Ball State University

GRADUATE CATALOG
2018-2019

BALL STATE UNIVERSITY BULLETIN

Ball State University provides equal opportunity in employment and in its education programs, activities, and facilities without regard to race, religion, color, sex sexual orientation, disability, national origin, ancestry, or age. It also takes affirmative action to employ and advance minorities, women, Vietnam-era veterans, disabled veterans, and other disabled persons. For further information, please consult our Web site or contact the Office of University Compliance, Ball State University, Muncie, IN 47306; Phone: (765) 285-5162; TTY: (765) 285-2639.

The information presented here, correct at the time of publication, is subject to change.

STATEMENT OF STUDENT RESPONSIBILITY

Ball State University reserves the right to alter programs and requirements for graduation with any degree. An alteration of a curricular or graduation requirement is not made retroactive unless the alteration is to the student's advantage and the student desires it. Exceptions may be necessary when changes in professional certification or licensure standards require changes in academic requirements or in university programs. It is also the student's responsibility to know the university regulations for the standard of work required to continue in the Graduate School. Graduate School personnel will aid in every possible way, but the responsibility for an error in the interpretation of the rules rests with the student.

INFORMATION DIRECTORY

Admissions Registration Information, Transfer or Credit	Admissions Coordinator, Graduate School 285-1286
Application for Graduation	Graduation Coordinator, Graduate School 285-1291
Careers	Career Center 285-1522
Fees, Resident Status	Bursar LU B31 285-1645
Financial Aid	Director of Scholarships and Financial Aid LU 245 285-5600
Graduate Assistantships and Doctoral Assistantships	Dean, Graduate School 285-1300
Housing	Housing and Residence Life 285-8000
International Student Programs	Director, Rinker Center for International Programs 285-5422
Off-Campus Classes	Online and Distance Education 285-1581
Program Advising	Departmental Advisors (A list of departmental advisors is available through the Graduate Office) 285-1301
Student Records, Grades	Registrar 285-1722
Teacher Licensing	Director of Educational Licenses TC 915 285-1168
Transcripts	Registrar 285-1722
Veterans' Affairs	Veterans' Affairs Certifying Official LU 242 285-5736

CONTENTS

4 About the University
5 The Graduate School
7 Master's Degrees
9 Master's Degree Admission
11 Certificate Programs
13 International Student Admission
14 Procedures For Earning A Master's Degree
22 Specialist in Education Degree (EdS)
25 Doctoral Degrees
32 Graduate Student Appeals Process
35 Fees and Expenses
35 Appendix
38 Interdepartmental Programs
39 Academy for Sustainability
40 Asian Studies
41 Interdepartmental Courses
43 College of Architecture and Planning
43 Urban Design
46 Architecture
53 Construction Management and Interior Design
55 Landscape Architecture
58 Urban Planning
65 Miller College of Business
69 Accounting
71 Economics
73 Finance and Insurance
74 Information Systems and Operations Management
80 Management
84 Marketing
87 College of Communication, Information, and Media
87 Interdepartmental
87 Communication Studies
89 Center for Information and Communication Sciences
93 Journalism
100 Telecommunications
103 College of Fine Arts
103 Art
106 Music
115 Theatre and Dance
117 College of Health
117 Counseling Psychology, Social Psychology, and Counseling
123 Kinesiology
135 Nursing
139 Nutrition and Health Science
144 Social Work
148 Speech Pathology and Audiology
154 College of Sciences and Humanities
154 Interdepartmental Programs
154 Science
157 Social Studies
157 Anthropology
161 Biology
169 Chemistry
172 Computer Science
176 Criminal Justice and Criminology
177 English
188 Geography
192 Geological Sciences
196 History
201 Mathematical Sciences
211 Center for Medical Education
212 Modern Languages and Classics
215 Natural Resources and Environmental Management
219 Philosophy and Religious Studies
219 Physics and Astronomy
225 Political Science
230 Psychological Science
234 Sociology
237 Teachers College
238 Office of Teacher Education Services and Clinical Practice
240 Licensing Programs and Requirements
245 Early Childhood, Youth, and Family Studies
246 Educational Leadership
252 Educational Psychology
263 Educational Studies
283 Elementary Education
288 Special Education

ABOUT THE UNIVERSITY

VISION

Ball State University will be a national model of excellence for challenging, learner-centered academic communities that advance knowledge and improve economic vitality and quality of life. *(Ball State University Strategic Plan Task Force Report 2007–2012)*

MISSION

Ball State University is an innovative, supportive academic community that inspires students by:

- Offering action-oriented learning including immersive out-of-class experiences, research, and study-abroad
- Providing extraordinary access to and collaboration with professors who create scholarship to advance knowledge, improve teaching, and transform learning
- Engaging state, national, and international communities to enhance educational, economic, and cultural development. (*Ball State University Strategic Plan Task Force Report 2007–2012*)

HISTORY

Ball State University was founded as Indiana State Normal School, Eastern Division, in 1918. Its antecedents, all housed in what is now the Ball State Administration Building, were also normal schools, owned and operated under various names. In 1918, the Ball brothers, a prominent Muncie industrial family, bought the property and donated it to the state of Indiana, which, in turn, transferred control of the school to the board of trustees of the Indiana State Normal School in Terre Haute. In 1922, in recognition of the generosity of the Ball brothers, the board added Ball Teachers College to the school's name. In 1929, the Indiana General Assembly separated the two colleges, naming the Muncie campus as Ball State Teachers College.

On February 8, 1965, the general assembly renamed the institution Ball State University in recognition of its phenomenal growth in enrollment and physical facilities; of the variety and quality of its educational programs and services; and in anticipation of the much broader role it would be expected to assume in the future.

DESCRIPTION

Ball State University is a comprehensive, publicly assisted institution of higher education that provides relevant immersive learning experiences, engaging high-caliber students in intense interdisciplinary projects both in and out of the classroom. It is located in Muncie, Indiana, a city of approximately 70,000, 56 miles northeast of Indianapolis. Although its primary concern is for the citizens of Indiana, it offers programs with appeal to regional, national, and international audiences.

Ball State University offers a strong undergraduate liberal and professional education and selected graduate programs of high quality. Ball State students can choose from a comprehensive range of academic programs at the associate, baccalaureate, and master's levels, as well as doctoral programs in areas where the university has special competence. In addition to core academic programs in the arts, sciences, and humanities, the university offers more than 240 undergraduate major and minor areas of study and 11 pre-professional programs through its seven colleges: Architecture and Planning; Miller College of Business; Communication, Information, and Media; Fine Arts; Health; Sciences and Humanities; and Teachers College.

The university has a selective admission policy; in some areas, such as architecture, the university is very selective. Exceptionally well-qualified undergraduate students may enroll in the Honors College for more intellectually demanding programs of study. Undergraduate students who have not decided on a major or who may need to strengthen their learning skills can take advantage of the special academic assistance and intensive educational counseling offered by University College.

As part of Ball State's commitment to excellence in education, the university offers students a friendly, collegiate atmosphere; a full range of out-of-class activities; and excellent, well-planned academic, residential, and recreational facilities. An impressive array of student support services contributes to the personal, social, and intellectual development of all students.

Although Ball State University is primarily a residential academic community, it also supports programs that reach students well beyond the immediate campus. Through interactive telecommunications, online courses, and live off-campus courses, Ball State's distance education program provides many Concentrations to students who wish to take courses and pursue degree programs but face challenges of time and access to campus. The university has a strong commitment to cultural diversity and international programs. It offers exchange programs with universities throughout the world and a wide variety of opportunities for students to study abroad.

THE GRADUATE SCHOOL

bsu.edu/gradschool
Location: West Quad 100
Phone: 765-285-1297
Dean: Adam Beach
Associate Vice President for Research: Susan McDowell

OBJECTIVE OF GRADUATE STUDY

The objective of graduate study is to develop the intellectual breadth and specialized training necessary for careers in teaching, in research and academia, and in the professions. The graduate programs at Ball State University emphasize the knowledge, methods, and skills needed for scholarly teaching, problem solving and original research, creative expression, and intellectual leadership.

The problems facing society require new knowledge and new ways of using existing knowledge. To meet these challenges the university provides, through its graduate programs, an atmosphere that fosters scholarship and creative activity.

GRADUATE EDUCATION COMMITTEE

Policies and procedures for graduate programs are the responsibility of the Graduate Education Committee, subject to approval by the University Senate, the president of the university, and the board of trustees. The committee consists of 11 representatives elected by the graduate faculty of each college. The number of representatives from each college is based on the ratio of its membership to the total graduate faculty. Two members of the Faculty Council who are members of the graduate faculty also serve. Three members of the graduate faculty, recommended by the dean of the Graduate School, are appointed by the Faculty Council. In addition, one graduate student is selected by the Student Association from each college offering graduate programs. The dean of the Graduate School, the associate dean of the Graduate School, and the provost and vice president for academic affairs are ex-officio members.

GENERAL INFORMATION

Graduate Academic Course Load
Graduate students may register for a maximum of 15 credits in a semester, 6 credits in a five-week summer term, and 12 credits for the combined summer terms. Some departments may have lower maximums for graduate assistants. for the combined summer terms.

A full-time graduate student, as defined for the purpose of classification for financial aid or veterans' benefits, is a student registered for 9 or more credits in any semester. A half-time load would consist of 5 to 6 credits. A full-time student, as defined by the Office of the Bursar and Loan Administration for billing purposes, is a student registered for a minimum of 12 credits.

All requests for overloads or exceptions to the established minimum course load must be accompanied by a written statement from the student's advisor, committee chairperson, or department chairperson justifying the request based on academic considerations only. Requests will be acted on by the dean of the Graduate School.

Course Numbering
Undergraduate courses of similar content may not be repeated at the graduate level for credit. Courses numbered 500 and above are for graduate students; graduate-level "taught-with" courses—graduate courses that may be taken by undergraduates—are represented by 500-level numbers; 600-level numbers are used for graduate courses; and 700-level numbers are for doctoral courses. Enrollment in 700-level courses requires doctoral-level standing or permission from the department chairperson and the dean of the Graduate School.

It is the student's responsibility to ensure that courses that are not available for variable credit are not repeated as they can apply only once to a degree or certificate.

Statement on Demonstrated Proficiency in English
Proficiency in the use of the English language is expected of all students who graduate with advanced degrees from Ball State University. Proficiency depends not so much on the ability to pass examinations—although the International English Language Testing System (IELTS), the Test of English as a Foreign Language (TOEFL), or GRE may be required—as it does on the habitual use of acceptable English in spoken or written work. Each department will judge the qualifications of its advanced students in the use of English. Reports, examinations, and speech may be used in evaluating students' proficiency. Students found deficient in English will be offered an opportunity to remedy the deficiency and will be encouraged to seek the assistance the university provides for this purpose.

Deleted: ¶
Graduate Record Examination
The Graduate Record Examination (GRE), which consists of verbal, quantitative, and analytical writing sections, is required for admission to a doctoral or specialist degree program. For non-native speakers of English, a different standardized test, recommended by the department head and approved by the graduate dean, may replace the GRE. Departments may also require GRE Advanced Subject Tests. The GRE is also required for a master's degree applicant in any of the following categories:¶
applicants whose undergraduate grade point averages (GPA) are below 2.75 on a 4.0 point scale;¶
applicants whose undergraduate degrees are from institutions with nontraditional grading systems; if nontraditional grades were received in the major field of study and related subjects, students are urged to submit both aptitude and, if available, advanced test scores;¶
applicants who expect to major in a department or enter a program that includes the GRE as a condition for admission.¶

Application for Graduation
Each graduate-degree-seeking student should file an application for graduation before the start of the semester in which the degree is to be granted. Check the Graduate School website for the deadline to apply for graduation.

Commencement Degrees
Degrees are awarded at the end of each semester. Formal public ceremonies are held at spring, summer, and fall commencements. All candidates are welcome to attend commencement exercises, where graduate degrees are conferred individually.

STUDENT ACADEMIC ETHICS AND ATTENDANCE POLICIES

Students of the university must conduct themselves in accordance with the highest standards of academic honesty and integrity. Academic dishonesty by a student will not be tolerated and will be treated in accordance with this policy.

Academic dishonesty includes, but is not limited to, the following:

1. Violations of procedures that protect the integrity of a quiz, examination, or similar evaluation, such as:
    a. possessing, referring to, or employing open textbooks or notes or other devices not authorized by the faculty member;
    b. copying from another person's paper;
    c. communicating with, providing assistance to, or receiving assistance from another person in a manner not authorized by the faculty member;
    d. possessing, buying, selling, obtaining, giving, or using a copy of any unauthorized materials intended to be used as or in the preparation of a quiz or examination or similar evaluation;
    e. taking a quiz or examination or similar evaluation in the place of another person;
    f. utilizing another person to take a quiz, examination, or similar evaluation in place of oneself;
    g. changing material on a graded examination and then requesting a regrading of the examination;
    h. cooperating with someone else on a quiz, examination, or similar evaluation without the prior consent of the faculty member.
2. Plagiarism or violations of procedures prescribed to protect the integrity of an assignment, such as:
    a. submitting an assignment purporting to be the student's original work that has been wholly or partly created by another person;
    b. presenting as one's own the work, ideas, representations, or words of another person without customary and proper acknowledgment of sources;
    c. submitting as newly executed work, without the faculty member's prior knowledge and consent, one's own work which has previously been presented for another class at Ball State University or elsewhere;
    d. knowingly permitting one's work to be submitted by another person as if it were the submitter's original work.
3. Cooperation with another person in academic dishonesty, either directly or indirectly, as an intermediary agent or broker.
4. Knowingly destroying or altering another student's work whether in written form, computer files, art work, or other format.
5. Aiding, abetting, or attempting to commit an act or action that would constitute academic dishonesty.

Implementation Procedures
Cases of academic dishonesty will be handled according to procedures outlined in the Student Academic Ethics Policy, found in the Faculty and Professional Personnel Handbook. For more information, contact the associate provost.

Code of Student Rights and Responsibilities
The Code of Student Rights and Responsibilities outlines behaviors expected of students at Ball State University. The standards of conduct apply to students while on the campus, when attending university-sponsored events, or when otherwise relevant to the security or integrity of the university community. View it online at bsu.edu/sa/srcs/studentcode.

Student Attendance
At Ball State University student attendance at class meetings is expected. Faculty shall establish attendance policies for their courses. Such attendance policies must be communicated to students by faculty through course syllabi or outlines.

Absence caused by field trips in one of the student's courses or by official university responsibilities shall be announced in advance to instructors of the other course(s) in which the student is enrolled. A notice will originate in the office of the department chairperson and be brought to the instructor(s) by the student. This notice should be shown to the instructor(s) at least three (3) days before the field trip. All trips should be scheduled after the first week or before the last two weeks of a semester (last two weeks—including the examination period). Exceptions to these periods will be granted only after consultation with and approval by the provost and vice president for academic affairs and the vice president for student affairs and enrollment management.

Detailed information regarding requirements for veterans' attendance may be obtained from the Office of Financial Aid and Scholarships. This information is kept current by directives received from the administrator of the Veterans Administration, VACO, Washington, D.C.

MASTER'S DEGREES

All master's degree programs are selective and require departmental permission before admission and registration for any graduate courses. Students should see the appropriate department chairperson for special requirements.

Ball State University offers the following master's degrees: master of architecture (MArch), master of arts (MA), master of arts in education (MAE), master of business administration (MBA), master of fine arts (MFA), master of landscape architecture (MLA), master of music (MM), master of public administration (MPA), master of science (MS), master of social work (MSW), master of urban and regional planning (MURP), and master of urban design (MUD).

MASTER OF ARTS DEGREE MAJORS

Actuarial Science
Adult and Community Education
Anthropology
Applied Behavior Analysis
Applied Gerontology
Biology
Business Education
Career and Technical Education
Chemistry
Clinical Psychology
Cognitive and Social Processes
Communication Studies
Counseling
Curriculum and Educational Technology
Educational Psychology
Emerging Media Design and Development
English
Executive Development for Public Service
Exercise Science
Fashion
Geology
History
Interior Design
Journalism
Kinesiology
Linguistics
Mathematics
Mathematics Education
Music
Natural Resources and Environmental Management
Nutrition and Dietetics
Physics
Physiology
Political Science
Post-Secondary Foundational Mathematics
Public Relations
Residential Property Management
School Counseling
School Psychology
Science Education
Secondary Education
Social Psychology
Social Psychology and Clinical Mental Health Counseling (Dual Major)
Social Science – Admissions Suspended
Sociology
Special Education
Speech-Language Pathology
Statistics
Student Affairs Administration in Higher Education
Teaching English to Speakers of Other Languages (TESOL)
Teaching English to Speakers of Other Languages (TESOL) and Linguistics
Technology Education
Telecommunications
Wellness Management

Requirements and Usual Plan of Study
A minimum of 30 credits is required for a master's degree. Some majors are more than 30 credits. Check specific programs for degree requirements. The usual plan of study for the master of arts degree is as follows:

Usual plan of study for the master of arts (MA) degree	
Major area of study including thesis, research paper, creative project, or graduate research methodology course	15-30 credits
Minor area of study of 8 or more credits and/or electives in any area or areas including the major area	0-15 credits

MASTER OF ARTS IN EDUCATION DEGREE MAJORS

Educational Administration and Supervision
Elementary Education
Physics
Special Education

Requirements and Usual Plan of Study

Usual plan of study for the master of arts in education (MAE) degree	
Major area of study including thesis, research paper, creative project, or graduate research methodology course	15-21 credits
Three courses from the professional education core	9 credits
Minor area of study of 8 or more credits and/or electives in any area or areas including the major area	0-11 credits

MASTER OF SCIENCE DEGREE MAJORS

Accounting
Biology
Chemistry
Computer Science
Educational Psychology
Exercise Science
Fashion
Geography
Geology
Health Science – Admissions Suspended
Historic Preservation
Information and Communication Sciences
Interior Design
Kinesiology
Management – Admissions Suspended
Mathematics
Natural Resources and Environmental Management
Nursing
Nutrition and Dietetics
Physics
Physiology
Quantitative Psychology
Residential Property Management
Software Engineering
Statistics
Wellness Management

Requirements and Usual Plan of Study
The master of science program in historic preservation usually requires 30 or 52 credits of study, including a summer internship. For a student who holds a bachelor of architecture degree, a preservation and restoration Concentration is available under the master of architecture degree (30 credits). Admission to either program requires departmental permission.

A thesis is required for all students working toward the master of science degree, except those majoring in accounting, computer science, software engineering, information and communication sciences, and nursing. The usual plan of study for the master of science degree is as follows:

Usual plan of study for the master of science (MS) degree	
Major area of study including credit for thesis	15-30 credits
Minor area of study of 8 or more credits and/or electives	0-15 credits

Minors
Minors are usually available in the major fields of study for the master's degree. They are also available in general foundations of business, GIScience, higher education, public health, and school library and audiovisual services. General foundations of business is a 12-credit minor that is *not open to* students who have an undergraduate major in any field of business or who are majoring in any field of business at the master's level.

Plan of Study
A student's plan of study, including the major area and the minor area or electives, will be selected in consultation with the appropriate department chairperson or delegated representative who serves as the student's departmental advisor.

MASTER'S DEGREE ADMISSION

Application for Admission
Admission standards are established for each master's degree program at Ball State University by the responsible academic unit. All application materials, including a completed application form and unofficial transcripts, must be submitted to the Graduate School at least two weeks before the term in which the student wishes to begin graduate study. Departments may have earlier deadlines. Students may apply for admission to graduate study online at *bsu.edu/gradschool*. A prospective student should contact the major department for specific program requirements, deadlines, and required application materials. Enrollment for applicants whose admission materials arrive after the deadline may be deferred to a subsequent term.

Students must meet the following minimum Graduate School criteria to be considered for admission to graduate study toward a master's degree:

1. A baccalaureate degree from Ball State University or an equivalent degree from an institution accredited by its regional accrediting association is a prerequisite for admission to graduate study for a master's degree. An applicant with a baccalaureate degree not considered the equivalent of that of Ball State University may be considered for probationary admission to a master's program.
2. An undergraduate cumulative grade point average (GPA) of at least 2.75 on a 4.0 scale on credit hours earned from the degee granting institution.
3. Meet departmental or program admission requirements.

4 Departments may recommend to the graduate dean that students with a latter half undergraduate GPA of a 3.0 be granted regular admission to their program.

An applicant who meets minimum Graduate School admissions standards is not guaranteed admission to a specific degree program. Specific programs may have higher GPA requirements than the Graduate School minimums.

The faculty of the various graduate programs make recommendations for admission to the dean of the Graduate School. Offers of admission are not official until approved by the dean of the Graduate School. Official admissions decisions are communicated to applicants by email from the dean of the Graduate School.

Transcripts
At the time of application, students must submit unofficial transcripts from all colleges and universities previously attended. Once a student is recommended for acceptance into a program, then they must submit one official transcript from all institutions from which the applicant had any degrees or certificates awarded. Students wishing to transfer graduate credit from another college or university also need to submit an official transcript from that institution. Final official transcripts must be received within the first semester of enrollment. An official transcript is one that has been received directly from the issuing institution, either by mail or electronically. It must bear that institution's seal, the date, and an appropriate signature. Transcripts received that do not meet these requirements will not be considered official and will be rejected for any permanent use. All transcripts become the property of Ball State University. Applicants who are currently attending, or who have previously attended, Ball State University are not required to provide a Ball State transcript. International students may have different transcript submission procedures than domestic students, and they should contact the Rinker Center for International Programs for specific information and requirements.

Standardized Tests
The Graduate School does not require programs to consider standardized test scores in admission. Programs have complete discretion concerning whether or not they require standardized test scores. You should refer to your program's graduate program handbook for more information about the admissions requirements and process for the program(s) you are interested in. If your program requires a standardized test score (GMAT or GRE), that score must be submitted to Ball State's Office of Graduate Admission directly from the administering agency.

Other Documents

Moved (insertion) [1]
Moved (insertion) [2]
Deleted: A
Moved down [3]: A baccalaureate degree from Ball State University or an equivalent degree from an institution accredited by its regional accrediting association is a prerequisite for admission to graduate study for a master's degree. An applicant with a baccalaureate degree not considered the equivalent of that of Ball State University may be considered for probationary admission to a master's program.¶
Deleted: ¶
Moved up [2]: Apply for admission to graduate study online at *bsu.edu/gradschool.*
Deleted: ¶
¶
To be eligible for registration, the student must be admitted to a graduate degree program, and the Graduate School must have received the graduate application and one official transcript from the institution granting the baccalaureate degree and each institution attended for undergraduate and graduate work. An official transcript is one that has been received directly from the issuing institution. It must bear that institution's seal, the date, and an appropriate signature. Transcripts received that do not meet these requirements will not be considered official and will be rejected for any permanent use. All transcripts become the property of Ball State University.¶
¶
Application Deadline¶
All application materials, including a completed application form and official transcripts, must be submitted to the Graduate School at least four weeks before the term in which the student wishes to begin graduate study. Departments may have earlier deadlines and require additional supporting credentials for admission. A prospective student should contact the major department for specific program deadlines and prerequisites. Enrollment for applicants whose admission materials arrive after the deadline may be deferred to a subsequent term.¶
Deleted: **Admission Standards**¶
Moved up [1]: Admission standards are established for each master's degree program at Ball State University by the responsible academic unit.
Deleted: , however
Formatted: Indent: Left: 0", Hanging: 0.25"
Deleted: Hold an earned bachelor's degree from a college or university that is accredited by its regional accrediting association.
Moved (insertion) [3]
Deleted: ¶
Deleted: Satisfy one of the following:¶
a.→
Formatted: Indent: Left: 0", Hanging: 0.25"
Deleted: (all undergraduate course work, including work completed prior to the baccalaureate degree, is used to calculate the GPA).
Deleted: b.→A cumulative GPA of at least 3.0 on a 4.0 scale in the latter half of the baccalaureate.¶
Moved (insertion) [4]

If the program(s) you are applying to require letters of recommendation, a resume or CV, a personal statement, or other documents, these can be submitted or requested through our online application process. It is your responsibility to ensure all deadlines and requirements are met.

Probationary Admission

Ball State University recognizes that some students who do not meet the Graduate School GPA minimum may still be able to make a strong case for admission to a master's program. In these cases, programs may petition the dean of the Graduate School for probationary admission of a student whose grade point average from their degree-granting institution is less than 2.75 if there is sufficient evidence of the student's academic and/or professional achievement indicating their potential for success in a master's program. Probationary admission requires the approval of the program director, department chair, and dean of the Graduate School. Programs may also choose to not allow probationary admissions in their programs.

Students admitted on a probationary status must earn a minimum GPA of 3.0 in their first 9 semester credits of graduate work approved in advance by the program director, the chairperson (or their designee) of the major department, and the dean of the Graduate School. Upon the successful completion of these requirements, a student admitted under probationary status will be eligible to assume regular graduate student status. Students admitted under probationary status are not eligible for an assistantship until they assume regular student status.

Applicants who have a bachelor's degree from an institution that is not recognized by its regional accrediting association but who otherwise meet all Graduate School and department requirements for regular admission may request probationary admission. A recommendation for probationary admission from the graduate program director must be accompanied by a rationale and a probationary course plan of 9 credits for approval by the department chair, college dean and dean of the Graduate School. Once admitted on probation, the applicant must earn a 3.0 after completing the probationary course plan and be recommended for regular admission by the academic department.

Compensatory course work may be required for students whose undergraduate majors do not prepare them for their chosen master's degree programs. Any such course requirements in addition to the requirements for the degree must be stated in the approved programs.

Exceptions to admission policies must be approved in advance by the dean of the Graduate School.

Deferral

After official admission to a master's degree or certificate program, the student, with permission from the department, may defer enrollment for up to a semester. If the deferral is longer than a semester, the student may reapply for admission but must submit new application materials and meet all current admission requirements.

Conditional Admission

Applicants who have not submitted complete departmental admission materials or who have not yet been officially admitted to their departmental master's degree programs may be granted conditional admission. Students will be notified of conditions that must be met at the time of admission. If the conditions for a student's admission have not been fulfilled within the time period specified (usually one academic semester), the student will be barred from subsequent registration in the Graduate School.

Fresh Start Admission

A graduate student may request a "fresh start" when changing or returning to a graduate program leading to a master's degree at Ball State University. A "fresh start" is defined as beginning a graduate program and having the graduate academic record recalculated to reflect no credits attempted and no graduate grade point average for the new program. All graduate courses previously taken at Ball State University, however, will remain on the student's academic record.

To be considered for a fresh start, the student must submit a graduate application and a written statement of purpose for seeking readmission to the dean of the Graduate School and must meet the following criteria:

- a period of time of no less than six years has expired since the student withdrew or was dismissed from a Ball State graduate program,
- the student's previous graduate GPA is below the minimum required to earn a master's degree (3.0 on a 4.0 scale),
- the student meets current Graduate School admission requirements, and
- the student has been recommended for admission into the program by the appropriate department.

Deleted: ¶
¶
¶
4. Students who do not meet the conditions listed above may be eligible for probationary admission. In some cases the admitting academic program may not allow probationary admission.¶
¶
Probationary admission may be achieved through the following:¶
¶
Standard Probationary Admission: In cases where a department has an approved probationary admission policy, students must have a minimum cumulative GPA of at least 2.5 and have attained a score on a nationally normed admissions exam that is satisfactory to the admitting academic program and the graduate dean. The admitting academic program may also have additional criteria to grant probationary admission. Students should contact the program director if pursuing this option.¶
¶
Professional Experience Probationary Admission: Students that have a cumulative undergraduate GPA of *less* than 2.5, who received their undergraduate degree at least 7 years prior, *and* who have worked professionally for a minimum of 4 years in discipline specific work may qualify for admission through a professional experience probationary plan. Students in this group must apply for probationary admission into the graduate school by providing additional materials delineated in the specific program's professional experience probationary admissions policy. Students should contact the program director if pursuing this option.¶
¶
In either of the above cases, s

Formatted: Font: Bold

Formatted: Font: Times New Roman, 10 pt

Formatted: Font: 10 pt

Formatted: Font: 10 pt, Not Bold, English (US)

Formatted: Normal, Right: 0", Space Before: 0 pt, Line spacing: single, No bullets or numbering, Widow/Orphan control, Adjust space between Latin and Asian text, Adjust space between Asian text and numbers, Tab stops: Not at 0.83"

Formatted: Font: 10 pt

Formatted: Font: Times New Roman, 10 pt

Formatted: Font: Times New Roman, 10 pt

Formatted: Font: Times New Roman, 10 pt

Deleted: g

Formatted: Font: Times New Roman, 10 pt

Deleted: dean

Formatted: Font: Times New Roman, 10 pt

Formatted: Font: Times New Roman, 10 pt

Deleted: graduate dean

Moved up [4]: An applicant who meets minimum Graduate School admissions standards is not guaranteed admission to a specific degree program.¶

Courses completed in a previous Ball State graduate program will not transfer or be applied to the requirements of the new program. The new program must be finished and the degree conferred within six years of the completion of the first new course. The student must complete a minimum of 30 credits, and the program of study must meet all departmental and Graduate School requirements.

Only one fresh start will be granted to any one graduate student at Ball State University. Final approval for a fresh start application rests with the dean of the Graduate School.

Admission as a Nondegree Student

Ball State University has two categories of nondegree admission:

1. Licensure Only (nondegree) —Licensure clearance is granted to students working toward any of the following:
   - License renewal or addition (post-bachelor's)
   - School services personnel and school administration

2. Nondegree (Nonlicensure)—Ball State University recognizes the need of many persons to pursue educational programs that may be related to their employment or that will otherwise enrich their lives. For these reasons, students with baccalaureate or advanced degrees who do not have further degree objectives but desire personal and professional enrichment may be admitted to graduate study as nondegree students.

Both licensure and nonlicensure nondegree students must meet the following admission criteria:

1. Hold an earned bachelor's degree from a college or university that is accredited by its regional accrediting association.
2. Have an undergraduate cumulative grade point average (GPA) of at least 2.75 on a 4.0 scale on credit hours earned from the degree-granting institution.

Certificates and licensures are classified as a non-degree programs, please check with financial aid to see if these programs are aide eligible. Specific programs may have higher GPA requirements than the Graduate School minimums. Nondegree students who later apply to a degree program must meet all entrance requirements of that program and must have maintained at least a 3.0 GPA in their nondegree coursework. No more than 9 credits earned in nondegree status may be applied to an advanced degree program if the person is later admitted as a degree-seeking student. The department in which the student is studying and the dean of the Graduate School will determine which credits earned in nondegree status will apply to a degree program. Credits must have been completed within the six-year time limit allowed for completion of a master's degree.

Transcripts

At the time of application, students must submit unofficial transcripts from all colleges and universities previously attended. Once a student is recommended for acceptance into a program, then they must submit one official transcript from all institutions from which the applicant had any degrees or certificates awarded. Students wishing to transfer graduate credit from another college or university also need to submit an official transcript from that institution. Final official transcripts must be received within the first semester of enrollment. An official transcript is one that has been received directly from the issuing institution, either by mail or electronically. It must bear that institution's seal, the date, and an appropriate signature. Transcripts received that do not meet these requirements will not be considered official and will be rejected for any permanent use. All transcripts become the property of Ball State University. Applicants who are currently attending, or who have previously attended, Ball State University are not required to provide a Ball State transcript. International students may have different transcript submission procedures than domestic students, and they should contact the Rinker Center for International Programs for specific information and requirements.

Other Documents

If the program(s) you are applying to require letters of recommendation, a resume or CV, a personal statement, or other documents, these can be submitted or requested through our online application process. It is your responsibility to ensure all deadlines and requirements are met.

Satisfactory Grade Point Average (GPA)

At any time after completion of 9 credits of graduate study, students must have and maintain at least a 3.0 graduate GPA.

Deleted: Satisfy one of the following:¶
A

Deleted: <#>(all undergraduate coursework, including work completed prior to the baccalaureate degree, is used to calculate the GPA).¶
<#>A cumulative GPA of at least 3.0 on a 4.0 scale in the latter half of the baccalaureate.¶

Deleted: ¶

CERTIFICATE PROGRAMS

Ball State University offers graduate certificate programs in the following areas:

Adult Education
Applied Behavior Analysis
Artist Diploma in Music Performance
Athletic Coaching Education
Autism
Biotechnology
Business Essentials
College and University Teaching
Community College Leadership
Community and Economic Development
Community Education
Computer Education
Criminal Justice and Criminology
Curriculum
Digital Design and Fabrication
Disabilities for Post-Secondary Settings with an Emphasis on Autism
Diversity Studies
Early Childhood Administration
Early Childhood Education, Master Teacher
Elementary Mathematics Teacher Leadership
Emergency Management and Homeland Security
Emering Media Design and Development
Emerging Media and Visual Reporting
Emotional and Behavioral Disorders
Enhanced Teaching Practice for Elementary Teachers
Entrepreneurial Music
Entrepreneurship
Geographic Information Science (GIScience)
Gifted and Talented Education
Health Economics, Policy, and Administration
Historic Preservation
Human Development and Learning
Identity and Leadership Development Program for Counselors
Information Systems Security Management
Institutional Research
Instructional Design and Assessment – Admissions Suspended
Interpretive Ethnography
Literacy Instruction
Literary Journalism
Middle-Level Education
Middle School Mathematics Education
Neuropsychology
Planning and Design of Healthcare Environments
Post-secondary Foundational Mathematics Teaching
Post-Master's Certificate Family Nurse Practitioner
Post-Master's Certificate Family Nurse Practitioner for the Adult Nurse Practitioner or Adult/Gerontology Nurse Practitioner
Post-Master's Certificate in Nurse Educator
Professional Meteorology and Climatology
Public Administration
Public Health Education – Admissions Suspended
Public Relations, Corporate Communications
Public Relations Education
Qualitative Research in Education
Real Estate Development
Response to Intervention
Selling and Sales Management
Social and Environmental Justice
Statistical Modeling
Teaching English to Speakers of Other Languages (TESOL)
Teaching Writing

Admission Requirements
Students must meet the minimum requirements for admission to a master's degree program and, if accepted, will be classified as nondegree students. With the department's approval, the student may defer admission for up to a semester. If the student wishes to defer longer than a semester, the student may reapply for admission but must submit new application materials and meet all current admission requirements.

Curriculum Criteria
The number of graduate credits for a certificate must be at least 12 credits and not more than one-half of the credits necessary for a related graduate degree. All certificate requirements must be met within five years. Students must earn at least a 3.0 GPA to qualify for a certificate, but no course with a grade below 2.0 (*C*- or lower) can be counted toward the certificate. No transfer credit is allowed to count toward the certificate. Credits earned toward the certificate can apply to a degree-granting program with departmental approval.

Transfer of Credit Status
Clearance to enroll in graduate courses may be granted to students who are intending to transfer courses back to their home institution. Transfer of credit students are not taking graduate courses toward any graduate degree or licensure program at Ball State University and are not considered to be admitted to the Graduate School.

Clearance is granted to students who hold a baccalaureate degree and are actively pursuing a graduate degree program at another regionally accredited college or university and who wish to earn credits for transfer to that institution. Transfer of credit students

normally will not be required to submit official transcripts (see next paragraph). However, students must request the dean of their graduate school to complete the Ball State University "Transfer of Credit Form" indicating they are in good academic standing (i.e., not under academic probation, suspension, and/or expelled).

If the student has been offered admission to a graduate school at another institution but has not taken any graduate courses at the time transfer for credit status is requested, then the applicant must apply for regular nondegree status and meet all of the requirements for "Admission as a Nondegree Student" found in the *Graduate Catalog*.

Approval for enrollment as a transfer of credit student is generally given for one academic semester. To be considered for an additional semester, students must reapply as a transfer of credit student. *No application fee is required for clearance as a transfer of credit student.*

Students who subsequently wish to be considered for admission to any graduate degree or licensure program at Ball State University must complete the regular admission procedure (including the appropriate application fee) and meet all requirements for their requested program. *No more than 9 credits earned as a nondegree student may be applied to any graduate degree program if a person is admitted as a degree-seeking student.*

INTERNATIONAL STUDENT ADMISSION

International students interested in graduate study at Ball State University should visit the Rinker Center for International Programs (RCIP) Office of International Admissions website at *bsu.edu/international* for application forms. International students must meet all the university's regular admission requirements. All credentials from secondary schools, colleges, universities, and their equivalents from locations other than the United States are evaluated by RCIP. RCIP determines the transcript submissions procedures for international students.

Physical Examination Requirement for International Students

After arrival at Ball State University, during the registration process, all international students are required to appear at the University Health Center for a physical examination.

English Proficiency for Non-native Speakers of English

Students who are non-native speakers of English applying for admission to the Graduate School must submit the results of the International English Language Testing System (IELTS) or Test of English as a Foreign Language (TOEFL) taken no more than 18 months prior to the date of application. A student intending to enroll at Ball State University may be required to retake the IELTS or TOEFL before being admitted, regardless of the extent of previous training in English. Any exceptions to these rules must be approved by RCIP and the dean of the Graduate School.

Any student admitted with a score lower than 6.5 on the IELTS or 79 on the TOEFL will be required to take ENEF courses offered by the Intensive English Institute. Exceptions to this rule must be approved by RCIP, the dean of the Graduate School, the chairperson of the department in which the student is majoring, and the director of the Intensive English Institute. Any department may set a higher score requirement than a IELTS score of 6.5 or TOEFL score of 79 for its majors.

If it is deemed advisable, RCIP or the director of the Intensive English Institute may recommend to the dean of the Graduate School that a student be required to take one or more of the English Language Tests administered by the Ball State University Counseling Center.

Any international student may take a course in English as a foreign language, regardless of whether such a course is required.

Any student who is required to take a course in English as a foreign language and whose progress is unsatisfactory will be required to repeat the course if the director of the Intensive English Institute deems it advisable or if the chairperson of the department concerned and the dean of the Graduate School deem it advisable. The chairperson of the department concerned and the dean of the Graduate School will take into consideration the recommendation of the Director of the Intensive English Institute. Before completing their course work in the Intensive English Institute, students are required to pass an assessment of their proficiency in English.

Conditional Admission
An applicant who meets all Graduate School academic requirements except for the minimum English proficiency requirement may be granted conditional admission. Conditional admission requires a prospective student to complete the English training course(s) and provide proof of English proficiency before regular admission and enrollment in graduate academic courses. Such a student is expected to achieve TOEFL-equivalent English proficiency within one year.

The initial I-20 will be generated by RCIP. Once RCIP certifies that the student has achieved English proficiency, he/she will be eligible for regular admission (or provisional if the department has additional requirements). Regular admission is determined by the student's major department. When a student's admission status changes from Conditional to Regular (or provisional) status, a new I-20 will be issued.

If English proficiency is not achieved within one year of conditional admission, a student can apply to Undergraduate Admissions or reapply to the Graduate School after completing additional classes at the Intensive English Institute.

An applicant granted conditional admission status will not normally be approved for an assistantship until regular admission is earned.

Any exception to the above policy must be approved by the dean of the RCIP and the dean of the Graduate School.

PROCEDURES FOR EARNING A MASTER'S DEGREE

Graduate Advising
Each department is responsible for evaluating the qualifications of its prospective graduate students. One of the evaluation tools used by some departments is a proficiency examination administered by the department. When undergraduate preparation in the chosen field of graduate study is insufficient, a student's major advisor may prescribe additional work. If the department determines that a student is deficient in one or more areas, the student is expected to remove these deficiencies.

The chairperson of the concerned department or the delegated representative will advise the student in outlining a degree program. All departmental advisors signing approval for graduate student academic programs must have been approved by their departments. When a student's eligibility is assured, the academic advisor will admit the student to candidacy for the master's degree and later will recommend the conferment of the degree. The research paper, creative project, and thesis will be written under the supervision of an academic advisor who is a member of the department in which a student has selected a major.

Registration
Upon receiving registration clearance, graduate students may register for courses on the Self-Service Banner section of *my.bsu.edu*. A Ball State University e-mail account is needed to use online registration services.

All students are expected to register before the beginning of a given term for which they will take classes. The period of advance registration for each semester and term is specified in the *Schedule of Classes* and the Office of Registration's website at ***bsu.edu/registration***. The penalty for late registration is a late-registration fee.

Changes of address or telephone number after registration are to be reported to the Office of the Registrar.

Research Plans
Candidates for master's degrees will organize their graduate study to meet the requirements of one of four research plans:

- Thesis, 6 graduate credits;
- Research paper, 3 credits;
- Creative project, 3 or 6 credits; or,
- Graduate research methodology course plan, a minimum of 3 graduates credits.

The research requirement must be taken at Ball State University.

Before beginning work on a research/creative project, a student must submit a topic approval form, signed by his or her advisor and the appropriate departmental chairperson, to the dean of the Graduate School. The form, obtainable in the department, the Graduate School office, and online, is to be accompanied by a typewritten description of the proposed research paper, creative project, or thesis, including a statement of the problem, the value and significance of the problem, and the research methodology to be used in the study.

Although the concerned department has the responsibility for determining the manual or form to be followed in writing the thesis, research paper, or creative project, projects must also conform to Graduate School guidelines.

Students must be registered during their final semester. If not registering for a course or courses, the candidate will register for MAST 600, Master's Candidate, for a fee of $75. A master's candidate may also take MAST 600 under other circumstances when not registered for a course or courses in order to access university services—for instance, while working off an incomplete grade—with the approval of the candidate's committee chairperson or graduate advisor.

Thesis (THES 698)
This plan requires the candidate to present a thesis embodying the results of a study of some subject directly related to the area of specialization. The thesis must show that the candidate possesses the abilities to pursue a research problem successfully and to draw valid and significant conclusions from the data. The student must have a committee of three faculty members selected in consultation with the department chairperson.

A student is not permitted to submit a thesis before completing 12 credits of graduate work and the candidate's advisor and departmental chairperson have signed a statement approving the subject. A student must also be in good academic standing to register for THES 698. Approval forms are available on the Graduate School webpage.

The approved thesis must be presented to the dean of the Graduate School in final form by the submission deadline during the term in which the student is to be certified for graduation. The final copy of the approved thesis, any accompanying materials, and a 100- to 150-word abstract of the thesis describing the nature of the study and findings must be submitted to the Graduate School electronically. Two hard-copy documents, the Final Approval Form and the ETD Signature Form, signed by all three members of the student's committee and the department chairperson, must be submitted to the Graduate School. If the departmental advisor and the department chairperson are the same person, another member of the graduate faculty within the department of the student's major must also sign the form, indicating familiarity with the project and knowledge of the student's work. A copy of the thesis may be required for the departmental file. It is the student's responsibility to deliver this copy.

The student who writes a thesis must enroll in THES 698: Thesis, for a total of 6 credits. The thesis is not used to meet the requirements for any course except THES 698.

The grading system used for THES 698 is credit/no credit.

Research Paper (RES 697)
This paper must be an original study of nonthesis proportions showing that the candidate possesses the abilities to pursue a research problem successfully and to draw valid and significant conclusions from the data. It must be on some subject directly related to the candidate's area of concentration and must meet the approval of the student's departmental advisor and the department chairperson.

A student is not permitted to submit a research paper before completing 12 credits of graduate work and the candidate's advisor and the department chairperson have signed a statement approving the subject. A student must also be in good academic standing to register for RES 697. Approval forms are available online.

The approved thesis must be presented to the dean of the Graduate School in final form by the submission deadline during the term in which the student is to be certified for graduation. The final copy of the approved research paper, any accompanying materials, and a 100- to 150-word abstract of the research paper describing the nature of the study and findings must be submitted to the Graduate School electronically. Two hard-copy documents, the Final Approval Form and the ETD Signature Form, signed by the student's advisor and the department chairperson, must be submitted to the Graduate School, showing that the work is accepted as the student's research paper for a master's degree. If the departmental advisor and the department chairperson are the same person, another member of the graduate faculty within the department of the student's major must also sign the form, indicating familiarity with the paper and knowledge of the student's work. A copy of the research paper may be required for the departmental file. It is the student's responsibility to deliver this copy.

The student who writes a research paper must enroll in RES 697: Research Paper for 3 credits. The research paper is not used to meet the requirements of any course except RES 697.

The grading system used for RES 697 is credit/no credit.

Creative Project (CRPR 698)
The creative research project (3 or 6 credits) must be in the student's concentration area. Examples of creative projects are a musical arrangement, composition, or recital; painting(s), sculpture, or a craft project; a literary composition; and instructional units in science

or social science. The creative project must be supported by a written report that includes background research and other significant information basic to the project, as well as a thorough description of the project itself. The student is required to have a committee of three for the 6-credit project and an advisor for the 3- credit project. These members will be selected in consultation with the department chairperson.

A creative research project must show evidence of superior craftsmanship and creative scholarship and must be limited to students, on the recommendation of the department chairperson, who are capable of exhibiting these traits. It must meet the approval of the student's advisor and the chairperson of the department concerned.

A student is not permitted to submit a creative project before completing 12 credits of graduate work and obtaining a signed statement from the departmental advisor and the department chairperson approving the project. A student must also be in good academic standing to register for CRPR 698. Approval forms are available online.

The approved creative project must be presented to the dean of the Graduate School in final form by the submission deadline during the term in which the student is to be certified for graduation. The final copy of the approved project, any accompanying materials, and a 100- to 150-word abstract of the project describing the nature of the project must be submitted to the Graduate School electronically. Two hard-copy documents, the Final Approval Form and the ETD Signature Form, signed by all three members of the student's committee (for a 6-credit project) or the student's advsor (for a 3-credit project) and the department chairperson, must be submitted to the Graduate School, showing that the work is accepted as the student's creative research project for the master's degree. If the departmental advisor and the departmental chairperson are the same person, another member of the graduate faculty in the student's major department must also sign the form. A copy of the creative project may be required for the departmental file. It is the student's responsibility to deliver this copy.

The student who writes a creative project will enroll in CRPR 698: Creative Project for a total of 3 or 6 credits. The creative research project is not used to meet the requirements for any course except CRPR 698.

The grading system used for CRPR 698 is credit/no credit.

Graduate Research Methodology Course Plan
This course plan is not approved as a research plan option in some master's degree programs. For these programs, a thesis, research paper, or creative project is required.

A candidate for a master's degree choosing the graduate research methodology course plan will complete an appropriate research course at Ball State University totaling a minimum of 3 credits. The research course, with departmental approval, will constitute a part of the master's degree major.

Each academic unit offering a master's degree will identify the course or courses it will use to satisfy the research course requirement of 3 or more credits. The research course may be taken in another department with the approval of the major-area advisor.

Research methodology courses identified as appropriate should emphasize either basic or applied research skills, or both. Unlike other graduate courses in the major area dealing with research, this course will have research as its primary focus and will be taught by persons with special research competencies and interests. Course content should include preparation of a research study, report, or paper.

Comprehensive Examinations for the Master's Degree
The Graduate School does not require comprehensive examinations for master's degree students. Departments and academic units that do have these requirements solely determine the format that is most appropriate for their disciplines but must adhere to the following general guidelines:

- The comprehensive examinations should be taken when the majority of the course work required for the master's degree is completed. The examinations will be offered each academic semester, the time and place to be determined by the administering department or academic unit.
- The examining committee will be made up of three members of the graduate faculty representing the student's major area(s) of study and will evaluate the student's performance.
- The committee decision will be either "pass" or "fail."
- The examining committee chairperson will notify the student, department chairperson or program director, and the Graduate School in writing of the outcome when the student has completed the comprehensive examination.

- A failed examination may be repeated only one time. The committee members who administered the first examination will also administer the retest.
- A student who fails the examination after two attempts is not allowed to complete graduate studies in that program, and the master's degree will not be conferred.

Exceptions to the above guidelines must be approved in advance by the dean of the Graduate School.

A student must pass the comprehensive examination before submitting a final copy of the research paper, creative project, or thesis (if required) to the Graduate School.

Final Thesis or Creative Project Defense
Candidates for master's degrees may be required or may choose to write a thesis or a six-credit creative project (see pages 14-15 of the current Graduate Catalog for a description of theses and creative projects). The Graduate School does not require an oral defense for theses or six-credit creative projects. Departments and academic units that do have this requirement solely determine the format that is most appropriate for their disciplines, but they must adhere to the following general guidelines:

- The defense will cover the thesis or six-credit creative project in its final form and will be administered by the student's committee. The time and place of the defense should be scheduled at least 10 days in advance. All committee members must be supplied a copy of the thesis or creative project well in advance of the scheduled defense to allow adequate time to review the final project. No defense will be given without all committee members present, unless prior consent is granted by the graduate dean in consultation with the chairperson of the committee and the absent committee member.
- If, in the opinion of the committee chairperson or upon a motion duly passed by a majority of the committee, it is deemed desirable to discontinue the oral defense, the chairperson may recess the oral defense until a time mutually agreeable to the student and the committee.
- After the conclusion of the defense and when the committee has determined the success or failure of the student, all the committee members must sign the Final Examination Form. The department chairperson or designate also signs the form and forwards it to the Graduate School.
- If the candidate has failed the defense, the committee must prepare a report including reasons for failure and requirements to be met. The committee chairperson must file this report with the dean of the Graduate School within seven days from the date of the defense. Permission to defend for a second time must be obtained from the chairperson of the student's committee and the dean of the Graduate School. Failure to pass the second defense will result in termination of master's degree study for said degree program.
- Upon passing the final thesis or creative project defense, the candidate can be formally recommended to receive the degree when all course work is completed satisfactorily.

A student who has failed the defense may request the department to be allowed to complete a master's degree without the thesis or six-credit creative project in academic areas in which the thesis or creative project is not required. The student must, however, complete all degree requirements for said degree program, including the appropriate research course or courses, as would any student who did not choose the thesis or creative project option.

Grading System
The graduate grading system and credit points are as follows:

A	4.000
A-	3.667
B+	3.333
B	3.000
B-	2.667
C+	2.333
C	2.000
C-	1.667
D+	1.333
D	1.000
D-	.667
F	0

The following grades are not included in the calculation of GPAs: *W* (Withdrawal), *I* (Incomplete), *AU* (Audit), and *EC* (Enrollment Continued).

All graduate grades are used in computing the student's cumulative GPA. An overall scholastic ratio of 3.0 GPA (*B* average) must be attained before admission to candidacy and the final awarding of any master's degree. An average of *B* is also required in the student's major. An overall scholastic GPA of 3.2 must be attained before admission to candidacy and the final awarding of any specialist or doctoral degree. No course with grades below *C* (2.0) may be counted toward any degree program. Individual departments may have higher minimum grade requirements. Consult the individual departments for a description of the minimum grade requirements.

A grade of I represents incomplete work and is given only when the instructor permits a student to finish incomplete work. In cooperation with the department chairperson, the instructor determines the validity of the claim to an incomplete grade and outlines the procedure for its removal and the time limit for completing the work. The maximum time permitted for the completion of an I grade is one year. If an I grade is not removed within the time agreed upon, it automatically becomes an F grade. Upon written notification to the registrar, the dean of the Graduate School may approve an extension of time up to one more year.

At the close of each term of attendance, a report of grades earned will be available on *my.bsu.edu.* Any change in a grade already reported must be made by the instructor on a Change-of-Grade form. Grade changes must be approved by the dean of the college concerned before filing in the Office of the Registrar. Any such change must be completed within one year of the close of the session for which the grade was due.

Incomplete capstone projects in CRPR 698, RES 697, THES 698, or DISS 799 may be handled in one of three ways: credit may be given on an ongoing basis if the student is making progress, with the understanding that the student cannot graduate until the project is submitted to and approved by the Graduate School; instructors may assign a grade of NC and may change the grade to CR when the project is complete; or instructors may request an extension of the I grade.

Course Repetition
A graduate student may not repeat more than one time a course for which a grade has been given unless the course is offered for variable credit. The repetition of a course does not remove the previous grades from the student's official academic record. The last grade in a course will be used in computing the scholastic ratio (GPA). The credits will count only once toward meeting minimum credit requirements for graduation.

Individual programs may impose additional limitations on course repetitions with the approval of the dean of the Graduate School. Students are advised to familiarize themselves with program policies.

Auditing a Course
A student who wishes to take a course without expectation of credit registers as an auditor. No credit will be earned; however, a transcript entry of "audit" may be recorded. The instructor will decide whether an audit class is to be posted on the permanent record.

Credit/No Credit
The option of credit/no credit is generally not available for graduate courses above zero credits with the exception of graduate student teaching courses, RES 697, THES 698, CRPR 698, and DISS 799.

RETENTION IN MASTER'S DEGREE PROGRAMS

Satisfactory Grade Point Average (GPA)
At any time after completing 9 credits of graduate study, students must have and maintain at least a 3.0 graduate GPA.

Probationary Status
Students will be placed on academic probation if their cumulative graduate GPA falls below 3.0 at any time after completion of 9 credits.

To remove probationary status, a student must have at least a 3.0 graduate cumulative GPA by the time the next 9 graduate credits are completed.

If probationary status is not removed, the student's admission to graduate study will be canceled, and additional graduate study will not be possible until the student has reapplied for reinstatement.

Reinstatement Procedure
Students seeking readmission must present to the dean of the Graduate School a written request approved by the chairperson of the major department. The decision to reinstate will be made by the dean of the Graduate School.

Reinstatement Status
Students readmitted to graduate study will carry the same classification held when graduate admission was cancelled.

CANCELLATION AND WITHDRAWAL

Cancellation Policy
If students do not wish to attend any university classes for which they are enrolled and it is before the official start date of all university classes, they may cancel their entire registration by contacting the Office of Registrar. The deadline for cancellation is the close of business on the Friday prior to the beginning of the term. Cancellation of registration does not result in a *W* on the student's record.

Change-of-Course Period
Students may drop a course through the fifth class day of a semester or through the third day of a summer term. Courses dropped through this period are not recorded on the student's permanent record. If, however, the student is enrolled in only one course, dropping a course during the first week of class constitutes a withdrawal from all classes. As a result, a *W* is recorded on the student's permanent record. For more information, see Withdrawal from All Classes in a Semester or Term.

Course-Withdrawal Period
The course-withdrawal period is from the sixth day of classes to the forty-fifth day of classes in a semester, sixth to the thirtieth day in a summer semester, and fourth to the fifteenth day of classes in a summer term. Saturday is not considered a class day for these purposes.

All student-initiated withdrawals will be accepted and recorded as *W* during this period. Students may obtain withdrawal forms from the Office of Registration and Academic Progress.

Students wishing to withdraw from a course during this period need to take the following actions:

- See the instructor and discuss the withdrawal;
- Take the initiative to obtain the withdrawal form with instructions; and
- Submit the completed form to the Office of Registration and Academic Progress by the last day of the withdrawal period.

Withdrawal After the Course Withdrawal Period: Verifiable Extenuating Circumstances
If there are verifiable extenuating circumstances that make withdrawal from a course academically justified after the withdrawal period ends, the college dean (or designate) may grant an exception to the above withdrawal policy. The faculty member is responsible for determining the grade to be assigned, *W* or *F*.

Withdrawal from All Classes in a Semester or Term
To withdraw from all courses during a semester or term, students must contact Office of Retention and Graduation, SC L-20, 765-285-3312 and complete an application for withdrawal. Students are strongly encouraged to discuss their withdrawal intention with staff in this office before removing courses from their schedule.

If students withdraw from all courses, instructors will be notified. Each instructor will be asked to report the last day of attendance, and a grade of *W* will be given for each course, provided the student withdrew by the published deadline. Grades of W will appear on the student's transcript but will not affect the GPA. Students must continue to attend classes until submitting a completed withdrawal form. If there are verifiable extenuating circumstances that make withdrawal from all courses necessary and academically justified after the withdrawal period, the Director of Retention and Graduation may grant an exception may grant an exception to permit withdrawal. Faculty members will record the last date of attendance and a grade of *W* or *F*.

APPLICATION FOR GRADUATION

All master's degree candidates must file an application for graduation with the Graduate School through Self-Service Banner. The student's department is responsible for submitting a degree check sheet to the Graduate School. All approved program changes made during the student's course work must be indicated on the degree check sheet.

TIME ALLOWED FOR A MASTER'S OR SPECIALIST DEGREE

All degree requirements must be met within six years.

When some but not all degree requirements were fulfilled more than six years earlier, a student may apply to have that coursework revalidated. In doing so, he or she must obtain permission from the department chairperson or designee and the dean of the Graduate School to demonstrate evidence of current knowledge in the out-of-date coursework. The methods for demonstrating currency will be determined on a case-by-case basis but may include written or oral examination on material covered in the course, retaking of out-of-date courses for credit or audit, passing a more advanced course in the same subject area, or presenting other evidence of currency in the field. The department chairperson or designee will present a written statement to the dean of the Graduate School outlining the conditions for revalidation of each course; the dean of the Graduate School will make the final determination on these conditions. If the dean of the Graduate School approves the conditions for revalidation, the department chairperson or designee will forward written results of these conditions, once satisfied, along with a recommendation for or against granting credit for the course(s) in question.

When all degree requirements were fulfilled more than six years earlier, a student must reapply for admission and meet current admission standards and degree program requirements. If readmitted to the degree program, a student may request to revalidate out-of-date course work as described above.

A student must meet additional requirements as determined by the department chairperson or designee and dean of the Graduate School if:

- The examinations are not passed with a *B* or higher, or
- Evidence of current knowledge is not persuasive, or
- The original recommendation of the department chairperson and the dean of the Graduate School was that examinations and/or the presentation of evidence were not appropriate.

Any transfer credit used to meet degree requirements expires six years from the date each course was completed. Transfer work is not eligible for revalidation.

Final approval of any request to revalidate out-of-date coursework rests with the dean of the Graduate School.

TRANSFER AND EXTENSION WORK

All off-campus courses offered by Ball State University are considered residence or campus credit.

A Ball State master's graduate who is working on the superintendent's license or high school principal's license (a 60-credit program) may take up to 15 of the 30 graduate credits beyond the master's degree at other institutions of higher education. Of these 15 credits, a maximum of 8 may be earned in extension.

Candidates for specialist in education degrees may take a maximum of 6 graduate credits beyond the master's degree at another institution of higher education. The remainder of the 30 graduate credits required for the degree must be earned in residence at Ball State. Upon recommendation of the department chairperson and with the approval of the dean of the Graduate School, work taken for graduate credit at other institutions may be transferred in partial fulfillment of degree requirements under the following conditions:

- All work must have been completed within the time limit of six years allowed to complete a master's degree at Ball State University.
- Transfer work is not eligible for revalidation.
- Only graduate courses in which a student has earned a grade of *B* or better may be considered for transfer credit. A grade of *B-* is not transferrable.
- Credits may be transferred, but grades earned in courses taken at another institution do not transfer and are not used in computing the student's GPA at Ball State University.
- When a graduate course is taken at another university on a credit/no credit or pass/fail option, "credit" or "pass" are not accepted as transferrable unless approved by the appropriate academic unit.
- A master's degree candidate may transfer as many as 9 credits toward a degree program with a total of 44 or fewer credits. A master's degree program that requires a total of 45 or more credits may allow a student to transfer as many as 15 credits. Departments may set more restrictive limits on the number of transfer credits.
- No credits earned on any graduate degree will be eligible for transfer to a Ball State master's degree.
- No credits earned for a baccalaureate degree may be counted for credit toward a graduate degree at Ball State University.

Transfer of credit will be considered for graduate work taken only at regionally accredited institutions provided the courses meet institutional requirements and are appropriate for the student's planned and approved program. The research requirement must be taken at Ball State University.

SPECIAL CASES

Special cases involving policies not covered in this catalog will be submitted to the Graduate Education Committee for consideration and action. In general, the student's program committee has jurisdiction, but a student may appeal adverse decisions impacting his or her progress toward a graduate degree. See the student appeals guidelines.

DOUBLE MAJOR

A student may earn a double major by completing a minimum of 15 credits of graduate work in each of the two approved fields of study. In some cases, a "common course" may apply to both majors if prior approval is obtained from the department chairpersons concerned. The double major option results in students obtaining a single master's degree with two listed major areas of study.

DUAL MASTER'S DEGREE

A student may earn two master's degrees congruently with shared credit. The requirements for the second master's degree include a minimum of 30 graduate credits; a major in a different field of study; submission of a thesis, research paper, or creative project or completion of the appropriate research methodology course(s), depending on specific degree requirements; and the meeting of other master's degree requirements as specified.

- Students must apply to and be accepted by both programs as soon as possible but no later than the date the student applies for graduation for the first degree.
- A plan for the program of study will be required and signed by representatives of each program (e.g. graduate coordinator or department chair/director), as well as the student, and filed with the respective departments and the Graduate School.
- Shared credits can be double-counted. A limit is set on the number of double-counted credits at 9 credits for programs that contain fewer than 45 credits. If one of the two programs is greater than or equal to 45 credits, the program with more credits could accept up to 6 additional credits from the "smaller" degree in addition to the original 9 credits for a total of 15 credits.
- A graduate student may complete capstones for either a single degree or both degrees, pursuant to agreement by all involved programs in addition to the 9 credits for the dual degree.
- A student working on dual degrees is operating under two independent 6-year clocks. A student cannot share credits with a new program after he/she has applied to graduate. Should a student wish to pursue another master's degree after filing for graduation, he/she must reapply to the Graduate School and work for a second master's degree.

SECOND MASTER'S DEGREE

A student may earn a second master's degree. The requirements for the second master's degree include a minimum of 30 graduate credits; a major in a different field of study; submission of a thesis, research paper, or creative project or completion of the appropriate research methodology course(s), depending on specific degree requirements; and the meeting of other master's degree requirements as specified. No credits earned for the first master's degree may be transferred to the second.

UNDERGRADUATES AND GRADUATE WORK

Undergraduates are limited to a total of 9 graduate credits. They may take 500 and 600 graduate-level courses provided the student has:

- completed at least 90 credits toward the baccalaureate degree
- achieved a 3.0 overall grade-point average, and
- has the approval of the instructor and chairperson of the department offering each course, the dean of the College in which the course is offered, the dean of the Graduate School, and the dean of University College.

Undergraduate students wishing to enroll in graduate courses must complete the Undergraduate Student Enrolling in a Graduate Course form, available on the Graduate School's website.

CHECKLIST FOR MASTER'S DEGREE

Procedure	Approved by	Date

Submit an application for admission.	Dean of the Graduate School	Check with department's program director.
Meet with program academic advisor to develop a program of study for the degree.	Program advisor	Before or at the time of registration.
Submit Topic Approval form along with description of proposed research paper, creative project, or thesis (not required in all programs).	Master's program committee, dean of the Graduate School	Before registering for research.
Submit approved thesis, research paper, or creative project.	Master's program committee, dean of the Graduate School	See Research Plans for required dates.
Apply for degree (graduation).	Dean of the Graduate School	The student is eligible to apply for graduation as early as registration for the final course(s) needed for the degree but no later than the end of the fourth week of the semester of expected graduation.

Deleted: plus one copy of official and complete transcripts of all work taken

SPECIALIST IN EDUCATION DEGREE (EdS)

The major purpose of the program for the specialist in education (EdS) degree is to provide a plan of advanced study for persons who need an additional year of study beyond the master's degree. The curricular program allows a greater depth of specialization than is possible at the master's level, and a plan of study is tailored to meet each candidate's specific needs. Although the specialist in education degree is self-contained and terminal, certain courses may sometimes be applied to a doctoral program.

SPECIFIC FUNCTIONS

The specific functions of the specialist in education degree program are

- To prepare more effective and competent elementary and secondary classroom teachers.
- To prepare junior college and lower-division college teachers.
- To provide the candidate with the additional preparation needed to fill specialized school positions as superintendents, principals, supervisors, subject specialists, subject consultants, or similar school personnel.

AREA OF SPECIALIZATION

Each candidate must have an area of specialization tailored to personal needs. In planning a candidate's program of study, the committee also will consider the student's general and professional education needs.

Areas of specialization currently available are educational psychology (school) and school superintendency.

ADMISSION REQUIREMENTS

To be admitted to graduate study toward a specialist in education degree, a student must meet the following criteria:

- Hold an earned master's degree or equivalent degree from a college or university that is accredited by its regional accrediting association. (A student with a master's degree not considered the equivalent of those of Ball State University may be admitted under conditions determined by the department concerned and the dean of the Graduate School. Credentials from secondary schools, colleges, universities, and their equivalents outside of the United States are evaluated by the Rinker Center for International Programs Office of International Admissions and the Graduate School.)
- Have a cumulative GPA on the master's degree of at least 3.2 on a scale of 4.0.
- Have had at least two years of successful teaching experience or appropriate professional experience.
- Any additional admission standards established by the academic unit responsible for each specialist in education degree program.

Deleted: <#>Achieve acceptable scores on the Graduate Record Examination (GRE) general test or other approved graduate admissions test for non-native speakers of English.¶

An applicant who meets the minimum admissions standards is not guaranteed admission to a specific degree program. Specific programs may have higher GPA requirements than the Graduate School minimums. Students may register for graduate courses leading to the specialist in education degree only upon official admission to the program.

Deleted: Admission to the university does not guarantee admission to a specific degree program.

Deleted: departmental recommendation for

A candidate will be considered for admission to graduate study leading to the specialist in education degree when he or she has met the entrance requirements and has met the following criteria:

- Submitted an application for admission.
- Submitted the names of at least five people who may be asked to testify to the candidate's professional qualifications.
- Submitted transcripts of previously conducted college work. At the time of application, students must submit unofficial transcripts from all colleges and universities previously attended. Once a student is recommended for acceptance into a program, then they must submit one official transcript from all institutions from which the applicant had any degrees or certificates awarded. Students wishing to transfer graduate credit from another college or university also need to submit an official transcript from that institution. Final official transcripts must be received within the first semester of enrollment. International students may have different transcript submission procedures than domestic students, and they should contact the Rinker Center for International Programs for specific information and requirements.
- Have completed whatever admission examinations are required by the program.
- Been approved by the screening committee for the specialist in education degree as a candidate for the degree.

Standardized Tests

The Graduate School does not require programs to consider standardized test scores in admission. Programs have complete discretion concerning whether they require standardized test scores. You should refer to your program's graduate program handbook for more information about the admissions requirements and process for the program(s) you are interested in. If your program requires a standardized test score (GMAT or GRE), that score must be submitted to Ball State's Office of Graduate Admission directly from the administering agency.

Other Documents

If the program(s) you are applying to require letters of recommendation, a resume or CV, a personal statement, or other documents, these can be submitted or requested through our online application process. It is your responsibility to ensure all deadlines and requirements are met.

The faculty of the various graduate programs make recommendations for admission to the dean of the Graduate School. Offers of admission are not official until approved by the dean of the Graduate School. Official admission decisions are communicated to applicants by email from the dean of the Graduate School.

ADVANCEMENT TO THE DEGREE

The three steps of advancement for the specialist in education degree are the following:

1. The applicant is admitted to graduate study.
2. The student is admitted to candidacy for the degree.
3. The candidate completes degree requirements.

The student is expected to know the requirements for the degree. The responsibility for correct interpretation of the rules rests with the student.

Transfer Credit

Candidates, with prior consent of the committee, may take up to 6 graduate credits in other approved institutions of higher education.

Time Allowed

See Time Allowed for a Master's or Specialist Degree.

COURSE REQUIREMENTS

The student must complete, including the thesis, at least 30 credits of graduate work beyond the master's degree. The candidate will not be permitted to carry more than 15 graduate credits in a semester or 12 credits for the combined summer terms. If the student is employed, the course load should be reduced proportionately. At least 24 of the 30 credits required for the specialist in education degree must be taken in residence.

A candidate for the specialist in education degree may, on recommendation of his or her committee, apply up to 9 credits of graduate work taken beyond the master's degree toward the specialist in education degree if such course work does not violate other degree requirements.

Moved (insertion) [5]

Deleted: <#>Had institutions previously attended send one transcript of all previously conducted college work.¶

Deleted: <#>Taken

Deleted: <#>the required

Deleted: <#>(Student may arrange with the Counseling Center to take these examinations.)

Formatted: No bullets or numbering

Deleted: ¶
¶

Deleted: ¶
ADMISSION TO THE SPECIALIST IN EDUCATION (EDS) PROGRAM¶

Moved up [5]: A candidate will be considered for admission to graduate study leading to the specialist in education degree when he or she has met the entrance requirements and has met the following criteria:¶
Submitted an application for admission.¶
Submitted the names of at least five people who may be asked to testify to the candidate's professional qualifications.¶
Had institutions previously attended send one transcript of all previously conducted college work.¶
Taken the required admission examinations. (Student may arrange with the Counseling Center to take these examinations.)¶
Been approved by the screening committee for the specialist in education degree as a candidate for the degree.¶

Approved Program of Study
During the first semester of study, specialist in education students are expected to establish an advising committee and to file an approved program of study with the Graduate School. Failure to meet this deadline may result in refusal to accept further course registration.

Committee
A student will have a committee of three, typically appointed during the first semester of graduate work beyond the master's degree. The committee, including the committee chairperson, will be appointed by the department chairperson in consultation with the candidate. Until the committee is appointed, the department chairperson or delegated representative will act as the student's program advisor. The committee, in consultation with the student, will develop the plan of study and guide the thesis. In cooperation with the Graduate School, the committee also will determine if and when the student is qualified to be admitted to candidacy for the degree, and finally, for the awarding of the degree.

Field Experience or Internship
Departments offering programs leading to the specialist in education degree may approve, as an alternative to the 6-credit thesis requirement, a 6-credit supervised field experience or internship. This option is for students whose program purposes warrant such an alternative. A report written by the candidate and approved by the supervising professor must be filed in the academic unit offering the program. If the internship or field study option is selected, the student's committee will determine that research competencies are demonstrated.

Final Examination
All candidates will be required to pass final written and oral examinations, administered by the candidate's committee.

The student's thesis must be approved by the committee and the department chairperson before final oral and written examinations are taken. The final oral and written examinations must be taken at least two weeks before the close of the semester or term in which the student is to be certified. When the student satisfactorily passes the final oral and written examinations, the committee will file the signed approval form in the Graduate School office. This form is available in the Graduate School office.

Application for Graduation from the Specialist in Education (EdS) Program
All specialist in education degree candidates must file an application for graduation in the Graduate School.

Completion of Specialist in Education (EdS) Degree Requirements
The student will be awarded the specialist in education degree after having

- Satisfactorily completed all course requirements with a GPA of at least 3.2.
- Satisfactorily passed the final written and oral examinations.
- Submitted an acceptable thesis or earned 6 credits in a supervised field experience or internship that has been approved by the candidate's committee.

SELECTIVE RETENTION

At all times after completing 9 credits of advanced graduate study, a student must maintain a cumulative GPA of at least 3.2 for courses taken toward the specialist in education degree.

Probationary Status
A student will be placed on academic probation if his or her cumulative GPA for courses taken toward the specialist in education degree falls below 3.2 at any time after completion of 9 credits. Probationary status will be removed if a student, in completing the next 9 credits, brings the cumulative GPA to at least a 3.2 for all courses for the specialist in education degree. If probationary status is not removed, a student's admission to graduate study will be canceled, and additional graduate study will not be possible until he or she has reapplied for regular admission and has been readmitted.

Readmission Procedure
A student seeking readmission must present to the dean of the Graduate School a written request approved by the specialist in education program director and by the chairperson of the major department. The decision to readmit will be made by the dean of the Graduate School.

Readmission Status
Upon readmission, the student will be reinstated to the classification held when graduate study was canceled.

Special Cases
Special cases involving policies not covered in this catalog will be submitted to the Graduate Education Committee for consideration and action. In general, the student's program committee has jurisdiction, but a student may appeal adverse decisions impacting their progress toward a graduate degree. See "Graduate Student Appeals Process."

CHECKLIST FOR THE SPECIALIST IN EDUCATION DEGREE

Procedure	Approved by	Date
Submit an application. See individual department descriptions for application materials required.	Dean of the Graduate School; specialist program director	Check with appropriate specialist program director.
Obtain approval from the Advanced Graduate Studies Screening Committee (in the Teachers College).	Advanced Graduate Studies Screening Committee (in the Teachers College); dean of the Graduate School	After all application materials have been submitted.
Establish advisory committee, develop plan of study, and file an approved program with the Graduate School.	Specialist program committee; dean of the Graduate School	By the end of the first semester of study.
Apply for degree (graduation).	Specialist program committee; dean of the Graduate School	Two semester before graduation but no later than the fourth week of the semester or term in which requirement will be completed.

Deleted: for admission and one copy of official transcripts
Deleted: additional
Deleted: Arrange with the Counseling Center to take the GRE (general test) or other approved graduate admissions test.
Formatted Table
Deleted: Dean of the Graduate School
Deleted: Before consideration by the Advanced Graduate Studies Screening Committee (in the Teachers College).

DOCTORAL DEGREES

Ball State University offers programs leading to the doctor of philosophy degree (PhD), the doctor of education degree (EdD), the doctor of arts degree (DA), and the doctor of audiology degree (AuD; see Department of Speech Pathology and Audiology for admission requirements and program information).

The doctor of philosophy degree is built upon depth of course work in the concentration area. It also requires a strong formal background in traditional research techniques in the same area and may include a foreign language competency. The dissertation is written on any research topic within the subject matter field, extending the bounds of knowledge in that field and making an original contribution to learning. Persons pursuing the doctor of philosophy degree may major in counseling psychology, educational psychology (general, school), educational studies, elementary education, English, environmental science, and human bioenergetics.

The doctor of education degree is built upon breadth of course work that includes required study in Teachers College. The research competency for this degree is usually statistical in nature. The dissertation characteristically, but not necessarily, contributes to the solution of some important educational problem. Persons pursuing doctor of education degrees may major in adult, higher, and community education; educational administration and supervision; elementary education; science education; and special education.

The doctor of arts degree in music is built upon a depth of course work in a primary field, an area of secondary emphasis usually related to the primary field, and another area of secondary emphasis on college teaching, including a required internship (on the Ball State University campus) and externship (at another college or university). The dissertation may make an original contribution to knowledge in the primary field, but it may also produce and examine innovative teaching materials or methods.

DOCTORAL PROGRAM ADMISSION REQUIREMENTS

To be considered for admission to graduate study toward a doctoral degree, a student must

- Hold an earned baccalaureate or equivalent degree from a college or university accredited by its regional accrediting association with a cumulative grade-point average (GPA) of at least 3.0 on a scale of 4.0 on hours earned from the degree-granting institution. A student with a baccalaureate degree not considered the equivalent to that of Ball State University may

Moved (insertion) [6]
Deleted: .
Moved up [6]: from a college or university accredited by its regional accrediting association.

be admitted under conditions to be determined by the department concerned and the dean of the Graduate School. Credentials from international colleges, universities, and their equivalents outside the United States are evaluated by the Rinker Center for International Programs (RCIP) and the Graduate School.

- Submit one unofficial transcript of all previous college work, showing graduation from accredited institutions of higher learning with degrees awarded.
- Meet any additional admission standards established by the academic unit responsible for each doctoral degree program.
- Be recommended for admission by the academic unit responsible for the doctoral degree program.

Some programs may require an earned master's degree or equivalent for consideration for doctoral study. In such cases applicants must have a cumulative GPA on the master's degree of at least 3.2 on a scale of 4.0. Applicants to these programs who have achieved a 3.2 GPA in their master's degree, but have less than a 3.0 on their baccalaureate work, meet the Graduate School's minimum GPA criteria. Specific programs may have higher GPA requirements than the Graduate School minimums. Please see admission requirements for specific majors found in other areas of this publication or on the departmental website. The fulfillment of the minimum Graduate School admission standards listed above does not guarantee admission to a specific degree program.

The faculty of the various graduate programs make recommendations for admission to the dean of the Graduate School. Offers of admission are not official until approved by the dean of the Graduate School. Official admission decisions are communicated to applicants by email from the dean of the Graduate School.

Students may register for graduate courses leading to the doctoral degree only upon official acceptance into their program.

After official admission to a doctoral program, the student has two years in which to begin courses approved by the doctoral program director or the student's committee. A student who has not taken courses in an approved program during this two-year period will be dropped from the program. The student may reapply for admission.

Transcripts

At the time of application, students must submit unofficial transcripts from all colleges and universities previously attended. Once a student is recommended for acceptance into a program, then they must submit one official transcript from all institutions from which the applicant had any degrees or certificates awarded. Students wishing to transfer graduate credit from another college or university also need to submit an official transcript from that institution. Final official transcripts must be received within the first semester of enrollment. An official transcript is one that has been received directly from the issuing institution, either by mail or electronically. It must bear that institution's seal, the date, and an appropriate signature. Transcripts received that do not meet these requirements will not be considered official and will be rejected for any permanent use. All transcripts become the property of Ball State University. Applicants who are currently attending, or who have previously attended, Ball State University are not required to provide a Ball State transcript. International students may have different transcript submission procedures than domestic students, and they should contact the Rinker Center for International Programs for specific information and requirements.

Standardized Tests

The Graduate School does not require programs to consider standardized test scores in admission. Programs have complete discretion concerning whether they require standardized test scores. You should refer to your program's graduate program handbook for more information about the admissions requirements and process for the program(s) you are interested in. If your program requires a standardized test score (GMAT or GRE), that score must be submitted to Ball State's Office of Graduate Admission directly from the administering agency.

Other Documents

If the program(s) you are applying to require letters of recommendation, a resume or CV, a personal statement, or other documents, these can be submitted or requested through our online application process. It is your responsibility to ensure all deadlines and requirements are met.

Deleted: Have previous institutions attended s

Deleted: <#>Achieve acceptable scores on the Graduate Record Examination (GRE). GRE scores older than five years normally are not acceptable. ¶

Deleted: ¶

Deleted: departmental recommendation for admission.

Deleted: ¶

Deleted: ¶

DOCTORAL PROGRAM DEGREE REQUIREMENTS

Minimum Graduate School doctoral degree requirements:

- Students must complete, including the dissertation, at least 90 credits of graduate work beyond the bachelor's degree, at least 40 of which, excluding dissertation credits, must be in the major. A minimum of 48 of the required 90 credits must be completed at Ball State University.
- For all doctoral programs, except the doctor of audiology (AuD) and doctor of nursing practice (DNP), a minimum of 10 credits are required for the dissertation. A maximum of 24 dissertation credits may be counted toward a student's program of study.
- For all doctoral programs, except the doctor of audiology (AuD), students must complete a rigorous research component. Students will be expected to demonstrate competency with research tools applicable to their major areas. Such tools include additional languages, statistical methods, computer science, and research techniques. The required research tools will be determined by the student's doctoral committee and included on the student's program of study.

Departmental doctoral degree requirements may include, but are not limited to, the following:

- Cognates—Candidates may be required to have one or more cognate fields, each of which may consist of either 15 credits or 24 credits. For the 15-credit cognate, 9 credits must be taken at Ball State University; 12 credits of the 24-credit cognate must be taken at Ball State University. Cognates are available in all major fields of study for the master's, specialist, and doctoral degrees. In addition, cognates are offered in community college leadership; composition; couples and family counseling; curriculum; diversity in counseling psychology; educational technology; English language arts; general field of education; general foundations of business; gifted studies; health psychology; health science; higher education; history, philosophy, and sociology of education; linguistics; literary theory; literature; neuropsychology; physiology; psychological assessment; psychology of human development; research methodology; social justice in counseling psychology; teacher education in higher education; TESOL; theory of computing; and vocational psychology.
- Internship—Candidates in some doctoral programs may be required to take a full-time internship at an approved site.
- Additional Language—If an additional language is required, the selection is made by the student and the committee and must be approved by the director of the student's doctoral program. Additional languages typically contain a significant body of available materials in the student's field of research or are essential to the student's career objective or to a field of study in which the student will participate as part of the doctoral program. For international students, non-native languages other than English will be accepted at Ball State University if they meet these criteria. See "Policies Related to Doctoral Degree Completion" for specific guidelines concerning additional languages.

Candidates must meet any additional program requirements established by the academic unit responsible for each doctoral degree.

Doctoral Committee

The student's committee is appointed after the student has been admitted to study for the doctoral degree—usually during the first year of doctoral work. Until the committee has been appointed, the departmental program director will serve as the student's program advisor.

Upon the recommendation of the departmental program director, the dean of the Graduate School will appoint the student's committee and the at-large member. The committee will consist of either four or five voting members (approved for full graduate faculty status), depending on the student's program of study. All committees will consist of two members from the student's major area and an at-large member from a field or department not already represented on the committee. The rest of the committee will be structured as follows:

- Program without Cognate(s)—a fourth voting member will be a representative appropriate to the individual student's program of study.
- Program with Cognate(s)—a voting member will be appointed for each cognate on the individual student's program of study.

The committee chairperson will represent the student's primary area of study and must meet the criteria for Dissertation Chairperson Endorsement in the department of the student's major.

Please see specific degree program requirements for detailed policies concerning the appointment of doctoral committees.

In consultation with the student, the committee will determine the student's plan of study and guide the student's dissertation (at the department's discretion, separate committees may be appointed for advising/comprehensive examinations and the dissertation stage). The plan of study will be filed in the departmental office of the student's major area and the Graduate School as soon as possible after

the committee has formed. Students who fail to do this in a timely fashion may have a registration hold at the recommendation of their departments.

The committee, in cooperation with the Graduate School, will determine whether the student is qualified to continue study during any of the three stages leading to the doctoral degree.

STAGES OF DOCTORAL COMPLETION

Stage 1. Completion of the Master's Degree or its Equivalent.
Requires completion with at least a 3.2 cumulative grade point average (GPA) at Ball State University or another university that is accredited by its regional accrediting agency. Students who have already completed a master's degree equivalent to that awarded by the major department are considered to have completed the first stage of the doctoral program unless the department stipulates otherwise.

Each academic unit that is responsible for a doctoral program will have a procedure to evaluate a student's progress during this stage. This evaluation will take place no later than the end of the second year to determine if the student is making satisfactory progress, and will be communicated in writing to the student. The evaluation is determined by the major department and could include, but is not limited to, an examination or other appropriate review that must be successfully completed before entering Stage 2.

Stage 2. Admission to Candidacy
Requires completion of all course work and fulfillment of any special departmental requirements (e.g., additional language examinations, if any), the passing of the comprehensive examinations, and approval of the dissertation proposal (see below for specific information regarding requirements for the comprehensive examinations). Completion of this stage is referred to as Admission to Candidacy for the degree. Enrollment in dissertation credits is permitted only upon the completion of this stage. If the foregoing requirements are not met, the student may be admitted to candidacy for the doctoral degree on probation, or the privilege of further study leading to the doctoral degree may be denied.

Stage 3. Dissertation Completion
Requires the research, writing, and final oral defense of the dissertation. During this stage, all doctoral candidates must be registered for a minimum of 3 credits each semester, except during the summer terms, until the final approved copies of the dissertation are deposited in the Graduate School, all credits for degree conferral have been completed, and the residency requirement (if any) has been fulfilled. Normally, if not registering for a course or courses, the doctoral candidate will register for three credits of DISS 799. However, a doctoral candidate in an externally accredited program that requires an internship experience is exempt from continuous enrollment while registered for internship credit. Further, a doctoral candidate may request to be exempt from the continuous registration requirement for certain life events such as serious illness, serving as principal care-giver for a child/stepchild or other family member who is seriously ill, or other extraordinary circumstances under which this requirement would result in undue hardship for the student. Requests for exemption to the continuous registration requirement are to be made to the Graduate School. The graduate dean will consult with the doctoral candidate's dissertation chair, department chair, and program director prior to making a decision on the request. Generally, exemptions will be granted for a maximum of one semester. Students will be required to register during the semester they expect to graduate.

Deleted: G

Deleted: D

The culmination of Stage 3 is degree conferral. No later than the first four weeks of the last semester before graduation, students must file an application for graduation with the Graduate School. Applications may be submitted online in Self-Service Banner at *my.bsu.edu*.

POLICIES RELATED TO DOCTORAL DEGREE COMPLETION

Additional Language Requirements
Students preparing for additional language exams may enroll in the appropriate language courses. Arrangements also may be made with the Department of Modern Languages and Classics for a tutorial class. Either the Graduate School Foreign Language Test (GSFLT) or a reading translation may be taken by the candidate, as determined by the department concerned. Other means of demonstrating appropriate language competence may be permitted, with the approval of the department, the Department of Modern Languages and Classics or other appropriate academic unit, and the dean of the Graduate School. Material for this examination will be selected jointly by the chairperson of the concerned department and the Department of Modern Languages and Classics or other appropriate academic unit. A student may use a language dictionary during the examination and will be permitted a maximum of three attempts to pass the examination for each language.

If the examination facilities for a particular additional language are not available at Ball State University, the student will be examined by a cooperating institution or agency. Additional language proficiency established at other institutions will be accepted by Ball State University if the proficiency is approved by the program director, the chairperson of either the Department of Modern Languages and Classics or other appropriate academic unit, and the dean of the Graduate School. If the student's committee chairperson has been appointed at the time the request for acceptance of additional language proficiency is being evaluated, the approval of the committee chairperson will also be necessary.

If the additional language Concentration is being followed, students must successfully complete the examination in one language by the time they complete one half of the Ball State University courses prescribed for their degree programs. The examination for the additional language, if any, must be successfully completed before the student will be permitted to take the comprehensive examinations.

DOC 700
A doctoral student may enroll in DOC 700 prior to admission to candidacy under special circumstances when not registered for regular graduate course work. DOC 700 is a 0-credit course at a fee of $75 that gives the student all the rights and privileges of a regular student. Registration in DOC 700 requires the approval of the student's committee chairperson, the departmental doctoral program director, and the dean of the Graduate School. Registration for DOC 700 is limited to any two academic year semesters.

Residence, Transfer, and Extension Work
There is no Graduate School residency requirement for doctoral students at Ball State University. However, individual programs may have a residency requirement to encourage doctoral students to focus on course work or research. It permits close collaboration with faculty and students; it fosters a familiarity with the university's libraries, computing resources, specialized collections, and other unique campus facilities.

SELECTIVE RETENTION

Satisfactory Graduate Grade-Point Average (GPA)
At all times after completing 9 credits of doctoral study, a student must maintain a cumulative GPA of at least 3.2 for courses taken toward the doctoral degree.

Probationary Status
A student will be placed on academic probation if his or her cumulative GPA for courses taken toward the doctoral degree falls below 3.2 at any time after completion of 9 credits. Probationary status will be removed if a student, in completing the next 9 credits, brings the cumulative GPA to at least 3.2 for all course work toward the doctoral degree. If probationary status is not removed, a student's admission to graduate study will be canceled, and additional graduate study will not be possible until the student has reapplied for regular admission and has been readmitted.

Readmission Procedure
A student seeking readmission must present to the dean of the Graduate School a written request approved by the doctoral program director and the chairperson of the major department. The decision to readmit will be made by the dean of the Graduate School.

Readmission Status
Upon readmission, the student will be reinstated to the classification held when graduate study was cancelled.

Time Allowed for the Doctoral Degree
It is important that doctoral students be current in their fields of study when they graduate. Therefore, after a student has been admitted to a doctoral program and has taken at least one approved course, all requirements for the degree must be met within a seven-year period. Any courses required for the degree taken before admission to a doctoral program are subject to approval by a student's doctoral committee. Evidence of current knowledge in the area may be required. Upon the recommendation of the department chairperson and with the approval of the graduate dean, an extension of the time allowed may be granted for one additional year. In rare cases, an additional one-year extension may be granted, provided the student can demonstrate significant progress on the dissertation. Extensions are based on academic considerations and are limited. The student requesting the extension of time allowed may be required to repeat preliminary examinations, to take additional course work, or both.

Comprehensive Examinations
Near the time course work is completed, each doctoral degree student will take a comprehensive examination in his or her major and cognate area(s), if applicable. Administration and evaluation of the examinations are the responsibility of the department or, at the

discretion of the department, a student's doctoral committee, hereafter referred to as the examining committee. The examining committee will determine with the student, well in advance of the examination, the course work and other preparation appropriate to the student's program of study to be represented in the examination. The examinations will be offered each academic semester, the time and place to be determined by the administering department or academic unit.

While the departments and academic units that house each doctoral program will determine the comprehensive examination format that is most appropriate for each respective discipline, all comprehensive examinations must meet the following general guidelines:

- A student must be in good academic standing to sit for the examinations. Good academic standing means that a student cannot be on academic probation and must have a cumulative GPA of at least 3.2.
- The comprehensive exam is one examination consisting of two parts, one written and one oral.
- The written examination will be taken during one week; exceptions must be approved by the program director and the student's doctoral committee. The oral examination will be taken within three weeks (exclusive of vacation periods) of the written examination.
- The examining committee will be made up of a minimum of four members with full graduate faculty membership and will evaluate the student's performance. The examining committee will decide if the student's written examination is of sufficient quality to proceed to the oral examination. All committee members responsible for the oral portion of the examination must participate in the orals unless excused in advance by the graduate dean.
- After completion of the orals, the committee decision for the entire examination will be either "pass" or "fail." A student may pass the entire examination with one dissenting vote. However, if two or more committee members dissent, the student fails the entire examination.
- The examining committee chairperson will send written notification of the outcome of the comprehensives to the student and the dean of the Graduate School after the completion of the orals.
- In the case of a failed comprehensive examination (see definitions below), the examining committee chairperson's written notification will include a statement of the reason or reasons for the failure and the time specified before the next examination.
- A failed comprehensive examination is defined as one of the following: 1) failure of both the written and oral portions; 2) failure of the written portion if the examining committee determines that the student should not proceed to the orals; or, 3) failure of the oral portion if the examining committee determines that the student was unable to correct deficiencies in the written portion. If the student meets any of the definitions of a failed exam, the entire exam (both written and oral portions) must be repeated.
- A failed comprehensive examination may be repeated only one time. The committee members who administered the first examination will also administer the retest.
- A student who fails to pass the second examination is ineligible to continue and is dismissed from the doctoral program.
- If more than seven years have elapsed after the student successfully completed the comprehensive examinations, the student must retake the entire examination.

Exceptions to the above guidelines must be approved in advance by the dean of the Graduate School.

Dissertation

The general supervision of the dissertation will be the responsibility of the student's committee chairperson. When needed, members of the committee will advise the candidate about the dissertation. The comprehensive examinations must be passed and the dissertation topic approved by the committee before the student enrolls for dissertation (DISS 799). The dissertation for a doctor of education degree candidate typically will be a study that will contribute to the solution of some important educational problem. The dissertation for a doctor of philosophy degree candidate will be a research problem that will contribute new knowledge or a new technique. The dissertation for the doctor of arts degree candidate may take the form of an original contribution to new knowledge; the production and use of innovative teaching materials such as the development of new teaching media, the writing of a textbook, or the designing of a curriculum or course of study; or the writing of a series of scholarly papers worthy of publication.

After the dissertation defense, the final approved copy, any accompanying materials, and an abstract (350 words in length, suitable for publication) must be filed with the Graduate School electronically. Although the department concerned has the responsibility for determining the manual or form to be followed in writing the dissertation, such matters as typeface, spacing, and professional typing standards must follow the specifications in Graduate School Requirements for Writing a Dissertation, available online and in the Graduate School office.

Final Dissertation Defense

All candidates for the doctoral degree are required to complete successfully an oral defense covering the dissertation, in defensible, final form, administered by their doctoral committee. The time and place of the defense will be announced at least 10 days in advance. All committee members must be supplied a copy of the dissertation well in advance of the scheduled defense to allow adequate time to

review the final product. This deadline will be determined by the committee. No defense will be given without all committee members present, unless prior consent is granted by the graduate dean in consultation with the chairperson of the examining committee and the absent committee member.

Two dissenting votes among members of the examining committee are required to fail a candidate. If one member of the examining committee dissents, the dissenting examiner and, if appropriate, the chairperson of the examining committee will file with the dean of the Graduate School a letter detailing the circumstances of the dissent.

If the candidate has failed the defense, the examining committee must prepare a report including reasons for failure and requirements to be met. The examining committee chairperson must file this report with the dean of the Graduate School within seven days from the date of the defense. Permission to defend for a second time must be obtained from the chairperson of the doctoral committee and the dean of the Graduate School. Failure to pass the second defense will result in termination of doctoral study.

Upon passing the final dissertation defense, the candidate will be formally recommended to receive the degree. Candidates must complete all degree requirements at least four weeks before the end of the semester or term in which they are certified for graduation.

SPECIAL CASES

Special cases involving policies not covered in this catalog will be submitted to the Graduate Education Committee for consideration and action. In general, the student's program committee has jurisdiction, but a student may appeal adverse decisions impacting their progress toward a graduate degree. See the "Graduate Student Appeals Process" for the guidelines for appeals.

CHECKLIST FOR DOCTORAL DEGREE

Procedure	Approved by	Date
Submit an application for admission. See individual department descriptions for additional application materials required.	Dean of the Graduate School; Departmental doctoral program director	Check with appropriate program director.
Obtain approval from the department doctoral screening committee for admission.	Departmental doctoral screening committee, Dean of the Graduate School	After all application materials have been submitted.
Establish doctoral committee and submit approved plan of study.	Doctoral program director and committee, Dean of the Graduate School	Within one year of beginning course work.
Complete foreign language exam(s) (if required).	Departmental doctoral committee	By the time half of required program course work has been completed (first exam).
Complete comprehensive exams.	Departmental doctoral committee	Near completion of course work.
Apply for admission to candidacy.	Departmental program committee, Dean of the Graduate School	Must have completed a minimum of 30 credits at Ball State, passed comprehensive exam, submitted an approved plan for the proposed dissertation, and passed any foreign language exam(s) before applying.
Apply for degree (graduation).	Dean of the Graduate School	No later than the end of the first four weeks of the last semester before graduation.
Complete final defense of the dissertation.	Doctoral program committee	At least six weeks before the end of the semester of term to be certified for graduation.
Submit final draft of dissertation.	Doctoral program committee, Dean of the Graduate School	At least four weeks before the end of the semester or term to be certified for graduation.

Deleted: and one copy of official transcripts

Deleted: Arrange with the Counseling Center to take the GRE (general test) or, for non-native speakers of English, other approved admissions tests.

Deleted: Dean of the Graduate School

Deleted: Before consideration by the department doctoral committee.

Formatted Table

GRADUATE STUDENT APPEALS PROCESS

I. Rationale

The purpose of this document is to outline procedures for an appeal and to specify recourse available to graduate students who believe that decisions have adversely influenced their progress in graduate school. It is the intent of Ball State University to address and resolve fairly and expeditiously appeals of graduate students. Students should refer to the *Code of Student Rights and Responsibilities* for more information.

II. Parties in the Appeal

The two parties in the appeal process shall include the appellant and the decision makers representing the unit having made the original adverse decision to be appealed, hereafter referred to as the "decision makers."

III. Basis for an Appeal

Graduate students may appeal adverse decisions impacting their progress toward a graduate degree. There are three permissible reasons to request an appeal:

- Allegation of violation of approved departmental, collegiate, and/or university policies, including those set forth in the *Graduate Catalog*.
- Allegation of unfair treatment on the part of the decision makers.
- Allegation of discriminatory treatment on the part of the decision makers.

Grade appeals should be conducted according to the process outlined in Section 6.5 of the *Code of Student Rights and Responsibilities*.

When an appellant alleges violation of approved departmental, collegiate, or university policies, including those set forth in the *Graduate Catalog*, then he or she must cite the specific policies that the decision makers failed to follow. When filing an appeal, the appellant must also provide a summary of the way(s) in which the policies were violated and how such violation(s) adversely affected the appellant.

Unfair treatment is defined as decisions that are arbitrary or capricious or are clearly not supported by the evidence. When an appellant alleges unfair treatment on the part of the decision makers, then he or she must cite the specific treatment engaged in by the decision maker. When filing an appeal, the appellant must also provide a summary of the reasons why the decision in question was clearly not merited by the evidence available to the decision makers and must also attach to the summary specific and detailed evidence in support of the reasons listed in the summary.

Discriminatory treatment is defined as decisions based upon constitutionally or statutorily prohibited reasons, including unlawful discrimination. When an appellant alleges discriminatory treatment on the part of the decision maker(s), then he or she must cite the specific treatment engaged in by the decision maker(s). When requesting an appeal, the appellant must also provide a summary of the prohibited reasons upon which he or she believes the decision was based. These prohibited reasons are contained within the Ball State University anti-discrimination policy. The appellant must provide a detailed summary of the evidence that supports the appellant's allegation.

When a request for reconsideration or appeal is filed that alleges discriminatory treatment on the part of the decision makers, a representative from the Office of University Compliance shall serve in an advisory capacity to the committee or hearing panel at each level of appeal.

IV. Actions of the Appellant

Appeals must be considered first at the departmental (if no appropriate department, appeal goes directly to the college) and college level before being forwarded to the Graduate Education Committee (GEC). Graduate students must initiate an appeal by submitting a formal written request for the adverse decision to be reviewed to the department chairperson (or college dean, if appropriate) within 10 working days of the date of the adverse decision.

V. Actions of the Department

If a request for an appeal is determined to have an appropriate claim by the department chairperson in consultation with the graduate program director or designate, then the appellant's decision maker(s) will reconsider the adverse decision. The appellant's decision maker(s) will render a decision within 15 working days of the department's receipt of the request for an appeal. Within five working days of the decision, the outcome will be communicated in writing to the student, the department chairperson, and the program director or designate.

VI. Appeal of Adverse Decisions

A graduate student may appeal an adverse departmental decision to the appropriate college dean's office. The appellant must submit a formal written request for a college appeal within 10 working days of the date of the adverse department decision. Within 15 working days of the receipt of the appeal in the college dean's office, the decision of the college dean must be communicated in writing to the appellant, the department chairperson, and the program director or designate.

Following adverse decision at the college level, a graduate student may appeal said decision by submitting a formal written request to the dean of the Graduate School within 10 working days of the notification of the adverse decision. The dean of the Graduate School will forward the appeal to the Graduate Education Committee (GEC) for resolution.

VII. Actions of the Graduate Education Committee

Upon receipt of a formal appeal, the Executive Committee of the GEC will review the request (See III for required materials). At the discretion of the Executive Committee, a determination will be made regarding the disposition of the request for appeal based only on the permissible reasons outlined in III above. Under all circumstances the Executive Committee will make the final determination of the status of the appeal within 10 working days of its receipt. There are no appeal procedures beyond the appeal to the Executive Committee of GEC.

Before an appeal can be considered, the appellant must show that alleged violations of the department, college, university, or Graduate School are a substantial failure to follow stated policies which negatively impacted academic progress.

If the Executive Committee of GEC determines that the appeal should go forward, it will appoint a Graduate Appeals Panel and establish an appeals file. The stakeholders, including the appellant, at least one department and one college representative, and the members of the Graduate Appeals Panel, must be given at least 10 working days notice of the hearing date, time, and place. The burden of proof is upon the appellant.

VIII. Graduate Appeals Panel

The Graduate Appeals Panel shall consist of three graduate faculty members and two graduate students. A designee of the dean of the Graduate School shall serve as a nonvoting ex officio member.

The members of the panel shall elect one of the three graduate faculty members as the panel chair. The graduate faculty members and graduate students serving on the panel shall not be members of the departments or colleges from which the appeal originates, nor shall they have a demonstrated conflict of interest in regards to the appeal.

IX. Graduate Appeals Hearing

Within 15 working days of receipt of a written appeal by the Graduate Appeals Panel, a hearing will be conducted with the Graduate Appeals Panel, the appellant, witnesses for the appellant, representative(s) of the decision makers, and other witnesses with direct information about the appeal (unless an extension is granted by the Executive Committee of the GEC).

The chairperson of the Graduate Appeals Panel shall conduct the hearing with a view for generating a complete understanding of the circumstances surrounding the appeal. As such, each party shall be granted up to 30 minutes of testimony to present relevant information to the panel. Parties may not question each other directly but may pose questions in writing to the panel chairperson, who may disallow the questions. The chairperson may also disallow documentation or witnesses. A testifying witness may only be in the hearing room when he or she is testifying or when the testifying witness is being questioned following rebuttal. The student shall be given the option of presenting first or second. Following the presentations, each party may request an additional five-minute rebuttal.

Following the rebuttal, members of the panel may question the parties and witnesses to clarify relevant details. The hearing may not be audiotaped or videotaped. The chairperson of the Graduate Appeals Panel will designate a secretary from the panel to keep minutes of the proceedings.

Immediately following the hearing, the Graduate Appeals Panel will consider the evidence and judge whether additional information is needed to inform its recommendation. Within five working days of the hearing, the panel must offer a written recommendation to the dean of the Graduate School whether to grant or deny the appeal. Copies of the recommendation must also be provided to the appellant, the decision makers, the dean of the college, and the chairperson of the Graduate Education Committee. The dean of the Graduate School must specify a recommended course of action to the appropriate parties.

X. Attendance at Hearing

In addition to the appealing party, the decision makers, and the members of the Graduate Appeals Panel, the following persons and no others will be permitted to attend the hearing: one current student or one full-time university employee invited by the appellant and one full-time university employee invited by the decision makers to assist the respective parties. Both parties may invite non-testifying witnesses, but said witnesses must be approved in advance by the Graduate Appeals Panel. Other university-affiliated person(s) whose presence is required for the hearing may also be approved by the Graduate Appeals Panel.

XI. Use of Witnesses for the Hearing

The appealing party or the decision makers may call witnesses as necessary. Witnesses must be affiliated with the university. The time used by the witness in her/his initial testimony shall be counted as part of the allotted time of the person who calls that witness. Time spent answering any questions by the other party or the Graduate Appeals Panel shall not be counted as part of the time allotted to the person who calls the witness.

The Graduate Appeals Panel may call or recall persons to give additional testimony concerning the issues involved in the case.

XII. Materials Used in Hearing

The appellant must provide copies of any previous departmental and college rulings. The student must also provide a written statement outlining the basis of the appeal and provide any supporting documentation, not to exceed a total of 20 pages.

The decision makers may present materials, not to exceed a total of 20 pages, no less than five days prior to the hearing. All records and decisions generated by the appeal shall be retained in the appeals file which shall reside in the office of the dean of the Graduate School for a period of 10 years, after which they shall be shredded.

XIII. Confidentiality of Appeal Hearing

The Graduate Student Appeals Panel members shall not retain in their possession any personal files, materials received during the appeal procedure, or notes taken during the meetings of the Graduate Student Appeals Panel. All copies of said materials shall be returned to the Graduate School by the Appeals Panel chairperson and shredded.

No party, Graduate Student Appeals Panel member, or other participant or observer in the appeal procedure shall reveal any facts, documents, or testimony gained through participating in or observing the hearing to any other person, unless required by a court of law to do so or upon the advice of the university's legal counsel.

XIV. Additional Procedures

The chairperson of the Graduate Student Appeals Panel, in consultation with the chairperson of the Graduate Education Committee or his/her designee and under specific, compelling facts, may modify procedures or establish additional procedures for the conduct of hearings in order to ensure that they are conducted in a fair and orderly manner, provided that such procedures shall not be inconsistent with the procedures stated herein. Whenever possible, all parties must be notified of any modifications and additions to procedures in advance of the hearing.

XV. Withdrawal of an Appeal

The appellant may submit a written request to withdraw the appeal at any time. The appeal file will be disposed in accordance to Section XII of this document.

XVI. Finality

The decision of the appeal by the dean of the Graduate School will be final. There are no appeals procedures at the university beyond the dean of the Graduate School.

FEES AND EXPENSES

FEES
An email notice will be sent to the student's BSU email account from The Office of Bursar and Loan Administration when the e-bill is created each month. To view or pay a student's account, or to print a paper copy of the eBill, go to ***bsu.edu/ebill***. A Ball State e-mail account is required to access the eBill account. It is recommended that students visit their eBill account on a regular basis for current account information.

Payments may be made through eBill using a checking or savings account, MasterCard, Discover, or American Express. VISA is *not* accepted. Please be aware that when making a payment by credit card, students will incur an additional convenience fee, which is set by the credit card companies. Payments can also be made by check, money order, cashier's check, or cash at the bursar's office, or sent through the mail.

Payments are due on the first day of each month. For a complete schedule of tuition, fees, and due dates, go to *bsu.edu/bursar*. The Ball State University Board of Trustees reserves the right to change the tuition and other charges for any semester or term.

DESCRIPTION OF TUITION
Tuition assessment is determined by the number of credits for which students enroll. An additional fee per credit is assessed all graduate students on courses taken for any type of credit. In addition, special fees and charges are assessed for certain courses and services. A complete listing of fees and other charges is available at *bsu.edu/bursar*.

WITHDRAWAL PROCEDURES
To withdraw from all courses during a semester or term, contact the office of the Associate Dean of Students/Title IX Coordinator (AD 238, 765-285-1545) and complete an application for withdrawal. Students are strongly encouraged to discuss their withdrawal intention with staff in this office before removing courses from their schedule.

If students withdraw from all courses, instructors will be notified. Each instructor will be asked to report the last day of attendance and a grade of W will be given for each course, provided the student withdrew by the published deadline. Grades of W will appear on the student's transcript but will not affect the GPA. Students must continue to attend classes until submitting a completed withdrawal form. If there are verifiable extenuating circumstances that make withdrawal from all courses necessary and academically justified after the withdrawal period, the Associate Dean of Students/Title IX Coordinator (or designee) may grant an exception to permit withdrawal. Faculty members will record the last date of attendance and a grade of W or F.

APPENDIX

ACCREDITATION AND PROFESSIONAL MEMBERSHIPS

Ball State University is accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools.

The university is approved by the American Association of University Women and the American Speech-Language Hearing Association.

The university holds memberships in many professional organizations, including the American Association of State Colleges and Universities, American Council on Education, American Association of Colleges for Teacher Education, Council of Graduate Schools in the United States, College Entrance Examination Board, Council for Advancement and Support of Education, National University

Continuing Education Association, National Association of State Universities and Land-Grant Colleges, National Association of Student Personnel Administrators, American College Personnel Association.

Architecture, Landscape Architecture, and Planning Accreditation
Architecture programs currently offered at Ball State University consist of: option one, a *pre-professional* undergraduate degree program combined with a *professional* graduate degree (4+2), that when earned sequentially, comprise an accredited professional education in architecture. The pre-professional degree *on its own* is not recognized as an accredited degree as required for professional licensure. The other accredited professional degree, option two, is a professional graduate degree program for students with an undergraduate degree in other fields of study other than architecture (not a pre-professional architecture degree). This second accredited graduate degree option allows students from other fields to make the transition into architecture. These two professional degree programs in the Department of Architecture are fully accredited by the National Architectural Accrediting Board (NAAB).

The professional degree programs of the Department of Landscape Architecture are fully accredited by the Landscape Architecture Accrediting Board (LAAB).

The professional programs of the Department of Urban Planning are fully accredited by the Planning Accreditation Board (PAB).

Speech-Language Pathology and Audiology Accreditation
The master of arts in speech-language pathology and the doctor of audiology are accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology of the American Speech-Language-Hearing Association.

Business and Accounting Accreditation
Both undergraduate and graduate programs in the Miller College of Business are fully accredited by the AACSB International. The accounting program, both undergraduate and graduate, holds separate AACSB accreditation.

Fine Arts Accreditation
Programs in the College of Fine Arts are accredited by the National Association of Schools of Art and Design, the National Association of Schools of Music, the National Association of Schools of Theatre, and the National Association of Schools of Dance. The Museum of Art is accredited by the American Association of Museums.

Nutrition and Dietetics
In the Department of Nutrition and Health Science, the dietetic internship is accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) of the Academy of Nutrition and Dietetics.

Nursing and Medical Education Accreditation
The Muncie Center for Medical Education is accredited as part of the Indiana University School of Medicine by the Liaison Committee on Medical Education, Association of American Medical Colleges. The master's degree in nursing and Doctor of Nursing Practice programs are accredited by the Indiana State Board of Nursing and the Commission on Collegiate Nursing Education.

Journalism, Mass Communication, and Public Relations Accreditation
The Department of Journalism is accredited by the Accrediting Council on Education in Journalism and Mass Communications. The public relations program in the Department of Journalism is certified by the Public Relations Society of America.

Educator Preparation, School Psychology, and Counseling Accreditation
All initial and advanced education-licensing programs are accredited by the Indiana Department of Education and the National Council for Accreditation of Teacher Education (NCATE)/Council for Accreditation of Educator Preparation (CAEP). Twenty-five educator preparation programs are nationally recognized by their respective professional associations. The EdS program in school psychology is accredited by the National Association of School Psychologists. The doctor of philosophy degrees in counseling psychology and school psychology are accredited by the American Psychological Association. The Council for Accreditation of Counseling and Related Educational Programs (CACREP) has conferred accreditation upon the school counseling and the clinical mental health counseling tracks. The rehabilitation counseling track is accredited by the Council on Rehabilitation Education (CORE).

Other

The EdS in Educational Psychology (School) is accredited by the National Association of School Psychologists (NASP) and the doctoral program in School Psychology is approved by NASP and accredited by the American Psychological Association (APA).

The program in medical technology offered through the Biology department. Students complete their clinical senior year at clinical affiliates, which are all accredited by the National Accreditation Agency for Clinical Life Sciences.

The associate degree program in radiography, offered through the Department of Nutrition and Health Science, is accredited by the Joint Review Committee on Education in Radiologic Technology.

The Legal Studies Program offered through the political science department is approved by the American Bar Association.

The Department of Social Work is accredited by the commission on Standards and Accreditation of the Council on Social Work Education.

The curriculum of the Chemistry Department is certified by the Committee on Professional Training of the American Chemistry Society.

Teaching major programs in the College of Sciences and Humanities that have been awarded national recognition are: English as a Second Language, recognized by Teaching English to Speakers of Other Languages (TESOL); School Health Education, recognized by the American Association for Health Education; Social Studies Education, recognized by the National Council for Social Studies; Mathematics Education, recognized by the National Council of Teachers of Mathematics; and, Language Arts Education, recognized by the National Council of Teachers of English.

The Department of Technology has the two accredited programs: Manufacturing Engineering Technology with ABET and Construction Management with American Council for Construction Education. Technology Education and Career and Technical Education hold National Council for Accreditation for Teacher Education (NCATE) standing.

INTERDEPARTMENTAL PROGRAMS

CERTIFICATE IN INSTITUTIONAL RESEARCH, 15 credits

Curriculum criteria

1. No transfer credit will be allowed.
2. Only members of the graduate faculty will teach courses included in the certificate program.
3. Students must achieve a 3.0 GPA in the certificate program to receive a certificate.
4. No course with a grade below a 2.0 can be counted toward a graduate certificate.
5. The student's official transcript shall contain not only the listing of courses taken in this program, but also will indicate successful completion of the program.
6. Students will receive a printed certificate acknowledging their completion of the program.

Admission requirements

1. Applicants pursuing only a certificate program will be admitted as non-degree students.
2. Applicants must complete an application form from the Office of Graduate Admissions and provide official transcripts from the institution granting the baccalaureate degree and each institution attended for undergraduate and graduate work.
3. Standards for admission
   a. Hold an earned bachelor's degree from a college or university that is accredited by its regional association.
   b. Satisfy one of the following:
      - An undergraduate cumulative GPA of at least 2.5 on a 4.0 scale (all undergraduate course work, including work completed prior to the baccalaureate, is used to calculate the GPA).
      - A cumulative GPA of at least 2.75 on a 4.0 scale in the latter half of the baccalaureate.
   c. Students not meeting these criteria may be considered for admission at the discretion of the certificate program director.
4. Students who are currently enrolled in the Graduate School and who wish to pursue this certificate program must apply for admission to the program before 6 of the credits are completed.
5. Graduate students enrolled only in a certificate program may not hold a graduate assistantship.
6. Students may be enrolled full-time or part-time in the certificate program.
7. Students who are currently enrolled in a graduate program of study leading to a degree who wish simultaneously to pursue this graduate certificate program must inform the Graduate School of their intent to seek the graduate certificate.
8. Completion of a graduate certificate does not guarantee admission into a graduate degree program.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
ID	602	Institutional Research	3
Research methods, 3 credits from			
CPSY	653	Research Counseling Guidance (3)	
EDPS	640	Research Methods (3)	
PSYS	680	Research Methods in Psychology (3)	
SOC	600	Research Methods: Qual & Quant (3)	3
Statistics, 3 credits from			
EDPS	641	Intro Statistical Methods (3)	
	642	Analysis of Variance (3)	
SOC	682	Social Statistics (3)	
	684	Adv Sociological Data Analy (3)	3
Electives, 3 credits from			
EDPS	646	Tests and Measurements (3)	
	730	Nonparametric Statistics (3)	
EDST	650	Intro to Qual Res (3)	
	660	Ethno Res in Ed (3)	
	671	Eval of Ed Prgrms (3)	
SOC	681	Survey Research Methods (3)	
SOPS	610	Social Psychology (3)	
	640	Social Psychology of Attitudes (3)	3
Practicum, 3 credits from			
(requires approval of certificate program director)			
EDAC	699	Intern in Ad and Comm Ed (2-6)	
EDHI	699	Pract in Stud Aff Admin (3)	
PSYS	686	Applied Practicum (3-6)	
SOC	588	Internship 3: Field Experience (1-3)	
SOPS	695	Intern in Appl Soc Psych (3)	3
			15 crs

SUSTAINABILITY (SUST)

510 Sustainability Foundations: Atmosphere Systems (1) Introduction to the atmosphere and to processes, through its physical and chemical components, and the interactions among the many additional factors that produce weather and climate, as well as interactions of the atmosphere with the oceans, within the broad social and economic issues which relate to understanding the atmosphere as a system.

511 Economic Sustainability: Ecological Systems (1) Introduction to the principles and dynamics of ecological systems at the population, community, ecosystem, and biome levels. Study of the effects of physical and biological conditions on the abundance, distribution, and diversity of plants and animals. Emphasis on human impacts on ecosystems and the provision of ecosystem services, and the related issues of conservation, planning, and restoration of ecological systems.

512 Environmental Sustainability: Soils (1) Introduction to the principles and dynamics of soil formation and the potentials for damage. Examination of the physical and chemical properties of soils and their role in agricultural production, storm water filtration, and aquifer recharge, and support of biota in the varying biomes of the world.

513 Environmental Sustainability: Material Resources and Waste (1) Introduction to concepts, issues, and practices surrounding the use of material resources and waste streams. Emphasis on reducing the environmental and human health impacts of materials and waste. Study of resource conservation, reuse, and recycling; and solid, liquid, and molecular waste stream reduction. Emphasis on the whole life cycle of materials from cradle to grave, or cradle. Discussion of the Living Product Challenge, Design for Sustainability, and Cradle to Cradle.

514 Water Resources (1) Introduction to and evaluation of water security issues, including how climate, population, economic growth, technological changes, and other socioeconomic factors affect the water supply and demand imbalances.

515 Social Sustainability: Food Systems (1) Introduction to domestic and global food production, supply, and consumption, both historically and projected to future likelihoods. Differentiation of food systems by cultural groups with an emphasis on the full life-cycle of food within a society. How political, sociological, and ecological structures shape consumption will be emphasized. Considerations of human health, environmental impacts, and ethical questions of food are addressed.

516 Economic Sustainability: Energy Resources (1) Introduction to the sourcing, distribution, and use of energy. Examination of conventional fossil-fuel systems and more contemporary alternative energy and green power sourcing, distribution, and use. Comparative study of distributed energy networks against centralized systems.

519 Economic Sustainability: Environmental Law (1) Critical investigation of the American political and legal system in shaping possible responses to issues of environmental sustainability. Topics may include: the foundations of environmental law, the process of environmental law-making and implementation; the role of the courts; and specific controversies regarding pollution regulation, energy production, and land use management/planning.

520 Economic Sustainability: Environmental Ethics (1) Critical examination of central concepts, principles, theories, and issues in environmental ethics. Topics may include: environmental theory, history of ethics, animal rights, population ethics, future generations, climate ethics, the ethics of activism, and corporate responsibility.

521 Social Sustainability: Human Health and Well-Being (1) Introduction to concepts, issues, and practices related to individuals living together while maximizing human potential and shared values and minimizing social breakdown and violence. Initially will investigate basic human needs for survival. Exploration will then expand to encompass societal provisions and expectations that lead to human flourishing across the lifespan, such as livability, cultural competence, health and health equity, social support, participatory governance, and human resilience.

523 Social Sustainability: Populations (1) Introduction to historical and recent trends in the fundamental demographic variables affecting human population change (growth or decline) at the global as well as at national and sub-national scales. Emphasis on rate of natural increase, total fertility rates, and life expectancies. Additional investigation of demographic variables as they influence (or are influenced by) human health, epidemiology, culture, technological threats, lifestyles, and health policies/technologies.

524 Social Sustainability: Social and Environmental Justice (1) Survey of principles of justice: libertarianism, welfare liberalism, and socialism. Distribution of environmental benefits and burdens across bioregions, populations, and markets, including indigenous rights, environmental racism, food security, and climate change treaties. Evaluation of various models of public participation in environmental decision making.

525 Interior Material Finishes and Sustainability (1) Introduction to interior material finishes and their environmentally sustainable properties. Emphasis will be on the importance of sourcing appropriate materials and finishes to ensure the health, safety, and welfare of building occupants as well as navigating material resources and verification systems to discern and provide the most socially, environmentally, and economically viable sustainable products for sustainable interiors.

528 Social Sustainability: Waste and Human Health (1) Introduction to concepts and issues that guide human practices influencing material consumption patterns as they generate resource depletion and waste/pollution, and impact upon human health conditions. Emphasis on reducing material flow-through in society, addressing best practices for treating waste/pollution, and reducing the conditions that negatively influence human health by our practices of material consumption and waste generation.

529 Economic Sustainability: Business Ethics and the Environment (1) Survey of fundamental principles of business plans and models for achieving operational sustainability. Topics may include: ethical materials sourcing, industrial ecology principles, "cradle-to-cradle" production models, justice in human resources practices, and corporate green washing.

530 Economic Sustainability: Modeling, Analytics, and Reporting for Business (1) Introduction to internationally-sanctioned protocols for analyzing the social, economic, and environmental impact of business practice. Includes the analysis of human resource management, supply chain networking and logistics, and the economic benefits/trade-offs of localized sourcing of feed stocks, components and assemblies, and whole system service delivery.

531 Economic Sustainability: Modeling for Business (1) Introduction to internationally-sanctioned protocols for documenting the social, economic, and environmental impact of business practice. Includes the study of human resource management, supply chain networking and logistics, and the economic benefits/trade-offs of localized sourcing of feed stocks, components and assemblies, and whole system service delivery.

532 Economic Sustainability: Reporting for Business (1) Introduction to internationally-sanctioned protocols for reporting the social, economic, and environmental impact of business practice. Includes the reporting of human resource management, supply chain networking and logistics, and the economic benefits/trade-offs of localized sourcing of feed stocks, components and assemblies, and whole system service delivery.

535 Internal Communications for Sustainability Professionals (1) Introduction to principles of internal communications.

536 Economic Sustainability: Ecological Economics (1) Evaluation of environmental goods and services include raw materials, watershed functioning, nitrogen cycling, and carbon sink capacities. Principles for translating the valuation of environmental goods and services into the market terms of sustainability, including market distortions and discounting.

537 Media Relations for Sustainability Professionals (1) Introduction to how journalists do their jobs; what the needs and the strengths and weaknesses are of different news media platforms, e.g., broadcast, print, online, social media; how to prepare for an interview with a journalist and the tools best used to communicate stories to the news media.

550 Survey of Sustainability Principles and Implementation Practices (3) This 3-credit course provides a wide-ranging survey of literature in the field of whole systems thinking and the principles and foundations of social, economic, and environmental sustainability in corporate, governmental, and public enterprise. Extensive review of topical literature and accepted models for projection of future developments and impacts from the adoption of best practices in corporate, governmental, and public enterprise are examined.

600 Application of Sustainability Principles, Theories, and Case Study Practices (3) Provides opportunity for students to define targets of opportunity and select a case study engagement for the application of the principles of sustainability in social, environmental, and economic contexts. Students are encouraged to shape a game plan for implementation suitable to their current work environment, their community setting, and/or personal enterprise.

ASIAN STUDIES

ASIAN STUDIES (ASIA)

598 Asian Studies: Selected Readings (3) Topics for independent study and research to be chosen and investigated in consultation with the department and instructor involved.

Prerequisite: permission of the program director.

A total of 6 credits may be earned, but no more than 3 in any one semester or term

INTERDEPARTMENTAL COURSES

CREATIVE PROJECT (CRPR)

698 Creative Project (3 or 6) Must be taken for a total of either 3 or 6 credits. Offered credit/no credit only.

Prerequisite: permission of the graduate advisor.

DOCTORAL CANDIDATE (DOC)

700 Doctoral Candidate (0) May be taken no more than two times prior to admission to candidacy. See page 27 for details. Offered credit/no credit only.

Prerequisite: requires the approval of the student's committee chairperson, the departmental doctoral program director, and the dean of the Graduate School.

DOCTORAL DISSERTATION (DISS)

799 Doctoral Dissertation (1-24) A total of 24 credits may be earned. Must be taken for a minimum of 10 credits. Must also be taken for three credits each academic semester after candidacy and enrollment in the minimum required by the department if not registering for a course or courses until the final copy of the dissertation is deposited in the Graduate School. A doctoral candidate in an externally accredited program that requires an internship experience is exempt from continuous enrollment while registered for internship credit. See page 26 for Stage 3 of doctoral requirements for details. Offered credit/no credit only.

Prerequisite: permission of the graduate advisor.

INTERDEPARTMENTAL (ID)

601 Teaching Practicum in Higher Education (3) Students complete a supervised experience in a college classroom relevant to their own area of study.

Prerequisite: EDHI 609 and 610 or equivalent; permission of the instructor.

602 Institutional Research (3) Provides an introduction to the field of institutional research. Exposes students to the theory and practice within the field, which is a unique combination of research methodology, data analysis, education policy, and applied research.

605 Academic Colloquium (1) Provides an opportunity to discuss research projects, scholarly advances in the discipline, and professional development. Offered credit/no credit only.

Prerequisite: permission of the program director or department chairperson.

A total of 10 credits may be earned, but no more than 1 in any one semester or term.

695 Immersive Experience for Graduate Students (1-9) An interdisciplinary immersive project resulting from collaboration among university and community members. Students may work independently or as part of project teams in consultation with a member of the graduate faculty with competence in the project area.

Prerequisite: permission of the dean of the Graduate School.

A total of 9 credits may be earned.

705 Research Colloquium (1-3) Doctoral candidates will present dissertation proposals for study and analysis. Related issues in research will be considered.

Prerequisite: permission of the department chairperson.

A total of 2 credits must be earned but departments may require a total of 3 credits.

A total of 3 credits may be earned.

Open only to doctoral students.

MASTER'S CANDIDATE (MAST)

600 Master's Candidate (0) After receiving approval for RES 697 or THES 698, all master's degree candidates must be registered each semester during the academic year. If not registering for a course or courses, the candidate will register for MAST 600 Master's Candidate for a fee of $75. Registration in MAST 600 is not required during the summer. Registration in MAST 600 will give the master's candidate the rights and privileges of a regular student.

A master's candidate may also take MAST 600 under other circumstances when not registered for a course or courses—for instance, while working off an incomplete grade—with the approval of the candidate's committee chairperson, the department advisor, and the dean of the Graduate School. Offered credit/no credit only.

Open only to master's students.

RESEARCH PAPER (RES)

697 Research Paper (1-3) Must be taken for a total of 3 credits. Offered credit/no credit only.

Prerequisite: permission of the graduate advisor.

TECHNOLOGY PREPARATION (TPRE)

590 Implementing the Technology Preparation Curriculum (3) Focuses on issues and processes used to develop curriculum that effectively incorporates technology preparation concepts. Individuals and committees receive guidance in writing curriculum.

595 Instructional Strategies in the Technology Preparation Curriculum (3) Focuses on interdisciplinary, competency-based content; planning and using instructional strategies; and assessment of student progress in the technology preparation (tech prep) curriculum.

690 Leading Technology Preparation Programs (3) Instruction of secondary administrators and technology preparation (tech prep) project managers in effective implementation strategies and methods used to develop, implement, and maintain a successful local technology preparation program.

691 Counseling in Technology Preparation Programs (3) Emphasizes career development of adolescents; relationships among career choice, lifestyle, psychosocial, and reality concerns in life career development; and application of theories to recruiting, guiding, and counseling technology preparation (tech prep) students in the school system.

THESIS (THES)

698 Thesis (1-6) Must be taken for a total of 6 credits. Offered credit/no credit only.

Prerequisite: permission of the graduate advisor.

COLLEGE OF ARCHITECTURE AND PLANNING

bsu.edu/cap
Architecture Building 104, 765-285-5859
Interim Dean: Dave Ferguson
Interim Associate Dean: Tarek Mahfouz

The College of Architecture and Planning, established by the Indiana Legislature in 1965, is dedicated to the development of professional competency in the functional, aesthetic, and humane design of the physical environment. The primary mission of the college is to offer undergraduate and graduate education programs of high quality in architecture, landscape architecture, and urban and regional planning and such related subjects as historic preservation and urban design. The college also stresses scholarly and creative activity as well as public service, including educational service to university students, professionals, and the general public. The college enrolls approximately 750 students and has more than 60 faculty and professional staff members. Because members of the college faculty have a wide variety of educational and experiential backgrounds and expertise, they approach their work in different ways. The curricula stress dedication, leadership, initiative, and a strong commitment to creativity, technical skill, and social and professional responsibility.

The facilities features extensive resources especially in the area of design, digital design, fabrication, and visualization. These resources are accessible to both students and faculty. The architecture library contains more than 27,000 volumes. The Drawings and Documents Archive maintains architectural, planning, and landscape architectural drawings and other materials documenting significant historic sites and structures in Indiana. Each student is assigned individual workspace in a studio. Additional facilities in the college include wood and metal shops, design build lab, virtual reality simulation lab, computer labs, laser cutters and 3D printing labs.

Architecture programs currently offered at Ball State University consist of: concentration one, a pre-professional undergraduate degree program combined with a professional graduate degree (4+2), that when earned sequentially, comprise an accredited professional education in architecture. The pre-professional degree on its own is not recognized as an accredited degree as required for professional licensure. The other accredited professional degree, concentration two, is a professional graduate degree program for students with an undergraduate degree in other fields of study other than architecture (not a pre-professional architecture degree). This second accredited graduate degree option allows students from other fields to make the transition into architecture. These two professional degree programs in the Department of Architecture are fully accredited by the National Architectural Accrediting Board (NAAB). Next accreditation visit for the department of Architecture is 2021.

The professional degree programs of the Department of Landscape Architecture are fully accredited by the Landscape Architecture Accrediting Board (LAAB). Next accreditation visit for the department of Landscape Architecture is 2016.

The professional programs of the Department of Urban Planning are fully accredited by the Planning Accreditation Board (PAB). Next accreditation visit for the department of Urban Planning and Development is 2017.

Certificate in Planning and Design of Healthcare Environments, 12 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
IDES	610	Evidence Based Design	3
	612	Legal Ethical Safety Issues	3
	614	Healthy Environ for Patient	3
	616	Research in Healthcare Design	3
			12 crs

URBAN DESIGN

bsu.edu/urbandesign
Indianapolis Center 302, 317-829-1025

MASTER OF URBAN DESIGN (MUD), 32 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
CAP	651	Research Methods	3
UD	501	UD Studio 1: Sust Urban Syst	2
	502	UD Studio 2: Urban Mobility	2
	503	UD Studio 3: Comm-Bsd Sust Des	2
	601	UD Studio 4: Pub Realm Des	2
	602	Urban Design Capstone	4
	640	History of Urban Form	3
	690	Reflective Synthesis	2
			20 crs

Design Communication Modules, must complete 7 credits from

PLAN	512	Intro to GIS for Urban Plan (3)	
UD	561	UD Communications 1 (3)	
	562	UD Communications 2 (3)	
	569	Topical Computer Graphics Work (1)	
	663	Urban Design Visualization (3)	7

Urban Design Theory Modules, must complete 3 credits from

PLAN	510	Planning Law (3)	
	585	Intro Comm Dev and Enter Plng (3)	
UD	598	Special Projects Urban Design (1-3)	3

Urban Design Colloquia, must complete 2 credits from

UD	637	UD Topics and Colloquia (1-4)	2
			32 crs

CERTIFICATE PROGRAMS

Certificate in Real Estate Development, 16 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
PLAN	510	Planning Law	3
	511	Property Law	1
	585	Intro Comm Dev and Enter Plng	3
	586	Methods of Public Interest Dev	3
			10 crs

Electives, 6 credits from

BL	665	Law, Ethics, Pub Pol and Bus (3)	
CAP	651	Research Methods (3)	
HSC	582	Environmental Health (3)	
PLAN	512	Intro to GIS for Urban Plan (3)	
	530	Hous and Comm Development (3)	
	590	Ind Study in Plannng (1-9)	
	598	Spec Proj Urb and Regl Plannng (3-9)	
	612	Community Development Studio (3)	
	620	Human Impact Analysis (2)	
	621	Environmental Impact Analysis (1)	
	626	Human Settlements (1)	
	627	Ecology of Planning (1)	
	628	Economics of Planning (1)	
	632	Studio Comm Dev and Ent Plannng (3)	
PMGT	525	Adv Mgt of Government Housing (3)	
	615	Senior Housing Option (3)	
	696	Property Management Seminar (3)	
UD	501	UD Studio 1: Sust Urban Syst (2)	
	503	UD Studio 3: Comm-Bsd Sust Des (2)	
	561	UD Communications 1 (3)	
	562	UD Communications 2 (3)	
	569	Topical Computer Graphics Work (1)	
	598	Special Projects Urban Design (1-3)	
	637	UD Topics and Colloquia (1-4)	
	640	History of Urban Form (3)	
	663	Urban Design Visualization (3)	6
			16 crs

Independent study and variable-title courses such as PLAN 598 require permission of the RED program director to count for RED credit. See the Department of Urban Planning for additional information.

COLLEGE OF ARCHITECTURE AND PLANNING (CAP)

500 Community-Based Projects Workshops (1-3) Independent study in urban design, planning, landscape architecture, and architecture, offered in conjunction with the college's Community-Based Projects Program. A multidisciplinary approach to problem solving in collaboration with faculty and professional consultants.

Prerequisite: permission of Community-Based Projects coordinator.

A total of 3 credits may be earned.

505 Context for Design and Planning (2) An intensive immersion introducing principles and introductory skills necessary to the design and planning of the environment. May include field study, historical case studies, philosophical issues, overview of professional practice skills, technology, vocabulary and concepts, and opportunities for interdisciplinary studies.

Prerequisite: permission of the instructor.

581 Introduction to Computer-Aided Design 1 (3) Introduction to two-dimensional computer-aided design (CAD) using micro- and large-computer CAD systems, hardware and operating system concepts, and drawing editing commands. Emphasizes environmental design and planning applications.

Prerequisite: permission of the dean of the College of Architecture and Planning.

582 Introduction to Computer-Aided Design 2 (3) A continuation of CAP 581 in a three-dimensional environment.

Introduction to the drawing environment, view manipulation, projections, coordinate systems, and hidden-line and hidden-surface shading. Emphasizes environmental design and planning applications.

Prerequisite: CAP 581; permission of the dean of the College of Architecture and Planning.

598 Special Projects in the College of Architecture and Planning (1-3) Special projects in the College of Architecture and Planning undertaken by groups under faculty direction.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

Open only to CAP graduate students, or by permission of the associate dean.

651 Research Methods (3) Introduction to methods and techniques in the design, preparation, and execution of urban design research. Emphasis will be on procedures and techniques for the development of critical evidence-based urban design.

Prerequisite: graduate status and permission of the MUD program coordinator.

URBAN DESIGN (UD)

501 Urban Design Studio 1: Sustainable Urban Systems (2) Studio/project-based introduction, fostering the understanding of methods and systems analysis and development that lead to the design of sustainable urban settlements. The interplay of context, culture, design, and performance are highlighted through complex urban design projects.

Prerequisite: permission of the MUD program coordinator.

A total of 4 credits may be earned, but no more than 2 in any one semester or term.

Open only to College of Architecture and Planning students.

502 Urban Design Studio 2: Urban Mobility (2) Studio/project-based study of contemporary multimodal urban mobility systems. The interrelationship of pedestrian, as well as vehicular traffic systems and their impact on urban design and development are highlighted through complex urban design projects. Programming as well as implementation of contemporary mobility systems will be explored through research analysis and the study of implementation strategies.

Prerequisite: permission of the MUD program coordinator.

A total of 4 credits may be earned, but no more than 2 in any one semester or term.

Open only to College of Architecture and Planning students.

503 Urban Design Studio 3: Community-Based Sustainable Design (2) Explores the interpretive dimensions of community, politics, and culture. Encourages critical thinking and studies the relationship of ethics, politics, and development. Sustainability, equity, and justice in urban design will be examined through context-rich community-based projects.

Prerequisite: permission of the MUD program coordinator.

A total of 4 credits may be earned, but no more than 2 in any one semester or term.

Open only to College of Architecture and Planning students.

561 Urban Design Communications 1 (3) Urban design communication theory, techniques, and media 1. The study of the design and development of effective oral, written, and graphic public design presentations. The study and application of new technologies including digital and visual media in the exploration of complex urban design projects.

Prerequisite: permission of the MUD program coordinator.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

Open only to College of Architecture and Planning students.

562 Urban Design Communications 2 (3) Design communication theory, techniques, and media 2. Design and development of effective urban design communication strategies using new mass publishing technologies including newspapers, World Wide Web, and video.

Prerequisite: permission of the MUD program coordinator.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

Open only to College of Architecture and Planning students.

569 Topical Computer Graphics Workshop (1) Various topical computer workshops designed to explore specific computer applications in urban design.

Prerequisite: permission of the MUD program coordinator.

598 Special Projects in Urban Design (1-3) Directed elective projects in urban design undertaken by groups or individual students.

Prerequisite: graduate status and permission of the MUD program coordinator.

A total of 9 credits may be earned, but no more than 3 in any one semester or term.

601 Urban Design Studio 4: Public Realm Design (2) Focuses on the study of urban, shared spaces in the public realm including public streets and plazas. Students will be engaged in the study and exploration of the principles of public open space design. Methods of planning and designing active people spaces will be examined through site-specific design problems.

Prerequisite: permission of the MUD program

coordinator.

A total of 4 credits may be earned, but no more than 2 in any one semester or term.

Open only to College of Architecture and Planning students.

602 Urban Design Capstone (4) Student-defined capstone urban design project developed through an urban design question exploring specialized areas of interest and concentration. Each student project is self-generated and defined. Projects must meet graduate school creative project requirements.

Prerequisite: UD 502 or 503 or 601; permission of the MUD program coordinator.

637 Urban Design Topics and Colloquia (1-4) Various urban design seminars will be offered. Each seminar will explore timely issues related to urban design practice and theory. Degree-seeking students must complete a minimum of 4 credits of urban design topics and colloquia.

Prerequisite: permission of the MUD program coordinator.

A total of 4 credits may be earned.

640 History of Urban Form (3) The survey of the history of urban form exploring the design of major cities and urban centers. Students will develop an understanding of significant precedent in urban design. Layout of major urban centers will be studied through presentations, readings, and lectures. Physical form and regional influences will be systematically studied.

Prerequisite: permission of the MUD program coordinator.

663 Urban Design Visualization (3) Theory and application of 3-D digital visualization in the preparation of visual representations, videos, and simulations of urban design projects. 3-D modeling, rendering, fly through, and architectural animation will be explored.

Prerequisite: permission of the MUD program coordinator.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

Open only to College of Architecture and Planning students.

690 Reflective Synthesis (2) Directed writings reflecting on capstone project completed through UD 602. Critical evaluation of the final design and analysis of UD 602 urban design capstone. Attention to transferable and applied knowledge is required. Largely dedicated to the publication of project findings.

Prerequisite: permission of the MUD program coordinator.

A total of 4 credits may be earned, but no more than 2 in any one semester or term.

Open only to College of Architecture and Planning students.

ARCHITECTURE

bsu.edu/architecture
Architecture Building 402, 765-285-1900

PROGRAMS

Master of architecture (MArch); master of architecture II (MArch II); and master of science (MS) in historic preservation.

The master of architecture is for those seeking licensure in the profession and is accredited by the NAAB (National Architectural Accrediting Board). We offer two concentrations for completing the master of architecture (MArch) professional degree.

- Two-year (concentration 1) MArch program for those who have an undergraduate degree in architecture from universities offering an accredited architecture program (begins fall semester).
- Three-year (concentration 2) MArch program for those holding a bachelor's degree in a field other than architecture (begins summer semester).

In the United States, most registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit professional degree programs in architecture offered by institutions with the U.S. regional accreditation, recognizes three types of degrees: the Bachelor of Architecture, the Master of Architecture, and the Doctor of Architecture. A program may be granted an eight-year, three-year, or two-year term of accreditation, depending on the extent of its conformance with established educational standards.

Doctor of Architecture and Master of Architecture degree programs may require a preprofessional undergraduate degree in architecture for admission. However, the preprofessional degree is not, by itself, recognized as an accredited degree.

Ball State University's Department of Architecture offers the following NAAB-accredited degree programs:

M.Arch. (preprofessional degree + 48 graduate credits)
M. Arch. (non-professional degree + 106 credits)

Next accreditation visit for all programs: 2021

The master of architecture II (MArch II) is for those who have completed their master of architecture professional education and wish to pursue research-oriented academic studies. This post-professional degree does not lead to licensure in the profession and is not accredited by NAAB (National Architectural Accrediting Board).

The master of science (MS) in historic preservation meets the standards of the National Council for Preservation Education. This degree is designed for students from a variety of undergraduate backgrounds who are interested in rejuvenating, revitalizing, preserving, and finding new uses for historic buildings and landscapes.

MASTER OF ARCHITECTURE, 48-54 credits

Admission requirements

Applicants need to apply to the Graduate School for admission to Ball State University. U.S. applicants must apply to Ball State University via the Graduate School. International applicants must apply to Ball State University via the Rinker Center for International Programs. All applicants need to submit required materials for admission to the Department of Architecture.

Degree requirements for the two-year (Concentration 1) MArch

All students must complete a minimum of 48 credits, consisting of a set of core seminar and architecture studios (30 credits); a minimum of one required building practices and technology seminar (3 credits); a minimum of one required critical thinking and representation seminar (3 credits); a minimum of four electives (12 credits); and an immersive away experience (0 credits).

Required courses in the two-year (Concentration 1) MArch

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
ARCH	501	Compr Arch Studio	6
	503	Res Meth in Arch	3
	520	Professional Practice	3
	555	Immersive Away Experience	0
	600	Architecture Workshop	3
	601	Architecture Topics Studio	6
	602	Final Arch Proj Studio	6
	603	Final Proj Prep	3
			30 crs

Building Practices and Technology seminar: focuses on the technical aspects of design, systems, and materials and their application to architectural solutions and the impact of such decisions on the environment are well considered.

Building Practices and Technology seminar, 3 credits from

ARCH	632	High Performance Buildings (3)	
	633	Adv Tech for Grn Bldng (3)	
	634	Advanced Fabrication (3)	
	636	Bldg Prac and Technology 1 (3)	
	637	Bldg Prac and Technology 2 (3)	3

Critical Thinking and Representation seminar: Graduates build abstract relationships and understand the impact of ideas based on the study and analysis of multiple theoretical, social, political, economic, cultural, and environmental contexts. Graduates must also be able to use a diverse range of skills to think about and convey architectural ideas, including writing, investigating, speaking, drawing, and modeling.

Critical Thinking and Representation seminar, 3 credits from

ARCH	640	History, Theory, and Criticism (3)	
	641	Citznshp, Wrldvews, Pub Sphere (3)	
	642	Architectural Theory (3)	
	644	Theories of Sustainability (3)	
	646	Crit Think and Represent 1 (3)	
	647	Crit Think and Represent 2 (3)	3

Electives, 12 credits from
A minimum of four elective graduate courses are required; may include ARCH 590 (Independent Study) and ARCH 598 (Special Project in Architecture) and any graduate course at Ball State University approved by the graduate program director. 12

48 crs

Degree Recap for Concentration 1
Core requirements (30 credits)
Building practices and technology (3 credits)
Critical thinking and representation (3 credits)
Electives (12 credits)
Immersive away experience (0 credits)

Total required graduate credit for the MArch Concentration 1 48 crs

Degree requirements for three-year (Concentration 2) MArch

Students are admitted as graduate students on a conditional basis. They must complete a number of preparatory courses (maximum 52 undergraduate + 6 graduate credits) listed below. The number of preparatory courses required for

successful completion is based upon evaluation of prior academic work. Upon completion, all students must complete a minimum of 48 graduate credits, consisting of a set of core seminar and architecture studio courses (30 credits); a minimum of one required building practices and technology seminar (3 credits); a minimum of one required critical thinking and representation seminar (3 credits); a minimum of four electives (12 credits); and an immersive away experience (0 credits).

Preparatory courses, 58 credits maximum (maximum 52 undergraduate + 6 graduate credits)

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Undergraduate preparatory:			
ARCH	103	Architectural Design Studio	6
	163	Arch Comm Media	4
	203	Arch Design Studio	4
	214	Arch Build Tech 1	3
	218	Structural Systems 1	3
	229	History of Architecture 1	3
	251	Social and Env Justice in Dsgn	3
	263	Digital Design	3
	273	Environmental Systems 1	3
	304	Architectural Design Studio	5
	314	Arch Build Tech 2	3
	318	Structural Systems 2	3
	329	History of Architecture 2	3
	373	Environmental Systems 2	3
	418	Structural Systems 3	3
Total undergraduate preparatory courses potentially required (based on evaluation of prior academic work):			52 crs
Graduate preparatory:			
ARCH	500	Architectural Design Studio	6
Total graduate preparatory courses potentially required (based on evaluation of prior academic work):			6 crs

Required courses in the three-year (Concentration 2) MArch

ARCH	501	Compr Arch Studio	6
	503	Res Meth in Arch	3
	520	Professional Practice	3
	555	Immersive Away Experience	0
	600	Architecture Workshop	3
	601	Architecture Topics Studio	6
	602	Final Arch Proj Studio	6
	603	Final Proj Prep	3
			30 crs

Building Practices and Technology seminar: focuses on the technical aspects of design, systems, and materials and their application to architectural solutions and the impact of such decisions on the environment are well considered.

Building Practices and Technology seminar, 3 credits from

ARCH	632	High Performance Buildings (3)	
	633	Adv Tech for Grn Bldng (3)	
	634	Advanced Fabrication (3)	
	636	Bldg Prac and Technology 1 (3)	
	637	Bldg Prac and Technology 2 (3)	3

Critical Thinking and Representation seminar: Graduates build abstract relationships and understand the impact of ideas based on the study and analysis of multiple theoretical, social, political, economic, cultural, and environmental contexts. Graduates must also be able to use a diverse range of skills to think about and convey architectural ideas, including writing, investigating, speaking, drawing, and modeling.

Critical Thinking and Representation seminar, 3 credits from

ARCH	640	History, Theory, and Criticism (3)	
	641	Citznshp, Wrldvews, Pub Sphere (3)	
	642	Architectural Theory (3)	
	644	Theories of Sustainability (3)	
	646	Crit Think and Represent 1 (3)	
	647	Crit Think and Represent 2 (3)	3

Electives, 12 credits from

A minimum of four elective graduate courses are required; may include ARCH 590 (Independent Study) and ARCH 598 (Special Project in Architecture) and any graduate course at Ball State University approved by the graduate program director. 12

48 crs

Degree Recap for Concentration 2

Preparatory graduate courses (6 credits)
Core requirements (30 credits)
Building practices and technology (3 credits)
Critical thinking and representation (3 credits)
Electives (12 credits)
Immersive away experience (0 credits)

Total required graduate credit for March Concentration 2 54 crs

MASTER OF ARCHITECTURE II (March II), 30 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core area			9-12
Concentrational area			9-12
Thesis or creative project			6
Electives			6
			30 crs

The MArch II program offers students from diverse geographical, educational, and professional backgrounds a

highly customizable platform from which to explore innovation with multiple applications to advanced design. This flexible curriculum offers students opportunities to engage the wide range of course offerings within the university and develop interdisciplinary, entrepreneurial, and immersive design and research projects. Research and collaboration with industry partners and a hands-on perspective are key philosophies.

The core requirement may be waived in response to the student's education and research interests, and a plan of study will be tailored to her/his specific needs. Credit transfers will be reviewed individually, and the degree may be pursued in tandem with one or more of the university's certificate programs. The minimum degree requirement is 30 graduate credits, and students are required to complete a 6-credit thesis or creative project.

MASTER OF SCIENCE IN HISTORIC PRESERVATION, 30-36 credits

This program offers students from diverse undergraduate backgrounds a solid academic foundation and the preparation necessary to undertake professional careers in historic preservation.

Graduates of the program enter a wide variety of positions in both the public and private sectors. The intent of the program is to prepare professionals qualified to handle complex problems that arise in rejuvenating the historic cores of cities, maintaining a sense of identity in small communities, revitalizing neighborhoods, restoring historic sites, and rural preservation. Students are exposed to a variety of preservation organizations and speakers and are encouraged to participate in community and state activities.

The curriculum also offers students opportunities to take multidisciplinary courses and engage in projects involving architecture, urban planning, landscape architecture, archaeology, history, business, and other related fields.

Concentration 1: a one-year program, consisting of a minimum of 30 graduate credits. This concentration is for students who already have professional experience (e.g., minimum of two years of professional practice) or who have achieved a minimum 3.0 GPA in previous academic experience (e.g., Ball State undergraduate historic preservation minor; undergraduate historic preservation major from another accredited college or university) and meet the curricular requirements of a minimum of 18 credits, or the equivalent, of the two-year master's program. The director of the graduate program in historic preservation will qualify applicants.

Admission requirements
Applicants must meet the admission requirements of the Graduate School as well as historic preservation in the Department of Architecture, College of Architecture and Planning.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
ARCH	506	Pres Prof Project	3-6
	528	Hist of Arch Built Environment	3
	540	Intro to Pres	3
	541	Pres Policy	3
	542	Pres Res Meth	3
	547	Pres Tech	3
	573	Pres Current Issues	3
			21-24 crs
Electives approved by the MSHP director			6-9
			30 crs

Concentration 2: a one-year (or 3 semesters) program, consisting of a minimum of 36 graduate credits.

Admission requirements
Applicants must meet the admission requirements of the Graduate School as well as historic preservation in the Department of Architecture, College of Architecture and Planning.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
ARCH	506	Pres Prof Project	3-6
	528	Hist of Arch Built Environment	3
	540	Intro to Pres	3
	541	Pres Policy	3
	542	Pres Res Meth	3
	547	Pres Tech	3
	573	Pres Current Issues	3
			21-24 crs
Electives approved by the MHSP director			9-12
			36 crs

CERTIFICATE PROGRAMS

Certificate in Historic Preservation, 12 credits

The Graduate Certificate in Historic Preservation provides students with a solid understanding of the complex issues involved in the preservation of historic structures and heritage sites. The curriculum offers opportunities to engage in community-based projects involving architecture and related fields.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*

Core requirements

ARCH	540	Intro to Pres	3

9 credits from electives

ARCH	506	Pres Prof Project (3-6)	
	528	Hist of Arch Built Environment (3)	
	541	Pres Policy (3)	
	542	Pres Res Meth (3)	
	547	Pres Tech (3)	
	573	Pres Current Issues (3)	9
			12 crs

Certificate in Digital Design and Fabrication, 12 credits

The Department of Architecture offers a 12-credit, graduate certificate in design and digital fabrication which encourages students to pursue a broad spectrum of inquiries in the translation of digital processes, while simultaneously working alongside industry partners in an open and collaborative environment. Through immersive projects deploying interdisciplinary, applied design and fabrication research, the certificate engages in immersive projects and research methods, which challenge existing modes of practice and design through state of the art technological innovation.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*

Core requirements

ARCH	581	Des Comp and Fab Core Projs	3

9 credits from electives

ARCH	593	Des Computation and Fab Apps (3)	
	594	Immersive Practicum (3)	
	634	Advanced Fabrication (3)	
TEDU	697	Problems in Technology Educ (1-3)	9
			12 crs

Certificate in Social and Environmental Justice, 12 credits

The mission of the graduate certificate in social and environmental justice, as offered by the Department of Architecture, is to create advanced awareness, understanding, and abilities related to issues of equity as they relate to the design of the built environment. The 12-credit certificate is open to all graduate students of the university and is comprised of three one-credit self-directed classes, seminars in the Department of Architecture, and 6 credits to be identified by the student (in consultation with the graduate program director). It is most appropriate for those who envision career trajectories that feature concerns for social responsibility and environmental awareness.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*

Core requirements

ARCH	509	Readings Soc and Env Justice	1
	510	Field Stud Soc and Env Justice	1
	511	Doc in Soc and Env Justice	1

3 credits from

ARCH	507	Fourth World Theory (3)	
	508	Architects of Hope (3)	
	641	Citznshp, Wrldvews, Pub Sphere (3)	3

6 credits from

Approved courses per the graduate program director	6
	12 crs

ARCHITECTURE (ARCH)

500 Architectural Design Studio (6) A capstone project that continues a rigorous emphasis on all aspects of sustainability. This in-depth design study requires synthesis of previous course work.

Prerequisite: graduate standing or permission of the program director.

501 Comprehensive Architecture Studio (6) Graduate architecture studio involves work that is comprehensive in its conception, development, and execution.

Prerequisite: graduate standing or permission of the program director.

502 Architectural Design 2 (6) Graduate design course involves architectural problems of increasing scale and complexity and requires solutions that are thorough in their conception, development, and execution. Multiple studio sections are offered each semester.

Prerequisite: graduate standing.

503 Research Methods in Architecture (3) Introduction to research methods applicable to architectural practice. Enables students to study and apply a variety of research methods and tools. Students formulate a range of research proposals.

Prerequisite: graduate standing or permission of the program director.

506 Preservation Professional Project (3-6) Graduate preservation exercises involving project-based learning, with opportunity to apply technical skills and academic concepts to community and professional preservation problems.

Prerequisite: permission of the program director.

A total of 6 credits may be earned.

507 Fourth World Theory (3) Fourth World Theory examines the physical, political, socio-economical, and institutional abandonment of the American inner-city and investigates the causes which have led to the massive disinvestment. Attempts to develop a sense of empathy for the citizens who choose or are forced to remain in these often severely distressed environments. Fourth World Theory employs critical inquiry that may better qualify us to be

engaged in improving the conditions of our inner-cities and of the United States as a whole.

Prerequisite: graduate standing or permission of the program director.

508 Architects of Hope (3) A growing subset of architects situates their talents and passions in the lives of persons occupying exploding equatorial megacities and shrinking inner cities in the Rust Belt. Students will consider a range of issues engaged by the persons who remain in these places. Seminar participants will study as well as interview architects and designers whose practices are centered on those people generally considered to be at-risk or in-need. In response to this investigation, each student will formally define and articulate a more meaningful career trajectory.

Prerequisite: graduate standing or permission of the program director.

509 Readings in Social and Environmental Justice (1) Selected readings and follow-up discussion in the topic area as guided by the course instructor.

Prerequisite: graduate standing or permission of the program director.

Parallel: ARCH 510 and 511.

510 Field Study in Social and Environmental Justice (1) Off-campus study in the topic area as approved by the course instructor.

Prerequisite: graduate standing or permission of the program director.

Parallel: ARCH 509 and 511.

511 Documentation in Social and Environmental Justice (1) Written report resulting from a field study in the topic area.

Prerequisite: graduate standing or permission of the program director.

Parallel: ARCH 509 and 510.

520 Professional Practice (3) Explores the essential elements of architectural practice and related professions. Addresses administrative role of the architect, basic principles of architectural practice, leadership, information management, financial considerations, legal responsibilities, ethics, and professional judgment in architectural practice.

528 History of Architecture in the Built Environment (3) The roots and development phases of American architecture and design are explored, beginning with Native American and Colonial examples, through the exploration, development, urbanization, industrialization, modernist, and post-industrial epochs. Both vernacular and high style design examples are covered, with emphasis on regional and cultural diversity. Design examples are drawn from the fields of architecture, landscape architecture and urban planning.

Prerequisite: permission of the program director.

Not open to students who have credit in ARCH 428.

530 History of Architecture, Planning, and Engineering in the Midwest (3) Analysis of the development of architecture, planning, engineering (canals, railroads, roads, bridges), and industrial architecture in the American Midwest from the frontier period through the twentieth century. Field trips to selected sites.

Prerequisite: graduate status in the College of Architecture and Planning or permission of the program director.

Not open to students who have credit in ARCH 430 or equivalent.

540 Introduction to Preservation (3) This course presents the history, philosophy and current practice of heritage preservation. Students examine the roles of significant public, private and non-profit preservation agencies and organizations. The legal basis of preservation is studied, as well as the process for documenting, designating and protecting heritage places. Preservation treatment and re-use options are examined in light of conservation, sustainability and cultural continuity concerns.

Prerequisite: permission of the program director.

Not open to students who have credit in ARCH 440.

541 Preservation Policy (3) This course examines the structure and function of international, federal, state and local laws and programs governing heritage preservation activities. Planning and economic development aspects of preservation practice are studied in the context of conservation and protection of heritage places.

Prerequisite: permission of the program director.

Not open to students who have credit in ARCH 441.

542 Preservation Research Methods (3) A comprehensive examination of the methods of researching, surveying, recording, and registering historic properties and heritage sites. Legal concepts of "significance" and "context" are applied to evaluating the historic built environment. Emphasizes applied research and analysis skills and the preparation of a research study report.

Prerequisite: permission of the program director.

Not open to students who have credit in ARCH 442.

547 Preservation Technology (3) An in-depth examination of architectural conservation. This course includes an analysis of the materials and systems of construction used in historic buildings. Students employ contemporary technology to document, analyze and diagnose building conditions, then formulate interventions for the stewardship of historic structures.

Prerequisite: permission of the program director.

Not open to students who have credit in ARCH 447.

555 Immersive Away Experience (0) Immersive away experience outside of the College of Architecture and Planning consisting of a (14 week) professional internship or approved alternative. Offered credit/no credit only.

Prerequisite: graduate standing or permission of the program director.

573 Current Issues in Preservation (3) This course provides an in-depth investigation of complex social, cultural and political case studies in contemporary heritage preservation. A foundation is laid for development of individual philosophies and ethics regarding preservation practice.

Prerequisite: permission of the program director.

Not open to students who have credit in ARCH 473.

581 Design Computation and Fabrication Core Projects (3) Foundations course introducing computation, design methods, tools for digital design fabrication, and project delivery methods for design through production. Initiates a core understanding of geometry, fabrication strategies, and data extraction/translation through a series of hands-on, interactive modeling and fabrication projects.

590 Independent Study (1-6) Independent study in architectural topics.

Prerequisite: approval of an independent study proposal by the department chairperson.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

593 Design Computation and Fabrication Applications (3-6) Seminar focusing on a discussion of critical consideration of design computation and fabrication technology application issues. Students will work collaboratively to develop critical and prototypical projects.

Prerequisite: ARCH 581 or permission of the graduate program director.

A total of 9 credits may be earned, but no more than 6 in any one semester or term.

594 Immersive Practicum (3-6) Self-directed, entrepreneurial, creative projects performed under the guidance of faculty advisors and in collaboration with industry partners. Students are encouraged to consider applied research potentials for projects.

Prerequisite: ARCH 581 or permission of the graduate program director.

A total of 9 credits may be earned, but no more than 6 in any one semester or term.

598 Special Project in Architecture (3-6) Special and timely architectural projects undertaken by groups of students.

Prerequisite: graduate standing or permission of the program director.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

600 Architecture Workshop (3) Graduate architecture workshop involves short exploratory architectural exercises or projects.

Prerequisite: graduate standing or permission of the program director.

601 Architecture Topics Studio (6) Graduate architecture studio involves topical architectural problems. Students are expected to increasingly define their own interests and take initiative in defining design concepts, tasks, and opportunities.

Prerequisite: graduate standing or permission of the program director.

602 Final Architecture Project Studio (6) Development and completion of a student initiated and defined architectural design project.

Prerequisite: ARCH 603 or permission of the program director.

603 Final Project Preparation (3) Students define and develop a topic for their ARCH 602 final architecture project. Through guided independent work, students prepare a proposal that documents the content of topical research, design methodologies, conceptual frameworks and a scheduling of tasks for the proposed execution of a final design project.

Prerequisite: ARCH 501 or permission of the program director.

632 High Performance Buildings (3) Consideration of high-performance buildings, including aspects such as green design, carbon-neutral design, net-zero-energy design, and sustainability.

Prerequisite: graduate standing or permission of the program director.

633 Advanced Technologies for Green Building (3) Investigations of green technologies including solar and wind energy, energy conservation, water management, building envelope design, lighting, building-integrated photovoltaic and wind energy systems, LED lighting, smart building systems, and sensor networks.

Prerequisite: graduate standing or permission of the program director.

634 Advanced Fabrication (3-6) Critical overview of current digital fabrication methods and tools for the design and production of artifacts of various scales and types.

Prerequisite: ARCH 581 or permission of the graduate program director.

A total of 9 credits may be earned, but no more than 6 in any one semester or term.

636 Building Practices and Technology 1 (3) Comprehension of the technical aspects of design, systems, and materials and application of that comprehension to architectural solutions and consideration of the impact of such decisions on the environment.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

637 Building Practices and Technology 2 (3)
Comprehension of the technical aspects of design, systems, and materials and application of that comprehension to architectural solutions and consideration of the impact of such decisions on the environment.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

640 History, Theory, and Criticism (3) Examines contemporary architectural theory and criticism through the presentation and study of significant texts and buildings of the present and recent past. Introduces and investigates the formal, technological, social and cultural, political, and economic issues within the disciplines of architecture and design. Explores interactions between theory and practice, and examines strategies for the making of architecture.

Prerequisite: graduate standing or permission of the program director.

641 Citizenship, World Views, and the Public Sphere (3)
Addresses ethical, social, cultural, political forces, as well as world views that frame the discourse of citizenship and the public sphere as it relates to issues of social justice in the design of the built environment. Explores theoretical frameworks in order to understand architecture as a social and cultural construct. The pedagogical objective is to encourage analysis, synthesis, and critical thinking.

Prerequisite: graduate standing or permission of the program director.

642 Architectural Theory (3) Examines contemporary architectural theory, criticism, and practice through the presentation and study of significant texts and built form.

Prerequisite: graduate standing or permission of the program director.

644 Theories of Sustainability (3) Students explore ideas and assumptions behind green building and sustainable design. Philosophies and concepts of nature, design and technology are investigated and discussed. Students develop and share their understanding of sustainability and green building grounded in both current and established theories.

Prerequisite: graduate standing or permission of the program director.

647 Critical Thinking and Representation 2 (3) Students build abstract relationships and understand the impact of ideas based on the study and analysis of multiple theoretical, social, political, economic, cultural, and environmental contexts. Graduates will also use a diverse range of skills to think about and convey architectural ideas, including writing, investigating, speaking, drawing, and modeling.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

669 Historic Preservation Internship (0) A 10-week period of approved employment with a national, state, or local organization engaged in professional preservation work, or participation in an approved preservation activity, typically undertaken during the summer. Offered credit/no credit only.

Prerequisite: graduate status in the College of Architecture and Planning or permission of the program director.

696 Historic Preservation Professional Project (3) Historic preservation field project undertaken in conjunction with a practicing professional qualified to advise the student in the selected area of study. The MSHP director or other member of the graduate faculty in consultation with the student will approve the study topic and the professional advisor.

Prerequisite: graduate status in the College of Architecture and Planning or permission of the program director.

CONSTRUCTION MANAGEMENT AND INTERIOR DESIGN

bsu.edu/academics/collegesanddepartments/construction-management-interior-design
Applied Technology Building 151, 765-285-5642

MASTERS IN INTERIOR DESIGN, 33 credits

Admission requirements
Applicants must meet the admission requirements of, and be cleared by, the Ball State University Graduate School prior to being considered for admission into the program. In addition to completing the Graduate School ADMIT application, all applicants are required to submit a letter of intent, a resume, and a portfolio of your finest work to the Director of Graduate Studies. All candidates must supply two letters of recommendation, preferably using the Graduate School's online ADMIT system. At least one recommendation should come from a university faculty member (teacher, advisor, coach, etc.). Applicants are required to have an overall undergraduate GPA of 3.0 on a 4.0 scale. For conditional and probationary acceptance requirements, contact the program's Director of Graduate Studies.

Master of Arts in Interior Design, 33 credits

This program is offered on-line only.

Applicants must have an undergraduate degree in interior design or architecture; all other candidates will be required to take on-campus undergraduate courses prior to taking graduate courses. Applicants must submit a digital portfolio of their past projects that contains a minimum of 20 pieces to demonstrate graphic skills and design ability. The master's program can be completed entirely online.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
IDES	604	Professional Design Practice	3
	606	Visual Culture in Built Enviro	3
	613	Design Analysis	3
	619	Environ Psychology Int Des	3
	620	Inclusive Design	3
			15 crs
Research component			
9-12 credits from			
EDPS	641	Intro Statistical Methods	3
FCS	697	Research Methods in FCS	3
RES	697	Research Paper (1-3)	
	or		
CRPR	698	Creative Project (3 or 6)	3 or 6
6-9 credits from Electives			6-9
			33 crs

Master of Science in Interior Design, 33 credits

This program is offered on-line only.

Applicants must have an undergraduate degree in interior design or architecture; all other candidates will be required to take on-campus undergraduate courses prior to taking graduate courses. Applicants must submit a digital portfolio of their past projects that contains a minimum of 20 pieces to demonstrate graphic skills and design ability. The master's program can be completed entirely online.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
IDES	604	Professional Design Practice	3
	606	Visual Culture in Built Enviro	3
	613	Design Analysis	3
	619	Environ Psychology Int Des	3
	620	Inclusive Design	3
			15 crs
Research component			
12 credits from			
EDPS	641	Intro Statistical Methods	3
FCS	697	Research Methods in FCS	3
THES	698	Thesis (1-6)	6
6 credits from Electives			6
			33 crs

CONSTRUCTION MANAGEMENT (CM)

697 (TCST 697) Independent Study in Construction Management (0-6) Advanced academic project directed by a construction management faculty member. Written proposal must be approved by program director prior to term of study.
A total of 6 credits may be earned.

698 (TCST 698) Advanced Topics in Construction Management (0-6) Advanced study of special topics in construction management.
A total of 6 credits may be earned.

INTERIOR DESIGN (IDES)

604 (FCID 604) Professional Design Practices (3) Focuses on the trends and issues embracing the professional, ethical and transnational interior design practices. Students will be introduced to successful models and relevant strategies in design leadership, management and entrepreneurship.

606 (FCID 606) Visual Culture in the Built Environment (3) Provides an integrated survey of global interior environments and architecture, exploring significant design styles and movements from the mid-19th century through the present day. Explores Western and non-Western interior and architecture within the context of the arts, politics, business, technology, economics, the sciences, and social sciences.

610 (FCID 610) Evidence Based Design in Healthcare Settings (3) This course introduces concepts of evidence based design in healthcare settings. The content of this course shows the link between research and design as the foundation of Evidence Based Design, and offers context and theory for EBD in health care settings, as well as rationale for its current role in the healthcare system.
Open only to Graduate students.

612 (FCID 612) Legal, Ethical, and Safety Issues in the Healthcare Industry (3) This course explains how healthcare design can empower people and communities to thrive in the face of emerging policies, business models, and operations. This course discusses a multidisciplinary approach to generate effective and transformative change to support people and communities. Specifically, it addresses topics of legal, ethical, and safety concerns in the healthcare industry through the LEAN model, a management model that serves to eliminate waste in systems.
Open only to Graduate students.

613 (FCID 613) Design Analysis (3) Discusses methods of gathering, organizing, and assessing data needed to design the interior spaces. Developing design concepts, goals, and

objectives, gathering information about users of the space, their interests, needs, aspirations, behaviors, interactions, and tasks, and the necessary environmental requirements to support these expectations in the planning and the design process are discussed. Students break up and analyze a whole into its fundamental elements or component parts. Illustrates a structure for the programming process that produces a pragmatic foundation of design information.

614 (FCID 614) Healthy Environments for Patient Populations (3) This course will cover successful programming approaches from Evidence Based Design perspective to meet user needs, with an in-depth exploration of research and programs applied to specific populations and needs. Topics covered in class will vary based on the instructor's expertise, invited speakers, and student interests. Topics may include design considerations for special populations, for example: children, elderly adults, ethnic minorities, and women's health. Topics may also include design considerations for special presenting problems, for example: chronic and acute pain management, sleep problems, cancer, Alzheimer's disease, Autism Spectrum Disorders, and depression. Each session of this class is divided into a lecture and a workshop.
Prerequisite: IDES 612.

616 (FCID 616) Understanding & Practicing Research in Healthcare Design (3) This course provides an overview of the research methods used in evidence-based design. Reviews the literature on particular topical areas in healthcare design. The sample articles exemplify an empirical focus of research with clearly defined environmental and outcome variables. Each selected article is analyzed to extract relevant information, including the environmental variable(s) and outcome(s), metrics, measurement tools, sample(s), setting(s), research design, and findings.
Prerequisite: IDES 614.

619 (FCID 619) Environmental Psychology in Interior Design (3) Explores how a space and building affect an occupant's behavior, well-being, and health. Discusses psychosocial responses to the built environment, analyzes the interaction between environments and human behavior and well-being, while exploring how individual differences related to age, gender, and cultural background impact that interaction. Provides proactive initiatives designed to minimize stress and maximize user satisfaction, helping designers to create more comfortable spaces that will both satisfy the needs of the intended occupants and expand the scope of design.

620 (FCID 620) Inclusive Design (3) Focuses on design solutions for all users of the interior space with emphasis on the functional, cultural, and ergonomic needs. Discusses alternative approaches to design process, materials, and user-centric products. Concepts and principles of universal and global design and governmental regulations are covered.

LANDSCAPE ARCHITECTURE

bsu.edu/landscape
Architecture Building 226, 765-285-1971

Landscape architecture is an expanding profession that is rich in scope, and engaged in shaping the future of our world. Practice involves creating, conserving, and reclaiming the landscape in contexts that range from urban to pristine nature. The work of landscape architects addresses varied settings, and includes an increasingly broad range of project types: public places and communities, educational and office campuses, active recreational parks and quiet places of contemplation, transit corridors and greenways, wetlands restoration and regional conservation planning, among others. When working with those in related professions—biologists, foresters, horticultural specialists, ecological scientists, civil engineers, soil experts, architects, and planners—landscape architects integrate solutions to complex problems, through designs that are artful, functional, and sustainable.

Successful landscape architecture orchestrates relationships between the natural and built environments. The economic and social benefits of effective landscape design—creating added value—are well documented. As environmental quality becomes a global priority there is increased public expectation of better places to live, work and play. This is reflected in the current status of landscape architecture as the fastest growing of the design professions. Employment of landscape architects is projected to grow 5 percent yearly from 2016 through 2024.

The MLA program is open to any qualified student holding a baccalaureate degree. Ball State University's programs in landscape architecture are fully accredited by the national Landscape Architecture Accreditation Board (LAAB).

MASTERS OF LANDSCAPE ARCHITECTURE (MLA), 39-57 credits

Admission requirements
Applicants must meet the admission requirements of both the Graduate School and the Department of Landscape Architecture.

Degree requirements

Concentration 1: 30 graduate credits
Students with degrees in landscape architecture from a Landscape Architecture Accreditation Board-accredited program are required to enroll in the following minimum program of study:

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
LA	651	Research Methods in Land Arch	3
	653	Readings in LA	3
LA electives			6-12
Electives			6-12

LA electives/electives include all landscape architecture courses offered at the graduate level and may include independent study courses, and any other electives approved by the program director.

THES	698	Thesis (1-6)	
	or		
CRPR	698	Creative Project (3 or 6)	6
			30 crs

Candidates will complete a minimum of 30 credits of graduate work.

Concentration 2: 46 graduate credits, 19 undergraduate credits
The following is the required program of study for candidates holding professional degrees in related environmental design and planning areas (i.e., architecture, interior design, urban and regional planning, etc.). Foundation courses at the undergraduate level are required for all candidates in this program except where prior equal course work is documented. This degree program is known as a first professional degree program in landscape architecture.

LA	573	Environmental Systems	3
	602	Site Design	4
	603	Community and Urban Space Des	4
	604	LA Planning and Design	4
	605	Comprehensive Landscape Plan	4
	606	Creative Project Studio	4
	622	LA History	3
	645	Planting Designs	3
	650	LA Methods	3
	651	Research Methods in Land Arch	3
	652	Creative Project Design Sem	2
	653	Readings in LA	3
	668	Internship (0)	
	or		
	669	Internship (0)	0
Electives			6
			46 crs

Foundation undergraduate courses

LA	211	LA Engineering 1	4
	312	LA Engineering 2	4
	313	LA Engineering 3	4
	341	Plants 1	4
	460	Professional Practice	3
			19 crs

Concentration 3: 56 graduate credits, 22 undergraduate credits
The following is the required program of study for candidates not holding professional degrees in landscape architecture or related environmental design and planning areas. Foundation courses at the undergraduate level are required for all candidates in this program except where prior equal course work is documented. This degree program is known as a first professional degree program in landscape architecture.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
LA	573	Environmental Systems	3
	601	LA Design Principles	4
	602	Site Design	4
	603	Community and Urban Space Des	4
	604	LA Planning and Design	4
	605	Comprehensive Landscape Plan	4
	606	Creative Project Studio	4
	622	LA History	3
	645	Planting Designs	3
	650	LA Methods	3
	651	Research Methods in Land Arch	3
	652	Creative Project Design Sem	2
	653	Readings in LA	3
	661	Design Communications	3
	668	Internship (0)	
		or	
	669	Internship (0)	0
Electives			9
			56 crs

Foundation undergraduate courses

LA	211	LA Engineering 1	4
	280	Computer Applications in LA	3

312	LA Engineering 2	4
313	LA Engineering 3	4
341	Plants 1	4
460	Professional Practice	3
		22 crs

Other courses may substitute for LA 280 with departmental approval.

All MLA candidates are also required to make a public presentation upon completion of a thesis or creative project.

LANDSCAPE ARCHITECTURE (LA)

514 Landscape Architectural Engineering 4 (3) Advanced methods of landscape architecture engineering and construction/implementation practices. Subjects include advanced applications for construction documentation, Building/Site/Land Information modeling (e.g., BIM); documented sustainable design criteria/guidelines/techniques (e.g., SITES); landscape construction management; and post-construction/-occupancy evaluation. Course topics may include advanced sustainable site construction and landscape engineering applications for lighting, water, material selection, and landscape management.

Prerequisite: LA 313 or permission of the instruction.

Open only to landscape architecture majors.

520 Regional Landscape Architectural History (3) Major representative samplings of cultural developments and forces affecting evolution and transformation of the structure, pattern, image, and function of the midwestern landscape.

525 Historic Landscape Preservation (3) Theory, concepts, methods, and case studies in historic design and cultural landscape preservation.

530 Philosophy of Landscape Architecture (3) Seminars and independent study of the background and development of prevailing philosophies of landscape architecture.

Not open to students who have credit in LA 430.

531 Rural Landscape (3) Lectures, seminars, and field study focusing on the rural landscape of Indiana and the Midwest. Issues of policy and management of resources, land-use practices, and various other conditions, both natural and human-made, as they relate to landscape architecture.

538 Park and Recreation Planning and Design (3) Interdisciplinary relationships in comprehensive and site-specific community recreation and park planning and design. A joint offering with the Indiana University Department of Recreation and Park Administration, presented over the Indiana Higher Education Telecommunications System.

573 Environmental Systems and Structures (3) Qualitative investigations and analyses of and research in landscape systems. Studies include assessments of vegetation, climate, hydrology, soils, and surface geology as determinants of landscape architectural form; natural processes as they relate to the principles of landscape architectural construction.

590 Independent Projects (1-9) Independent study in environmental topics relevant to landscape architecture.

Prerequisite: permission of the department chairperson.

A total of 9 credits may be earned.

598 Special Projects in Landscape Architecture (1-9) Special and timely landscape architectural projects undertaken by groups of students.

Prerequisite: permission of the department chairperson.

A total of 9 credits may be earned.

601 Principles of Landscape Architectural Design (4) Design projects, exercises, lectures, and field studies to develop awareness of principles and concepts integrating natural and cultural elements in the landscape.

602 Site Design (4) Continued applications of basic design principles, programming, and site analysis reinforcing design processes and visual thinking in the design of sites. Emphasizes open space planning and park design. May include projects in natural, rural, and urban settings. Computer applications as appropriate.

Prerequisite: LA 601 or departmental permission.

603 Community and Urban Space Design (4) Continued application of principles of landscape architecture to community- and neighborhood-scale projects of increasing complexity, including housing, commercial and urban land planning, and development issues. Additional issues addressed include human behavioral principles and planting design concepts as they relate to landscape architectural spaces. Computer graphic and CAD techniques as appropriate.

Prerequisite: LA 602 or departmental permission.

604 Landscape Architecture Planning and Design (4) Staged projects progressing through regional land planning and site design scales. Includes landscape planning (manual or GIS), overlay assessments, historic and cultural landscape conservation planning and design, and site design applications.

Prerequisite: LA 603, 650, or departmental permission.

605 Comprehensive Landscape Planning and Design (4) Faculty-directed landscape architectural planning and design problems and projects at an advanced level.

Prerequisite: advisor selected for the thesis or creative project and proposal developed; LA 604, 650, 651, and 653; or departmental permission.

Open only to MLA majors.

606 Creative Project Studio (4) Focus on individual comprehensive projects in landscape architecture from analysis to concept through appropriate levels of developed design and documentation. A comprehensive project report

will be produced. Emphasizes guided independent work and student initiative.
Prerequisite: LA 652.
Open only to MLA majors.

622 Landscape Architectural History (3) Lecture and discussion on contributions of various cultures and eras to the landscape and their relationship to current issues in landscape design and theory.

631 Topical Seminars (1) Issues, case studies, guest professionals, and student presentations relevant to broadening understanding of the diverse profession of landscape architecture.

645 Planting Design (3) Use of plants as landscape-design elements; related specifications and detailing. Introduction to cost estimating.
Prerequisite: LA 341 or permission of the instructor.

650 Landscape Architecture Methods (3) Theories and methods related to landscape planning, preservation, and design.
Open only to MLA majors.

651 Research Methods in Landscape Architecture (3) Focus is on critical issues and the framing of meaningful questions appropriate to the discipline and profession of landscape architecture. Emphasis on basic and/or applied research skills; and preparation of research study report or proposal.
Open only to MLA majors.

652 Creative Project Design Seminar (2) Creative project programming and goal setting, with attention to theory, context and precedents, as applied to site analysis and conceptualization. Emphasizes guided independent work and individual initiative.
Prerequisite: LA 651.
Open only to MLA majors.

653 Readings in Landscape Architecture (3) Directed and selected readings and written reports to broaden perspective in landscape architecture. Preliminary investigation for the literature review of the thesis/creative project.

661 Design Communications (3) Theory and application in design communication, including free-hand and technical drawing and presentation skills. Includes demonstration of computer-automated drafting (CAD) and computer graphic simulation technologies.

668 Landscape Architecture Internship (0) Minimum of one semester of supervised, unpaid employment under the direction of a landscape architect or allied-design professional. Departmental approval required in advance of qualified employment. Required employer and self-evaluation reports. Offered credit/no credit only.
Not open to students who have credit in LA 669.

669 Landscape Architecture Internship (0) Minimum of one semester of supervised, paid employment under the direction of a landscape architect or allied-design professional. Departmental approval required before qualified employment. Requires employer and self-evaluation reports. Offered credit/no credit only.
Not open to students who have credit in LA 668.

690 Independent Projects (1-3) Independent study in environmental topics relevant to landscape architecture.
Prerequisite: permission of the department chairperson.
A total of 9 credits may be earned, but no more than 3 in any one semester or term.

698 Special Projects in Landscape Architecture (1-3) Special and timely landscape architecture projects undertaken by students in groups.
Prerequisite: permission of the department chairperson.
A total of 9 credits may be earned, but no more than 3 in any one semester or term.

URBAN PLANNING

bsu.edu/urban
Architecture Building 327, 765-285-1963

MASTER OF URBAN AND REGIONAL PLANNING, 36-51 credits

The professional field of planning and the programs of the department present significant and diverse opportunities to solve the problems of communities and shape the built environment. Our profession is uniquely dedicated to the quality of life impacted by place, to visions and policy consequences that extend beyond the short term, and to problem solving that relies on multiple disciplines. Our professional values commit us to environmental sustainability, social equity, participatory democracy, and deliberate design.

Planners promote public interest development through the implementation of plans formulated and adopted in the public interest. They perform this function in all three economic sectors—public, private for-profit, and private nonprofit. Professional career areas of opportunity include public planning and housing/community development agencies, land

development and professional service firms, and nonprofit corporations serving neighborhoods and various public interests.

The department prepares students for these challenges by offering a rigorous course of study for the master of urban and regional planning (MURP), a professionally recognized degree leading to professional certification by the American Institute of Certified Planners (AICP).

Admission requirements

Applicants must meet the admission requirements of the Graduate School and be approved by the Department of Urban Planning. International students must also meet the financial, English language, U.S. Immigration (visa), and transcript certification requirements of the Rinker Center for International Programs.

Degree requirements

Concentrations

The standard MURP concentration is a two-year, 48-51 credit program. The accelerated track program, available only to graduates of an urban planning baccalaureate program accredited by the Planning Accreditation Board (PAB), may be completed within one calendar year (a full academic year plus dual summer session) and requires 36-39 credits.

Examination

To assist in self-assessment and faculty advising, newly admitted students must complete a diagnostic examination that evaluates their planning interests, perceptions, knowledge, and skills. Before graduation students must also complete a comprehensive examination that addresses the synthesis of knowledge of greatest significance in the student's professional education. This exam assesses not only student competency and program effectiveness, but also student progress since the diagnostic exam.

Course of Study in Selected Area of Concentration

For the standard and accelerated concentrations, 12 credits are required in the student's selected area of concentrated study (ACS) in (1) comprehensive planning, (2) physical planning, (3) community development and enterprise planning, or (4) customized urban planning area; the latter requires faculty approval. This is comprised of an ACS core course, ACS studio, and two elective courses particular to the selected ACS; depending on ACS, there are certain requirements for electives.

Capstone Project

The degree requires a capstone project of 3 credits, typically in the student's ACS, to demonstrate advanced competency in the use of knowledge or to create knowledge. The project may center on a field-based project that produces a professional report or on a topic of scholarship that produces a research paper (refer to RES 697). With faculty approval a student may engage in a creative project that produces a thesis for 6 credits (refer to THES 698). The program's curriculum prepares students for the capstone project.

Remaining Electives

The remaining electives constitute 6 credits for the standard concentration and 6 credits for the accelerated concentration. Students select electives based on their ACS from courses offered within urban planning or from courses in other disciplines of the Graduate School, as approved by urban planning; a pre-approved list is available through the department, or consult with the graduate faculty advisor for approval. Also, the required capstone project constitutes 3 credits by students enrolling in RES 697, or if THES 698 is approved for 6 credits, the additional 3 credits may substitute as an elective.

Credits Transferred from Prior Graduate Study

Up to 15 credits for the standard and 9 credits for the accelerated concentration earned in prior graduate study outside the department and not resulting in a degree may be applied toward the MURP. Such transfer credits must have been earned at an accredited institution, demonstrate relevancy for an equivalent course of study of the MURP program, and be approved by the department.

For students without a Bachelor of Urban Planning and Development (BUPD) or equivalent degree

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
PLAN	500	Planning Diagnostic Exam	0
	501	Introduction to Urban Planning	3
	510	Planning Law	3
	605	Des and Present Tech (1-3)	3
	613	Qual Meth and Soc Just	3
	614	Quant Analy	3
	620	Human Impact Analysis	2
	621	Environmental Impact Analysis	1
	626	Human Settlements	1
	627	Ecology of Planning	1
	628	Economics of Planning	1
	629	Planning Analysis Studio	3
	690	Planning Portfolio Review	0
	691	Planning Internship	0
	695	Plan Capstone Research Methods	1
	696	Plan Capstone Res Methods 2	1
	697	Plan Capstone Res Methods 3	1
	699	Planning Comp Exam	0
			27 crs

3-6 credits from			
RES	697	Research Paper (3)	
	or		
CRPR	698	Creative Project (3 or 6)	
	or		
THES	698	Thesis (1-6)	3-6

12 credits from
Area of Concentrated Study (ACS)
Including either

PLAN	630	Comprehensive Planning Studio (3)	
	or		
	632	Studio Comm Dev and Ent Plannng (3)	12

Complementary electives from outside planning	6
	48-51 crs

For students with a Bachelor of Urban Planning and Development (BUPD) or equivalent degree

PLAN	500	Planning Diagnostic Exam	0
	604	Adv Plnng Iss, Thry, and Pract	3
	613	Qual Meth and Soc Just	3
	620	Human Impact Analysis	2
	621	Environmental Impact Analysis	1
	690	Planning Portfolio Review	0
	691	Planning Internship	0
	695	Plan Capstone Research Methods	1
	696	Plan Capstone Res Methods 2	1
	697	Plan Capstone Res Methods 3	1
	699	Planning Comp Exam	0
			12 crs

3 credits from

PLAN	510	Planning Law (3)	
	626	Human Settlements (1)	
	627	Ecology of Planning (1)	
	628	Economics of Planning (1)	3

3-6 credits from

RES	697	Research Paper (3)	
	or		
CRPR	698	Creative Project (3 or 6)	
	or		
THES	698	Thesis (1-6)	3-6

12 credits from
Area of Concentrated Study (ACS)
Including either

PLAN	630	Comprehensive Planning Studio (3)	
	or		
	632	Studio Comm Dev and Ent Plannng (3)	12

Outside electives	6
	36-39 crs

URBAN PLANNING (PLAN)

500 Planning Diagnostic Exam (0) The diagnostic exam, administered to incoming students, evaluates professional objectives, perception of the planning profession, and knowledge of several key topical areas with the intention of both the student and student's faculty advisor using the results when selecting a course of study. Offered credit/no credit only.

501 Introduction to Urban Planning (3) Introduces the principles, practices, and theory of contemporary urban planning. The community planning process and the substantive areas of planning practice are discussed. Students will be provided with the skills needed for the preparation and implementation of a community's comprehensive plan.

504 Urban Design (3) An exploration of the physical form of the public realm and how it has been shaped by social, economic, political, and cultural forces. Special attention will be paid to issues of identity, sense of place, placemaking, and sense of belonging.

506 Environmental Design Studio (3) An interdisciplinary approach to the resolution of problems in environmental design. Appropriate projects to be determined in consultation between the students and faculty.

507 Computer Techniques for Design and Planning (3) Introduces a variety of software and applications techniques in remote sensing, mapping, perspective drawing, and database graphics for architecture, landscape architecture, and planning.

510 Planning Law (3) Historical/jurisprudential analysis of planning/land-use law within public agencies and the private sector of development. Zoning, subdivision, and other land use regulations. A study of the legislative, regulatory, and administrative law adjudicatory process within the context of planning and land use as well as comparisons of selective states and localities' processes.

511 Property Law (1) Essential state and federal statutes and codes as well as case law, regulating real estate and its transaction, including landlord/tenant relations, deed encumbrances and covenants, memorialized developer commitments, forms of realty ownership and leasing, mortgage sureties and financing, and contractual instruments of public-private partnerships. Historic evolution of this body of law and development instruments and their effectiveness in promoting the public interest.

512 Introduction to Geographic Information Systems for Urban Planning (3) Designed to introduce principles of GIS and GIS applications in an urban environment. Topics include GIS components, modeling methodology, and management of environments. Implications to urban and environmental policy development.

513 Advanced Concepts in Geographic Information Systems for Urban Planning (3) Advanced topics in modeling and analysis of urban and regional environments. Techniques for database organization, database development, and analytical processes (algorithm development).

Prerequisite: PLAN 512.

521 Urban Land-Use Planning (3) Planning the uses of land in urban areas. Land-use determinants, standards at the community level, information systems, preparation of land-use plans, and development of land-use control policies at the urban and county levels.

525 Urban Agriculture as Community Development (3) Examines the growing role of urban agriculture in cities and the implications for community development and design. Examines the broad issues of food production and distribution along with related policies. Focuses on the present discourse associated with food security. Sustainability provides a framework under which communities better use natural resources, create infrastructures that are more efficient, protect and enhance quality of life, and create new, greener businesses that strengthen their economies without compromising the environment.

530 Housing and Community Development (3) Public programs and private activities relating to the provision of affordable housing for all income levels. Topics include housing supply and demand, housing finance, the role of government subsidies, and coordinated policy for community development.

531 Urban Transportation Planning (3) Transportation planning methods and policy, including analysis of travel demand, links between land use and transportation, choice of transportation modes, and design of balanced transportation systems.

533 Urban Environmental Planning (3) Introduction to urban planning considerations for control and reduction of air, water, and land degradation, including waste management, noise pollution, and other side effects of urban development.

534 Regional Development Planning (3) Seminar in techniques of regional planning analysis and policy formulation. Methods of integration of economic, ecological, and social objectives in regional development.

535 Energy Planning (3) Energy resource issues in urban planning. Strategies for incorporating energy efficiency into housing, land use, transportation, social services, and community development. Analysis of energy policy, with emphasis on innovative public and private sector initiatives at the community level.

538 Regional Land-Use Planning (3) Planning the uses of land at the regional, area, and state levels; interface between social, environmental, and land-use plans at the regional level; and land-use policies for critical-area management including the coastal zone.

539 Public Facilities Planning (3) An introduction to the planning of public facilities systems including street and highway systems, water systems, wastewater, and solid waste management.

540 Building Performance (3) A scientific approach to understanding how energy and moisture move in buildings, and how buildings fail with respect to health and safety, durability, comfort, and affordability. While the focus is on housing, the fundamentals are applicable to all buildings.

541 Sustainable Housing (3) Methods for bringing sustainable design and construction practices into the housing industry, with an emphasis on increasing durability, comfort, and energy efficiency while reducing costs. Use of computer software for economic analysis of design improvements, ensuring code compliance, and determining HERS and Energy Star ratings.

Prerequisite recommended: PLAN 540.

550 Neighborhood Planning (3) Planning strategies for the revitalization of older residential neighborhoods and neighborhood commercial areas. Includes community organization and the role of public and private neighborhood organizations.

553 Planning Practice Workshop (3) An eclectic practice course intended to sharpen the planning student's skills in report preparation, oral and visual presentation of complex issues, preparation of grant applications, and agency budgeting procedures.

554 Community Development Policy Planning (3) Strategies of community development to achieve policy goals and objectives. Emphasizes interorganizational coordination of public and private interests in revitalizing urban communities.

555 Women and Urban Environments (3) Examines the linkages between women and urban environments by focusing on the role played by the urban environment in facilitating or hindering women's access to economic, social, and political opportunities. Domestic and international examples are used to illustrate concepts.

558 Introduction to Multiculturalism as a Planning Context (3) Anthropological analysis of culturalism for planning within a cross- and multi-cultural context. Subordination/exclusions based on age, gender, sexual preference, bureaucratic/economic status, religion, and race are historically reviewed through socio-cultural forces: fear of the other, immigration, unresolved post-colonialism, resurgence of indigenous peoples/displaced cultures, and emergence of modern metropolitan society.

559 International Planning (3) An exploration of the nature of the urban and regional planning process in other countries.

Topics include development policies, planning strategies, institutional structures, implementation strategies, and accomplishments. Attention also will be paid to the usefulness of these experiences to American cities.

560 Alternative and Sustainable Community Planning (3) Seminar examining nontraditional approaches to community planning and design. Focuses on concepts associated with the design of sustainable communities. Historical precedent, case study, and utopian alternatives are synthesized to project alternative futures for present community planning and design issues.

561 Emergency and Disaster Planning (3) Examination of natural disasters and what planning and design measures can be undertaken to prevent and/or mitigate those disasters. Focuses on tornadoes, hurricanes, flash floods, earthquakes, and other natural and human-made disasters. Recent examples of natural and human-made disasters will serve as case studies.

577 History of Urban Form (3) An examination of the historical transformation of the urban form and its elements. Focuses on the physical organization of the city in relation to social, economic, political, and cultural forces that have shaped it. Special attention will also be paid to non-Western urban forms and histories.

580 Policy Impact Analysis and Techniques of Project Control (1) Program scheduling techniques of Program Evaluation Review Techniques (PERT) and Critical Path Method (CPM). Decision-diagramming aids in the rational choice and sequencing of actions toward public objectives.

581 Public Participation: Issues, Methods, and Techniques for Knowing the Public Interest (3) Issues and qualitative methods/techniques useful to the planner's paramount responsibility: understanding/integrating local knowledge and values into the public decision-making process. Issues and theories of public participation. Methods and skill techniques of being informed by the public, of informing the public, and of advancing planner/constituency collaboration.

582 Grant Procurement and Administration for Planners (1-3) Techniques of proposal writing, including RFP and RFQ responses, and grant procurement, including intergovernmental, foundation and corporate giving, contract negotiation and administration, and lobbying strategies.

A total of 3 credits may be earned.

583 Site Analysis and Planning (3) Range of practical approaches in evaluating and planning sites within the contexts of natural, economic, and cultural systems. Site inventory, analysis, and planning. Introduction of computerized platforms, integrating digital and physical representations to enhance planning and communication with the public. Required core course in the physical planning area of concentrated study (ACS).

584 Advanced Digital Communication (3) Advanced graphic design representation and presentation techniques in the digital environment. Emphasis on portfolio building and online marketing of digital rendering skills.

585 Introduction to Community Development and Enterprise Planning (3) An overview of the basic principles of real estate, community development, and enterprise planning practices with an emphasis on the roles played by the three economic sectors: public sector, private sector, and not-for-profit sector. Review of the development process and the various financing tools used to make projects a reality, with emphasis on the role of the planner in the overall implementation process. Topics also include emerging trends in community development, including the growth of the not-for-profit sector, public/private partnerships, and shifts in state and federal policies towards rebuilding communities.

586 Methods of Public Interest Development (3) From an enterprise planning perspective, the rationale and methods of development. Finance: proforma, break-even cash flow, equity investment, lender underwriting, and gap financing analyses; public-private partnerships incorporating range of development inducements. Strategies for creating markets given disinvestment pattern. Managing community development organization and projects through development process.

590 Independent Study in Planning (1-9) Relevant research or a project under the direction of the planning faculty.

Prerequisite: approval of a written project or research proposal.

A total of 9 credits may be earned.

598 Special Projects in Urban and Regional Planning (3-9) Special projects in urban and regional planning undertaken by groups of students under faculty direction.

A total of 9 credits may be earned.

601 Planning Theory (3) Introduction to the theory of urban and regional planning. Planning as a method of decision making and strategic choice, including setting goals, exploring alternatives, and implementing solutions. Evolution of planning theories in twentieth-century urban planning.

604 Advanced Planning Issues, Theory, and Practice (3) Advanced seminar to explore the application of planning theory to planning practice and management. Issues of planning ethics, roles, styles, and strategies, including citizen participation, for effective plan making and implementation. Accelerated track.

605 Design and Presentation Techniques (1-3) Introduction to graphic techniques and design processes. Lecture and studio

exercises on problem solving and public presentation of findings. For planning and preservation students without undergraduate training in design.

A total of 3 credits may be earned.

610 Planning Analysis Studio (3) Analysis and design principles at regional, urban, and local scale, including environmental suitability, land-use location criteria, and site-planning criteria for Greenfield or redevelopment sites. Students defend proposals based on analytical and design criteria.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

611 Comprehensive Planning Studio (3) Application of substantive skills in a comprehensive planning exercise for an urban area, involving field work and a real location. Emphasizes the process by which comprehensive planning decisions are reached.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

612 Community Development Studio (3) Community development scale planning, such as neighborhood revitalization, housing, or industrial renewal, with a real-world setting and sometimes a real-world client.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

613 Qualitative Methods and Social Justice (3) This is a theory and methods course that focuses on the study of socio-cultural issues pertaining to urbanism and planning methods from a qualitative perspective. Theoretically, the course exposes students to urban social theory and cultural studies, particularly how class, race, gender, and other socio-cultural divisions affect urban development. It focuses on social justice and inclusive planning that acknowledges diversity. Methodologically it exposes the students to qualitative methods, especially participant observation, ethnography, interviewing and other ways to plan with communities.

614 Quantitative Analysis (3) Data analysis and presentation skills for planners, including demographic, economic, and socioeconomic projection techniques, descriptive and inferential statistics, and sampling and survey research methods. Focus on collection and analysis of data from multiple sources, translation of data into reliable and defensible information, and effective communication of information to decision makers.

618 Advanced Planning Research Methods (2) Advanced inferential statistics; correlation and regression analysis progressing from linear and bivariate to quadratic and multivariate models; introductory Boolean algebra. Data reduction techniques of factor analysis and Q-methodology. Classification techniques of cluster analysis.

Parallel: PLAN 619.

619 Quantitative Models of Location Theory and Spatial Analysis (1) Quantitative modeling of urban spatial analysis (analysis and forecasting of uses and forms); land use and transportation forecasting; public facility, basic sector, residential distribution and retail/local service sector modeling; and trip generation and distribution modeling.

Parallel: PLAN 618.

620 Human Impact Analysis (2) Fiscal, macroeconomic, social, and political impact analyses of development decisions and distributive consequences through incidence analysis. Consequences: public budgets, household income/consumption/investment, jobs, and community health/welfare. Shifting electoral consequences of new/displaced residential populations on political agendas of decision-makers. Urban indicators as measures of community well-being and distress.

621 Environmental Impact Analysis (1) Techniques for assessing environmental impacts, including environmental inventory, rapid assessment, environmental impact analysis, land suitability analysis, risk assessment, build-out analysis, modeling for environmental sustainability, and the review of environmental regulations at all levels of government.

626 Human Settlements (1) Analytical and comparative history of urban form by way of its human, economic, and cultural influences. Elementary and essential principles of urban design.

627 Ecology of Planning (1) Overview of principles of ecology essential to sustainable growth, habitat for human and nonhuman life, and the qualitative assessment of development impacts. Fundamental principles of environmental analysis and management in the formulation, implementation, and evaluation of plans.

628 Economics of Planning (1) Neoclassical microeconomics applicable to analysis/evaluation of private/public development and urban form. Theories of marginal analysis, present value, and applied optimization explain urban/environmental/international economics; public choice; location theory; and development economics. Macroeconomic general equilibrium paradigm explains suboptimal resource allocations, or market failures, leading to variety of market interventions.

629 Planning Analysis Studio (3) Analysis and design principles at regional, urban, and local scale, including environmental suitability, land-use locational criteria, and site planning criteria for Greenfield or redevelopment sites. Students defend proposals based on analytical and design techniques. Six contact hours.

630 Comprehensive Planning Studio (3) Application of substantive skills and knowledge in a comprehensive planning exercise for an urban area, involving fieldwork and a real

location. Emphasizes the process by which comprehensive planning decisions are reached. Six contact hours.
Prerequisite: PLAN 521.

631 Studio in Physical Planning (3) Application of substantive skills and knowledge in physical planning through the creation of a site plan utilizing fieldwork and a real location. Emphasizes the processes of site planning and analysis. Six contact hours.
Prerequisite: PLAN 583.

632 Studio in Community Development and Enterprise Planning (3) Application of substantive skills and knowledge in an enterprise planning exercise for an urban area, involving fieldwork and a real location. Emphasizes the processes of action plans, land development/redevelopment, and community development. Six contact hours.
Prerequisite: PLAN 585 or 586.

636 Theory of Urban Spatial Planning (3) Seminar in theories of location and development of principal urban activities including transportation, housing, industry, commercial centers, and public facilities. Implications for urban planning policies.

661 Planning Issues, Theory, and Practice (3) Capstone seminar to explore application of theory to planning practice and management. Issues of planning ethics, citizen participation, styles of planning, and strategies for effective implementation of planning.
Prerequisite: PLAN 691 or permission of the department chairperson.

690 Planning Portfolio Review (0) During the second semester of study and upon selection of ACS each student assembles a professional resume, examples of work, strategic plans for both career and internship, and an outline of a capstone project for review before a panel of faculty and for the purpose of self-assessment and faculty critique and guidance. Offered credit/no credit only.

691 Planning Internship (0) Professional work experience of at least 200 hours in approved planning or development organization; employer supervision/evaluation. Offered credit/no credit only.
Prerequisite: PLAN 690 and completion of half the required credits (24 for standard concentration; 18 for accelerated concentration) or permission of the department chairperson.

695 Planning Capstone Research Methods (1) Problem identification; selection of topical area of interest; formulation of specific research/professional report topic and outline; and development of an annotated syllabus.

696 Planning Capstone Research Methods 2 (1) Selection and application of research methods to topic; collection and preliminary analysis of data.

697 Planning Capstone Research Methods 3 (1) Rigorous analysis of data and formulation of the paper/report, demonstrating topic definition, research methods, preliminary conclusions, and implications of the same.

699 Planning Comprehensive Examination (0) Passing grade required for graduation. The exit examination evaluates three areas: (1) student competencies across a knowledge range most significant to, and integrative of, planning; (2) student progress consequent to the MURP course of study and relative to PLAN 500; and (3) the learning effectiveness of the MURP program. Offered credit/no credit only.
Prerequisite: all other degree requirements.

MILLER COLLEGE OF BUSINESS

bsu.edu/business
Whitinger Business Building 100, 765-285-8192
Interim Dean: Mark Myring
Associate Dean: Sushil Sharma

MASTER OF BUSINESS ADMINISTRATION, 30-33 credits

The master of business administration (MBA) degree is designed for the student who seeks an applied and integrated program with flexibility in choice of electives. The MBA is available on campus and by Distance Education. Off-campus students participate synchronously in live, interactive classes originating from the Ball State campus by joining other students at a site or by Internet delivery to their home or office.

Accreditation
The college and the undergraduate accounting program are accredited by the AACSB International. All credits transferred to complete the degree must have been taken at AACSB-accredited schools. The Miller College of Business does not award credit in business courses on the basis of self-acquired competency. The college will not accept the transfer of credit for business courses from other institutions if the credit was awarded on the basis of self-acquired competency.

Admission requirements
Applicants must meet the admission requirements of the Graduate School and must also be admitted to the Miller College of Business. The Miller College of Business Graduate Admissions Committee will consider applicants' previous academic records, scores on the Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE), potential leadership qualities, and any other information deemed relevant by the committee.

International Students
In addition to the GMAT or GRE, applicants whose native language is not English and who have not received degrees from institutions within the United States are also required to take the Test of English as a Foreign Language (TOEFL).

Prerequisite requirements
Although no specific undergraduate major is required for admission, the quantitative nature of the MBA program requires that the student possess a strong background in mathematics and statistics. The student must also possess proficiency in microcomputer applications (spreadsheet, word processing, database, and presentation software), and possess familiarity with the Internet. These competencies will be the responsibility of the student to acquire and will be assumed.

Foundation courses
The student must possess competence in the foundation fields of accounting, economics, management, operations management, marketing, and finance. The competency can be demonstrated through undergraduate-equivalent courses or by completing the following foundation courses: ACC 501, ECON 509, FIN 500, ISOM 551, MGT 500, and MKG 505. Foundation courses may be completed after students are admitted into the program or by taking them via the Business Essentials Certificate before admission to the MBA.

In general, foundation courses must be completed before work in the MBA program begins. The Graduate Programs Office in the Miller College of Business will examine each student's undergraduate course work to determine eligibility for exemption from foundation courses. A student with an undergraduate major in business will usually have sufficient background to begin the MBA program.

Degree requirements
For a general MBA or a concentration in entrepreneurship, the program requires a total of 30 credits. For an MBA with a concentration in finance, health economics, policy and administration, information systems, logistics and supply chain management, or sales management, the program requires a total of 33 credits. Courses required to earn the information systems concentration are offered on campus and online in an asynchronous format, but not through synchronous distance education.

Students must maintain a 3.0 GPA in all foundation courses and within the MBA program. Also, a grade of *C* (2.0) or above is required in each course in order to graduate.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Required courses for general MBA			
MBA	601	Entrepreneurial Leadership	3
	611	Stats and Quantitative Methods	3
	621	Information Systems	3
	631	Accounting and Decision Making	3
	651	Economic Analysis for Managers	3
	661	Managerial Finance	3
	671	Marketing Management	3
	691	Global Strategic Management	3
Electives			6
			30 crs

Entrepreneurship concentration

MBA	601	Entrepreneurial Leadership	3
	611	Stats and Quantitative Methods	3
	621	Information Systems	3
	631	Accounting and Decision Making	3
	651	Economic Analysis for Managers	3
	661	Managerial Finance	3
	671	Marketing Management	3
MGT	640	Entrepreneurial Innovation	3
	647	Entr Planning and Feasibility	3
	649	Entrepreneurial Strategy	3
			30 crs

Finance concentration

MBA	601	Entrepreneurial Leadership	3
	611	Stats and Quantitative Methods	3
	621	Information Systems	3
	631	Accounting and Decision Making	3
	651	Economic Analysis for Managers	3
	661	Managerial Finance	3
	671	Marketing Management	3
	691	Global Strategic Management	3

Electives, 9 credits from

FIN	645	Bus Analy Vae Creation (3)	
	650	Investment Management (3)	
	680	Global Financial Policy (3)	
RMI	570	Risk Management and Insurance (3)	9
			33 crs

Health Economics, Policy and Administration concentration

ECON	683	Health Economic Analysis	3
	693	Health Economics and Policy	3
MBA	601	Entrepreneurial Leadership	3
	611	Stats and Quantitative Methods	3
	621	Information Systems	3
	631	Accounting and Decision Making	3
	651	Economic Analysis for Managers	3
	661	Managerial Finance	3
	671	Marketing Management	3
	691	Global Strategic Management	3

3 credits from

BL	665	Law, Ethics, Pub Pol and Bus (3)	
MGT	661	Strategic Human Resources MGT (3)	
RMI	570	Risk Management and Insurance (3)	3
			33 crs

Information Systems concentration

ISOM	601	Intro Comp and Net Sec	3
	613	Sys Data Mgt: Analy and Des	3
MBA	601	Entrepreneurial Leadership	3
	611	Stats and Quantitative Methods	3
	621	Information Systems	3
	623	Electronic Commerce	3
	631	Accounting and Decision Making	3
	651	Economic Analysis for Managers	3
	661	Managerial Finance	3
	671	Marketing Management	3
	691	Global Strategic Management	3
			33 crs

Logistics and Supply Chain Management concentration

ISOM	651	Supply Chain Management	3
	654	Project Management	3
	655	Quality Management	3
MBA	601	Entrepreneurial Leadership	3
	611	Stats and Quantitative Methods	3
	621	Information Systems	3
	631	Accounting and Decision Making	3
	651	Economic Analysis for Managers	3
	661	Managerial Finance	3
	671	Marketing Management	3
	691	Global Strategic Management	3
			33 crs

Sales Management concentration

MBA	601	Entrepreneurial Leadership	3
	611	Stats and Quantitative Methods	3
	621	Information Systems	3
	631	Accounting and Decision Making	3
	651	Economic Analysis for Managers	3
	661	Managerial Finance	3
	671	Marketing Management	3
	691	Global Strategic Management	3
MKG	625	Prof Sell Skills and Practices	3
	630	Customer Relationship Mgt	3
	635	Sales Management	3
			33 crs

Minor in General Foundations of Business

Admission requirements

The minor is not open to Miller College of Business graduate majors. Students with undergraduate equivalent courses may need course substitutions or may not be eligible for the minor. Students must be admitted to the minor by filing a program of study in the Miller College of Business. A Miller College of Business graduate advisor will examine each student's undergraduate course work to determine eligibility for the minor. Contact the Graduate Programs Office in the Miller College of Business for details.

Degree requirements

After a program of study is filed with the director of Graduate Business Programs, the candidate must complete at least 12 credits from the following courses.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
ACC	501	Financial Accounting (3)	
BL	560	Survey of Business Law (3)	
ECON	509	Survey of Economics (3)	
FIN	500	Corporation Finance (3)	
MGT	500	Managing Org Behavior (3)	
MKG	505	Survey of Marketing (3)	12 crs

Students must maintain a 3.0 GPA in the general foundations of business minor. Also, a grade of *C* (2.0) or better is required for a course to apply to the minor.

Doctoral Cognate in General Foundations of Business

The Miller College of Business offers a single cognate of 15 credits that will satisfy only one of the two required cognates for the doctoral programs. Of these 15 credits, 9 must be taken at Ball State. The Miller College of Business does not offer the large cognate of 24 credits that satisfies all cognate requirements.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
ACC	501	Financial Accounting	3
ECON	509	Survey of Economics	3
9 credits from			
BL	560	Survey of Business Law (3)	
FIN	500	Corporation Finance (3)	
ISOM	551	Operations Management (3)	
MBA	601	Entrepreneurial Leadership (3)	
MGT	500	Managing Org Behavior (3)	
	661	Strategic Human Resources MGT (3)	
MKG	505	Survey of Marketing (3)	9
			15 crs

CERTIFICATE PROGRAMS

Certificate in Business Essentials, 12-15 credits

Admission requirements
Applicants must meet the admission requirements of the Graduate School and the certificate requirements of the Miller College of Business.

The certificate is available on campus and via Distance Education.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
12 credits from			
ACC	501	Financial Accounting (3)	
ECON	509	Survey of Economics (3)	
FIN	500	Corporation Finance (3)	
ISOM	551	Operations Management (3)	
MGT	500	Managing Org Behavior (3)	
MKG	505	Survey of Marketing (3)	12
Optional			
MBA	699	Internship in Business (1-3)	0-3
			12-15 crs

Certificate in Community and Economic Development, 12 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
ECON	545	Econ of Government Budgets	3
	612	State and Local Econ Develpmnt	3
MGT	697	Independent Study in Mgt (1-6)	3
Electives, 3 credits from			
ECON	585	Urban Economics (3)	
MGT	500	Managing Org Behavior (3)	
MKG	655	Business Research Methods (3)	3
			12 crs

MASTER OF BUSINESS ADMINISTRATION (MBA)

600 Global Business Experience (3) Examines a strategic business problem for an organization with international offices/operations. Students will study relevant international business practices and culture, current practices related to the business problem presented, and theoretical underpinnings of those practices. Students will work in teams to create solutions for the client and may present findings during on-site international meetings.

Prerequisite: full admission to a graduate program in the Miller College of Business.

Open only to Miller College of Business students or by permission of the Executive Director of graduate programs.

601 Entrepreneurial Leadership and Ethical Reasoning (3) Assessment of each student's personal ethics, decision making, motivation, communication, team building, and leadership characteristics followed by creation of a personal development plan. Emphasis on application of current leadership theories to leading innovation and managing operations within an entrepreneurial organization. Ethical reasoning is taught in three modules: 1) critical thinking for ethical decision making; 2) ethical theories and frameworks; 3) corporate social responsibility.

Prerequisite: full admission to a graduate program in the Miller College of Business; ISOM 551; MGT 500; or their equivalents.

Open only to Miller College of Business students or by permission of the Miller College of Business director of graduate programs.

611 Statistics and Quantitative Methods (3) Use of statistics and quantitative methods for making business and operations

management decisions. Applications of probability, hypothesis testing, analysis of variance, correlation, advanced topics in regression analysis, time series analysis and forecasting, linear programming, and simulation.

Prerequisite: ECON 221 or equivalent; ISOM 551; full admission to a graduate program in the Miller College of Business.

Open only to Miller College of Business students or by permission of the Miller College of Business director of graduate programs.

621 Information Systems (3) Enterprise information systems developments and implementation strategies, managerial issues associated with operations of the enterprise, the organizational impact of information systems and projects, and associated human resource issues. Cases and applications of ERP software.

Prerequisite: ISOM 551 or equivalent; full admission to a graduate program in the Miller College of Business.

623 Electronic Commerce (3) Focuses on the unique issues facing businesses involved in electronic commerce. Specific topics include e-business models, e-commerce technology, electronic marketing, electronic funds transfer, and e-commerce security and controls.

Prerequisite: full admission to a graduate program of the Miller College of Business or by permission in the Miller College of Business director of graduate programs.

624 Integrative Enterprise Resource Planning (3) Applications of enterprise resource planning systems in several business areas such as accounting systems, customer relationship management, operations and materials management. Utilizes a well-known ERP software system to familiarize students with these applications.

Prerequisite: MBA 621 or permission; full admission to a graduate program of the university.

625 Enterprise Resource Planning Systems (3) Focuses on business ERP systems. Topics include ERP framework and architecture, leading enterprise systems and market trends, evaluation of ERP Systems, and implementation methodologies and success factors. Students are exposed to the SAP system. Hands-on applications and labs are included to provide practical experience for implementing SAP solutions.

Prerequisite: MBA 621 or permission; full admission to a graduate program of the university.

631 Accounting and Decision Making (3) Study of the concepts and techniques of preparation and use of accounting data by management for planning, control, and decision-making purposes. Production and operations management-related topics will be explored, as well as implications of a global business setting.

Prerequisite: ACC 501 or the equivalent; ISOM 551 or the equivalent; full admission to a graduate program in the Miller College of Business.

Open only to Miller College of Business students or by permission of the Miller College of Business director of graduate programs.

651 Economic Analysis for Managers (3) Apply economic principles to improve the decisions made by managers. Topics include supply and demand, marginal analysis, the impact of market structure (i.e., competitive, monopoly, and oligopoly), and the organization of the firm.

Prerequisite: ECON 509; full admission to a graduate program in the Miller College of Business.

Open only to Miller College of Business students or by permission of the Miller College of Business director of graduate programs.

661 Managerial Finance (3) Provides an in-depth discussion of perspectives and practices of financial management. Focuses on the application of analytical techniques to the firm's short-term and long-term investment and financing decisions in a global context.

Prerequisite: FIN 500 or the equivalent; full admission to a graduate program in the Miller College of Business.

Open only to Miller College of Business students or by permission of the Miller College of Business director of graduate programs.

671 Marketing Management (3) The analysis, planning, implementation, and control of marketing programs by profit and nonprofit organizations as viewed by marketing managers. Topics include the study of pricing policies, promotion, product strategy and liability, market research, supply chain management, international issues, and consumer law.

Prerequisite: full admission to a graduate program in the Miller College of Business; MKG 505 or equivalent.

Open only to Miller College of Business students or by permission of the Miller College of Business director of graduate programs.

691 Global Strategic Management (3) Integrative application of business knowledge to managerial decisions and action that determine the long-run performance of organizations. Deals with legal and environmental issues and strategy formulation, and implementation in a global setting.

Prerequisite: completion of 12 credits of MBA core courses; full admission to a graduate program in the Miller College of Business.

Open only to Miller College of Business students or by permission of the Miller College of Business director of graduate programs.

697 MBA Independent Study (1-3) Supervised study of some phase of business administration in depth. The topic selected, methods of study, and credits allowed must be

approved by the MBA advisor and the supervising faculty member.

Prerequisite: permission of the MBA advisor and full admission to a graduate program of the university.

A total of 3 credits may be earned.

699 Internship in Business (1-3) Professional practice as an intern in an approved program with a business firm, government agency, or nonprofit organization under the supervision of the Miller College of Business. Requires periodic written progress reports that will be evaluated by the assigned faculty member and the intern's supervisor.

Prerequisite: good standing with the university; permission of the director.

A total of 3 credits may be earned.

Open only to Miller College of Business students or by permission of the Miller College of Business director of graduate programs.

ACCOUNTING

bsu.edu/accounting
Whitinger Business Building 303, 765-285-5100

MASTERS OF SCIENCE IN ACCOUNTING, 30 credits

The masters of science in accounting are designed for the accounting student who seeks to meet the statutory requirements to sit for the Certified Public Accountant (CPA) examination and for the accounting student who wants added depth and breadth in professional preparation.

Accreditation
The college and the undergraduate accounting program are accredited by AACSB International. All credits transferred to complete the degree must have been taken at AACSB-accredited schools.

The Miller College of Business does not award credit in business courses on the basis of self-acquired competency. The college will not accept the transfer for business courses from other institutions if the credit was awarded on the basis of self-acquired competency.

Admission requirements
Applicants must meet the admission requirements of the Graduate School and must also be admitted by the Department of Accounting Admissions Committee. The committee will consider applicants' previous academic records, scores on the Graduate Management Admission Test (GMAT), potential leadership qualities, and any other information deemed relevant by the committee. The committee's decision is always final.

International Students
In addition to the GMAT, applicants whose native language is not English and who have not received degrees from institutions within the United States are also required to take the Test of English as a Foreign Language (TOEFL).

Foundations Courses
The student must possess competency in the foundation fields of accounting, economics, business law, management, operations management, marketing, and finance. The competency can be demonstrated through undergraduate equivalent courses or by completing the following foundation courses: ACC 501, BL 560, ECON 509, FIN 500, MGT 500, and MKG 505.

As a rule, all foundation courses must be completed before course work in the accounting program begins. The Department of Accounting will examine each student's foundation course work to determine eligibility for exemption from foundation courses. A student with an undergraduate major in business with a major or concentration in accounting will usually have sufficient background to begin the program.

Master of Science in Accounting – Professional Accounting Concentration, 30 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Required courses			
ACC	625	Tax Planning and Research	3
	640	Intro Accounting Research	3
	650	Attestation Principles Prac	3
	665	Seminar in Management Acctg	3
	675	Seminar in Financial Acctg	3
	690	Seminar in Professional Issues	3
	695	Accounting Capstone	3
MBA	611	Stats and Quantitative Methods	3
Accounting electives			
ACC	630	Accounting Info Systems (3)	
	655	Selected Topics in Accounting (3)	
	660	International Acctg Issues (3)	
	670	Ped and Prac Research in Acctg (2)	
	671	Adv Accounting Research I (2)	
	672	Adv Accounting Research II (2)	0-6
			24-30 crs

0-6 credits of graduate business courses outside the Department of Accounting approved by the

department chairperson or program advisor			0-6
			30 crs

Master of Science in Accounting – Research and Analytics Concentration, 30 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Required courses			
ACC	640	Intro Accounting Research	3
	670	Ped and Prac Research in Acctg	2
	671	Adv Accounting Research I	2
	672	Adv Accounting Research II	2
	680	Accounting Research Methods	3
	699	Research in Accounting	3
FIN	645	Bus Analy Vae Creation	3
MBA	611	Stats and Quantitative Methods	3
Accounting electives			
ACC	625	Tax Planning and Research (3)	
	630	Accounting Info Systems (3)	
	650	Attestation Principles Prac (3)	
	655	Selected Topics in Accounting (3)	
	660	International Acctg Issues (3)	
	665	Seminar in Management Acctg (3)	
	675	Seminar in Financial Acctg (3)	
	690	Seminar in Professional Issues (3)	
	695	Accounting Capstone (3)	3-9
			24-30 crs
0-6 credits of graduate business courses outside the Department of Accounting approved by the department chairperson or program advisor			0-6
			30 crs

ACCOUNTING (ACC)

501 Financial Accounting (3) Explores fundamental issues in financial accounting and external reporting from a manager's perspective. Develops skills necessary to interpret financial information.

Prerequisite: full admission to a graduate or certification program of the university.

Not open to students who have credit in ACC 201 or equivalent.

Not applicable toward the credits required for Master of Science in Accounting and Master of Business Administration.

625 Tax Planning and Research (3) A study and analysis of strategic tax issues and problems emphasizing tax planning and research methodology and computer-assisted tax research.

Prerequisite: ACC 410; full admission to a graduate program of the university.

Open only to MS in accounting majors or by permission of the department chairperson.

630 Accounting Information Systems (3) A study of data management situations unique to the accounting function as well as other data management resources and applications in organizations. Focuses on understanding how to design, implement, and manage effectively the accounting applications and data resources.

Prerequisite: ACC 306; full admission to a graduate program of the university.

Open only to MS in accounting majors or by permission of the department chairperson.

640 Introduction to Accounting Research (3) An overview of accounting academic research, focusing on the implications of research to practicing professionals and regulatory bodies.

Prerequisite: full admission to a graduate program of the university.

Open only to MS in accounting majors or by permission of the department chairperson.

650 Attestation Principles and Practices (3) Attestation services provided by the external auditor. Topics include auditing standards and procedures, reporting responsibilities, and ethical and professional responsibilities.

Prerequisite: ACC 451; full admission to a graduate program of the university.

Open only to MS in accounting majors or by permission of the department chairperson.

655 Selected Topics in Accounting (3) Special topics of current concern to the accounting profession.

Prerequisite: full admission to a graduate program of the university.

Open only to MS in accounting majors or by permission of the department chairperson.

660 International Accounting Issues (3) A study of the internal and external uses of accounting in an international environment. Major emphasis on accounting and managerial issues of multinational corporations such as currency translation, financial reporting and disclosure, transfer pricing, standards setting, and current issues.

Prerequisite: ACC 302; full admission to a graduate program of the university.

Open only to MS in accounting majors or by permission of the department chairperson.

665 Seminar in Management Accounting (3) Special topics of current concern to the accounting profession. Discussion topics range from a historical perspective of management accounting to current items affecting the accumulation, analysis, and reporting of financial information.

Prerequisite: ACC 306 or MBA 631; full admission to a graduate program of the university.

Open only to MS in accounting majors or by permission of the department chairperson.

670 Pedagogical and Practice Research in Accounting (2) An overview of academic accounting research, focusing on pedagogical and practice research.
Prerequisite: full admission to a graduate program of the university.
Open only to MS in accounting majors or by permission of the department chairperson.

671 Advanced Accounting Research I (2) Provides a detailed analysis of accounting researches. Focuses on research design and statistical methodology.
Prerequisite: MBA 611, full admission to a graduate program of the university.
Open only to MS in accounting majors or by permission of the department chairperson.

672 Advanced Accounting Research II (2) A continuation of ACC 671, providing greater depth research methods and techniques. Focuses on research design and statistical methodology.
Prerequisite: MBA 611, full admission to a graduate program of the university.
Open only to MS in accounting majors or by permission of the department chairperson.

675 Seminar in Financial Accounting (3) An examination of conceptual, theoretical, and practical aspects of financial accounting. Emphasis placed on the conceptual framework of accounting and its application to current accounting issues and standard setting.
Prerequisite: ACC 440; full admission to a graduate program of the university.
Open only to MS in accounting majors or by permission of the department chairperson.

680 Accounting Research Methods (3) Provides an overview of the statistical software used in accounting research.
Prerequisite: ACC 672, full admission to a graduate program of the university.
Open only to MS in accounting majors or by permission of the department chairperson.

690 Seminar in Professional Issues (3) Covers topics relevant to the public accounting profession and concentrates on current issues.
Prerequisite: ACC 302; full admission to a graduate program of the university.
Open only to MS in accounting majors or by permission of the department chairperson.

695 Accounting Capstone (3) Synthesis and integration of knowledge and skills learned in the MSA program. Integrating accounting issues in areas such as assurance services, accounting systems, financial accounting, managerial cost accounting, and income tax accounting, using cases, reading, and literature.
Prerequisite: full admission to a graduate program of the university.
Open only to MS in accounting majors or by permission of the department chairperson.

697 Independent Study in Accounting (1-3) Some special phase of accounting studied in depth. The topics selected, methods of study, and credits must be approved by the department.
Prerequisite: permission of the department chairperson and full admission to a graduate program of the university.
A total of 3 credits may be earned.
Open only to MS in accounting majors or by permission of the department chairperson.

699 Research in Accounting (3) An opportunity for students to apply research design and statistical methods to address an accounting research issue.
Prerequisite: ACC 672, full admission to a graduate program of the university.
Parallel: ACC 680.
Open only to MS in accounting majors or by permission of the department chairperson.

ECONOMICS

bsu.edu/economics
Whitinger Business Building 201, 765-285-5360

CERTIFICATE IN HEALTH ECONOMICS, POLICY, AND ADMINISTRATION, 12 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
ECON	662	Health and Economics (3)	
	or		
MBA	651	Economic Analysis for Managers (3)	
	or		

NUR	662	Hlth Care Bus and Econ (3)	3
ECON	683	Health Economic Analysis	3
	693	Health Economics and Policy	3

Electives, 3 credits from

BL	665	Law, Ethics, Pub Pol and Bus (3)	
MGT	661	Strategic Human Resources MGT (3)	
MKG	505	Survey of Marketing (3)	
NUR	642	Admin Mgt for Nurses (3)	
	643	Financial Management Nurses (3)	
RMI	570	Risk Management and Insurance (3)	3
			12 crs

ECONOMICS (ECON)

509 Survey of Economics (3) Micro- and macroeconomics for those without economics credit at the undergraduate level. Satisfies the prerequisites of courses requiring ECON 201 and 202.

Not open to students who have credit in ECON 201, 202.

Not applicable toward the credits required for Masters of Science in Accounting and Master of Business Administration.

511 Environmental Economics (3) The application of economic principles to environmental problems. Emphasizes application of the economist's decision-making model to environmental issues and the advantages and shortcomings of the economist's analysis.

Prerequisite: ECON 201 or 509; 6 credits in natural resources and environmental management, NREM 101, or permission of the department chairperson.

Not open to students who have credit in ECON 311; NREM 203.

524 Introduction to Econometrics (3) Quantitative methods in economic research. Emphasizes construction of economic models and testing of their predictive power. Topics include correlation and regression techniques and the specific problems that arise in applying these to economic data.

Prerequisite: ECON 201, 202, 221; MATH 132 or its equivalent.

Not open to students who have credit in ECON 424.

532 Labor Relations and Law (3) Study of collective bargaining, the joint determination by employers and employees (through their representatives) of the problems of the employment relationship, encompassing both the negotiation and administration of the labor agreement with primary emphasis upon the rules governing these processes.

Prerequisite: ECON 201, 202.

Not open to students who have credit in ECON 332.

541 The Theory of Monetary Policy (3) A theoretical presentation of how the board of governors of the Federal Reserve System modifies the economic climate within which the institutions of the nation operate and of the problems of government finance as they relate to the board's goal of general economic stability.

Prerequisite: ECON 201, 202.

Not open to students who have credit in ECON 441.

545 Economics of Government Budgets (3) Analysis of economic theory behind alternative methods of financing government budgets and debt management. Emphasizes economic consequences of budgets by examining incidence, shifting, and incentives regarding provision of public services and alleviation of economic insecurity. Inflation as tax is considered.

Prerequisite: ECON 201, 202.

Not open to students who have credit in ECON 345.

581 Workshop on Economic Education (1-3) Designed to give the teacher who is not a specialist in economics an understanding of the American economy and to suggest specific techniques by which this understanding can be integrated into the teaching of other subjects at all levels of instruction.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

585 Urban Economics (3) The systematic economic structure of the city and its component parts. The ways in which the economic structures of cities and regions obstruct or facilitate the attainment of the goals of the communities.

Prerequisite: ECON 201, 202.

Not open to students who have credit in ECON 485.

592 Readings and Directed Study in Economics (1-3) Students will pursue their interests in specialized economics subjects under the direction of a member of the economics staff. Topics different from or studied in greater depth than those treated in other economics courses.

Prerequisite: 6 credits in economics.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

595 Seminar in Economics (1-3) Economic problems and issues of special interest to students and the instructor. Permits in-depth studies of topics not formally treated in other courses, thereby exposing interested students to a wider variety of economic problem-solving situations.

Prerequisite: ECON 201, 202, or 509; permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

Not open to students who have credit in ECON 495.

610 Advanced Topics in Managerial Economics (3) Focuses on combining economic theory and econometrics to analyze and present solutions in written and oral formats to a variety of actual business problems, including case studies involving local firms and government agencies.

Prerequisite: ECON 524 or permission of the instructor.

612 State and Local Economic Development (3) This course presents the economic foundations for managing state and local economic development activities. Neoclassical and modern growth theory, and the fundamentals of business location theory are presented, along with public budgeting and institutional detail of economic development activities within state and local government activities within developed economies.

Prerequisite: full admission to a Ball State University graduate program.

615 International Economics (3) Classical and modern theories of exchange rates, gains from trade, factor movements, international money markets, and barriers to trade. Includes analysis of international commercial policy.

Prerequisite: ECON 201, 202 or equivalent, or permission of the department chairperson.

Open only to students who have been admitted to a university graduate program.

662 Health and Economics (3) Studies how economic incentives and institutions affect health, health care, and clinical practice. Will help students apply economic concepts to analyze health care and the effect of various health policies. Also emphasizes ways to improve health-care quality, increase access, and reduce costs.

Not open to students who have credit in NUR 662.

Open only to students with full admission to a graduate or certificate program of the university or by permission of the department chairperson.

683 Health Economic Analysis (3) Studying health economics will provide students with the tools necessary to analyze the interrelationship of health-care resources, providers, consumers, and markets. By the end of this course, students will demonstrate a conceptual understanding of health economics and how it relates to the U.S. health-care system.

Prerequisite: ECON 662 or MBA 651 or NUR 662 or permission of the department chairperson.

693 Health Economics and Policy (3) Applies economic concepts to understand how policy decisions made at various levels (of business and government) affect health-care access, quality, and cost. Specific applications may be drawn from the life sciences industry.

Prerequisite: ECON 116 or 201 or 509 or 662 or 683 or NUR 662.

FINANCE AND INSURANCE

bsu.edu/insurance
Whitinger Business Building 301, 765-285-5200

BUSINESS LAW (BL)

560 Survey of Business Law (3) The nature, role, and historical development of the law: the structure and operation of our legal system. The essential elements of tort, contract, agency, and partnership law.

Prerequisite: full admission to a graduate program of the university.

Not open to students who have credit in BL 260.

665 Law, Ethics, and Public Policy in Business (3) Introduces principles of business ethics, with focus on legal, public policy, and ethical issues facing private enterprise. Topics include business responsibility to the public, the environment, consumers, shareholders, employees, suppliers, and others, as today's manager must balance profitability, ethical responsibility, good corporate citizenship, and risk of legal liability.

FINANCE (FIN)

500 Corporation Finance (3) Principles underlying the financial management of nonfinancial corporations. Topics include: goals of the firm; financial planning, forecasting, and control; principles of valuation; investment decisions under certainty and uncertainty; capital structure decisions and cost of capital; dividend policy; management of current assets; sources of short-term funds and security law.

Prerequisite: admission to a graduate or certification program of the university; ACC 201 or 501 or equivalent.

Not open to students who have credit in FIN 300 or equivalent.

645 Business Analysis for Value Creation (3) Provides a conceptual framework for business analysis and examines the valuation fundamentals of a business. Topics include: financial analysis, managing privately held firms, entrepreneurial finance, capital budgeting, and structure.

Prerequisite: FIN 500 or equivalent; full admission to a graduate program in the Miller College of Business.

650 Investment Management (3) Introduction to investments, securities markets, transactions in stocks and bonds, market efficiency, risk, utility, portfolio theory, valuation and analysis, options, and futures markets.

Prerequisite: FIN 500 or equivalent; full admission to a graduate program in the Miller College of Business.

Open only to Miller College of Business students or by permission of the Miller College of Business director of graduate programs.

680 Global Financial Policy (3) Capstone examination of the financial management of the global firm. Emphasizes the firm's strategic use of market imperfections when operating in a risky international environment. Explores how exchange rate management adds another dimension to managing the global firm and creates profit opportunities.

Prerequisite: FIN 500 or equivalent; full admission to a graduate program in the Miller College of Business.

Open only to Miller College of Business students or by permission of the Miller College of Business director of graduate programs.

697 Independent Study in Finance (1-6) Designed for academically qualified students who wish to study some phase of finance. An intensive individualized program of reading, research, or analysis of various finance topics under the guidance of a faculty member.

Prerequisite: permission of the department chairperson and full admission to a graduate program of the university.

A total of 6 credits may be earned.

Open only to Miller College of Business students or by permission of the Miller College of Business director of graduate programs.

RISK MANAGEMENT AND INSURANCE (RMI)

570 Risk Management and Insurance (3) Examination of business and individual risk management and insurance, risk financing techniques, enterprise risk management, and additional related topics.

Prerequisite: full admission to a graduate or certification program of the university or permission of the department chairperson.

597 Independent Study in Insurance (1-6) For academically qualified students: study of some selected phase of insurance. An intensive individualized program of reading, research, or analysis of various insurance topics under the guidance of a faculty member.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned.

INFORMATION SYSTEMS AND OPERATIONS MANAGEMENT

bsu.edu/isom
Whitinger Business Building 203, 765-285-5227

PROGRAMS

Master of arts (MA) in business education, certificate in information systems security management

MASTER OF ARTS IN BUSINESS EDUCATION, 30-36 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Course requirements			
BED	592	Work-Based Learning	3
	593	Phil Org Adm CTE	3
	620	Improvement Instr Technology	3
	622	Instr Materials Strategies	3
	625	Problems and Issues	3
			15 crs
Research requirements			
BED	616	Research Methods	3
	and/or		
THES	698	Thesis	1-6
			3-9 crs
BED and other directed electives with program advisor approval			6-18
			30-36 crs

PROGRAMS

Master of arts (MA) in career and technical education; an alternative route to a secondary license in career and technical education; director of career and technical education.

MASTER OF ARTS IN CAREER AND TECHNICAL EDUCATION, 30-36 credits

The degree is designed for secondary or post-secondary educators of trade-related programs or persons in an industry seeking a program that includes training techniques, safety, and technical courses. This program may be completed entirely through distance education. The program is also designed for students who wish to acquire an advanced-level teacher license in career and technical education or to add a

career and technical area to a current teacher license of another area.

Admission requirements

Applicants must meet the admission requirements of the Graduate School.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Professional courses: must complete at least 9 credits			
CTE	550	Student Organization in Edu (3)	
	560	Occupational Safety and Health (3)	
	569	Organization Coordination CTE (3)	
BED	622	Instr Materials Strategies (3)	
	625	Problems and Issues (3)	9-15
Research methods requirements			
BED	616	Research Methods	3
and/or			
Research concentration, 3-6 credits from			
CRPR	698	Creative Project (3 or 6)	
RES	697	Research Paper (1-3)	
THES	698	Thesis (1-6)	3-6
CTE, BED, and other directed electives with program advisor approval)			9-18
			30-36 crs

BED 616 is a program requirement and a prerequisite for those pursuing a research concentration. Six advisor designated CTE and BED courses are required for Indiana Career and Technical Education teacher licenses in a trade and industrial program area.

DIRECTOR OF CAREER AND TECHNICAL EDUCATION, 30 credits

Initial Practitioner License Requirements
Designed for students who seek a Director of Career and Technical Education license required for administering career programs and facilities. This addresses Indiana REPA license requirements.

Admission requirements
Applicants must meet the admission requirements of the Graduate School.

Who can qualify?
Candidates must meet the following:

1. Hold one (1) of the following licenses:
   (A) A Proficient Practitioner license or Accomplished Practitioner license with at least one (1) of the content areas in career and technical education according to the Indiana Standard License Assignment Code.
   (B) A Workplace Specialist II license with two (2) years of full-time teaching experience in an accredited vocational school in the grade level and vocational content area listed on the license.
   (C) A Proficient or Accomplished Practitioner License in Building Level Administrator, Superintendent, Director of Curriculum and Instruction, or Director of Exceptional Needs.
   (D) A Proficient or Accomplished Practitioner license that includes the content area of Business or Technology education.
2. Successfully complete the content for director of career and technical education.
3. Successfully complete a master's degree.

Also required:
Verified valid CPR/Heimlich Maneuver certification and Suicide Prevention training through a state approved training program. Also, complete a required state criminal background check.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDAC	631	Adult and Community Education (3)	
	or		
	632	Org Ad and Comm Ed Progs (3)	3
EDAD	600	Intro to Ed Leadership	3
	684	Educational Finance and Ethics	3
	695	Career Tech Director Intern (3 or 6)	6
SPCE	637	Org and Admin of Spec Ed	3
6 credits in EDAD 695 are required unless the student previously took an internship for another administrative license, in which case 3 credits may be required pending review.			
3 credits from			
BED	625	Problems and Issues (3)	
CTE	568	Principles and Philosophy CTE (3)	
FCED	692	FCS Educ Prog Implementation (3)	3
3 credits from			
BED	593	Phil Org Adm CTE (3)	
CTE	569	Organization Coordination CTE (3)	3
3 credits from			
BED	592	Work-Based Learning (3)	
	622	Instr Materials Strategies (3)	
CTE	552	Strategies and Materials CTE (3)	
	696	Coordinating Coop Programs (3)	3
3 credits from			
BED	616	Research Methods (3)	
EDPS	640	Research Methods (3)	
FCS	697	Research Methods in FCS (3)	3
			30 crs

CERTIFICATE IN INFORMATION SYSTEMS SECURITY MANAGEMENT, 15 credits

Admission requirements

1. Applicants pursuing only a certificate program will be admitted as nondegree students.
2. Applicants must complete an application form from the Graduate School and provide official transcripts from the institution granting the baccalaureate degree and each institution attended for undergraduate and graduate work.
3. Standards for admission
   a. Hold an earned bachelor's degree from a college or university that is accredited by its regional accrediting association.
   b. Satisfy one of the following
      i. An undergraduate cumulative GPA of at least 2.75 on a 4.0 scale (all undergraduate course work, including work completed prior to the baccalaureate degree, is used to calculate the GPA).
      ii. A cumulative GPA of at least 3.0 on a 4.0 scale in the latter half of the baccalaureate.
      iii. Students not meeting these criteria may be considered for admission at the discretion of the Department of Information Systems and Operations Management program director.
4. Students who are currently enrolled in the Graduate School and who wish to pursue this certificate program, must apply for admission to the program before 6 of the required credits are completed.
5. Graduate students enrolled only in a certificate program may not hold a graduate assistantship.
6. Students may be enrolled full- or part-time in the certificate program.
7. Students who are currently enrolled in a graduate program of study leading to a degree who wish simultaneously to pursue this graduate certificate within the Division of Online and Distance Education must inform the Department of Information Systems and Operations Management program coordinator and the Division of Online and Distance Education of their intent to seek the graduate certificate.
8. Completion of a graduate certificate does not guarantee admission into a graduate degree program.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
ISOM	601	Intro Comp and Net Sec	3
	602	Host Hardening	3
	603	Net Designs and Sec Concerns	3
	604	Security Technologies	3
	605	Dis Recov and Comp Forensics	3
			15 crs

BUSINESS EDUCATION (BED)

551 Practicum in Business and Marketing Education (1-6) Supervised experience in curriculum planning and development of instructional materials for business and marketing education at the secondary and postsecondary levels.

A total of 6 credits may be earned.

582 Improvement of Instruction in Marketing Subjects (3) For the person with a baccalaureate degree in a discipline other than marketing education who is seeking licensure as a marketing education teacher/coordinator.

Prerequisite: EDSE 380 or equivalent; full admission to a graduate program of the university.

Open only to students seeking marketing education certification.

592 Managing Work-Based Learning Programs (3) Special knowledge and techniques for managing laboratory, cooperative, internship, and other work-based learning programs at both the secondary and postsecondary levels.

593 Philosophy, Organization, and Administration of CTE (3) The principles upon which CTE is organized, administered, and supervised; federal and state regulations; agencies that provide delivery systems for CTE; vocational rehabilitation and programs for persons with special needs.

594 Survey of Career/Technical Education Program Areas (3) An overview of career/technical education program areas. Includes program administration and supervision, objectives, the occupations for which training is offered, curricula, equipment and facilities, student selection, in-school laboratories, field-training opportunities, and youth organizations.

600 Occupational Experience Internship (1-8) Approved full-time employment in an occupation where students perform supervised work. Each credit requires 375 hours of approved, supervised, paid employment and submission of various employment reports by the intern.

Prerequisite: permission of the program coordinator.

A total of 8 credits may be earned.

Open only to students seeking a CTE license addition offered through the department.

602 Internship in Marketing Education (1-4) Full-time employment in an approved marketing occupation under departmental supervision. Students perform a variety of duties for a broad view of marketing occupations. Each credit requires 375 hours of approved employment and submission of various reports by the employer and intern.

Prerequisite: permission of the department chairperson and full admission to a graduate program of the university.

A total of 4 credits may be earned.

Open only to students seeking licenses as marketing education teacher/coordinators.

616 Research Methods (3) The concepts and methodology used in content-area research; introduction to research design, methodology, research limitations, and proposal preparation; analysis of completed research in the content area; determination of needed content-area research at the secondary and postsecondary levels.

617 Administration of Business and Marketing Education Programs (3) The purposes, functions, and principles of administration and supervision of business and marketing education programs. Uses case studies and simulations to solve business and marketing education problems under conditions of uncertainty. Uses problem solutions to teach decision making, organization planning, and strategy formulation.

620 Improvement of Instruction with Technology (3) Research, issues, strategies, and methods for improvement of instruction in content-area teaching with technology at the secondary and postsecondary levels.

622 Instructional Materials and Strategies for Improvement of Instruction (3) Methods, materials, and strategies for improvement of instruction in content-area teaching at the secondary and postsecondary levels.

624 Advanced Cooperative and Laboratory Methods (3) Techniques for improving and refining cooperative and laboratory methods in business and marketing education programs. Encompasses the development, operation, and evaluation of cooperative education and laboratory business and marketing education methods.

625 Problems and Issues (3) Identification of the problems and issues impacting the content area and possible solutions at the secondary and postsecondary levels; assessment of the significance of economic, legislative, and societal events impacting the content area at the secondary and postsecondary levels.

627 Seminar in Business and Marketing Education (1-3) Individual investigation into current problems, issues, and developments in business and marketing education at the secondary and postsecondary levels. Assigned readings and conferences.

A total of 3 credits may be earned.

628 Workshop in Business and Marketing Education (1-8) Curriculum planning; test construction; preparation of other visual aids, enrichment materials, and resource units; and similar concerns at the secondary and postsecondary levels.

A total of 8 credits may be earned.

650 Independent Study (1-12) For graduate students with excellent academic records. Studies in some phase of business education, marketing education, or related area. The project selected, methods, and credits must be approved by the department chairperson and supervising faculty member.

A total of 12 credits may be earned.

CAREER AND TECHNICAL EDUCATION (CTE)

550 (TEDU 550) Student Organizations in Education (3) Emphasizes the development, operation, and evaluation of career and technical education and other student organizations, with a concentration on co-curricular and extracurricular organizations.

552 (TEDU 552) Strategies and Materials for Career and Technical Education (3) A study of resources, instructional materials, and strategies for career and technical education programs.

560 (TMFG 560) Occupational Safety and Health (3) A study of the practices used to ensure a safe and healthful environment for business, education, and industrial sectors. Examines hazard recognition and correction and the impact of safety and health regulating agencies.

568 (TEDU 568) Principles and Philosophy of Career and Technical Education (3) Principles and philosophies of career and technical education programs are investigated. The role of legislation is analyzed.

569 (TEDU 569) Organization and Coordination of Career and Technical Education (3) Examines organizational structures, responsibilities, programs, and facilities dedicated to career and technical education. Current legislation directly impacting these programs will also be examined.

696 (TEDU 696) Coordinating and Conducting Cooperative Education Programs (3) Examines the regulations and guidelines governing the coordination of cooperative education programs and unique methods and strategies used to facilitate work-based learning.

COMPUTER TECHNOLOGY (CT)

511 Data Management Systems Infrastructure (3) A conceptual and technological examination of information technology architectures essential to data management systems. Subject matter includes server operating systems, cluster architectures, computational platform virtualization, data center design, enterprise storage solutions, and data management systems. Current technology and trends in each infrastructure aspect will be examined.

611 Resiliency Technologies for Highly Available Infrastructures (3) A conceptual and technological examination of information technologies that support highly

available infrastructures and services. Subject matter includes storage services, virtualization, telephony, computational clusters, data center strategies for reliability and redundancy, and organizational resiliency. Current technology and trends will be examined.

INFORMATION SYSTEMS AND OPERATIONS MANAGEMENT (ISOM)

533 System Simulation (3) Concepts and techniques of system modeling and simulation using computers. Includes computer simulation languages, statistical elements of simulation, and application of computer simulation to various practical business situations in manufacturing and service sectors.

Prerequisite: ECON 221; ISOM 351.

551 Operations Management (3) Discusses methods and models for managing the operations function in service and manufacturing organizations. Topics include operations strategy, forecasting, operations planning and control, materials and inventory management, operations and staff scheduling, and quality management.

Prerequisite: ECON 221 or equivalent; full admission to a graduate program of the university.

Prerequisite or parallel: MGT 500.

Not open to students who have credit in ISOM 351 or equivalent.

600 Negotiations (3) Examination of negotiation theories and practices in competitive business situations. Participative activities to evaluate negotiation process, develop confidence for participating in negotiation and conflict management, and analyze the behaviors of others in competitive settings. Students will develop effective negotiation skills and strategies through case discussions and negotiation simulations.

Prerequisite: MGT 500 or equivalent; admission to a graduate or certification program of the university.

601 Introduction to Computer and Network Security (3) Introducing fundamental concepts of computer and network security and security architecture using a look at the TCP/IP protocol and the tools used to interpret its traffic. Analyzing case studies, formulation of comprehensive security policy with hands-on experience of the latest intrusion detection techniques are discussed.

602 Host Hardening (3) The process of protecting a system against unknown threats. This course is designed for system administrators who need to anticipate attacks and compromises looking at the theories behind security and hardening a system and how to take very general approaches to organizational security.

Prerequisite: ISOM 601.

603 Network Designs and Security Concerns (3) Covers the fundamental concepts of network design, construction, and maintenance. Using case studies to take an in-depth look at the TCP/IP protocol and the tools used to read and interpret traffic. Providing students hands-on experience inside the world of Internet working, using the latest networking tools and techniques.

Prerequisite: ISOM 602.

604 Security Technologies (3) Covers the fundamental concepts of computer/network security and security architecture. Students will use case studies to unravel the method of attack and explain the security countermeasures while learning to formulate a comprehensive security policy. Provide students hands-on experience inside the world of hacking. Students will learn intrusion detection techniques.

Prerequisite: ISOM 603.

605 Disaster Recovery and Computer Forensics (3) Covers fundamental concepts of data protection, disaster recovery, and computer forensics. Provides readings and case studies. Students will learn strategies behind data protection and disaster recovery and best practice considerations for incident response. Students will be able to translate these best practice strategies into effective comprehensive policies for data management.

Prerequisite: ISOM 604.

612 Systems Analysis and Design (3) Concepts and techniques for the analysis of information needs, specification of system requirements, system development life cycle, and the design, development, and implementation of computer-based information systems in organizations including structured and prototype approaches.

Prerequisite: ICS 601 or MBA 621.

613 Systems and Data Management: Analysis and Design (3) Concepts and techniques for the analysis of information needs. Specification of data structures and system requirements in the design, development, and implementation of computer-based data management systems including structured and prototype development of commercial database management systems.

Prerequisite: full admission to a graduate program in the Miller College of Business or by permission of the Miller College of Business director of graduate programs.

614 Decision Support Systems (3) Decision support systems as tools for improving managerial decision making. Strategies for designing decision support systems for various managerial functions. Case studies and commercially available software are used to solve practical problems.

Prerequisite: ICS 601 or MBA 621; ISOM 361 or MBA 611; admission to a graduate program.

Open only to Miller College of Business students or by permission of the Miller College of Business director of graduate programs.

615 Information Resource Management (3) Concepts and techniques of information resource planning and management including a discussion of the design, development, operation, and evaluation of information resource planning strategies in the context of corporate plans and objectives.

Prerequisite: MBA 621; admission to a graduate program of the university.

Open only to Miller College of Business students or by permission of the Miller College of Business director of graduate programs.

617 Distributed Information Systems for Business (3) Concepts and techniques for analyzing business information needs of various organizations including teleprocessing networks, design of information networks, and the implementation of communication systems to meet the needs of end-user computing and distributed data processing functions.

Prerequisite: MBA 621; admission to a graduate program of the university.

Open only to Miller College of Business students or by permission of the Miller College of Business director of graduate programs.

618 Information Systems Security (3) Using case studies of hacking attacks, students will unravel the method of attack and explain the security countermeasures that defend against hackers. Learn how to formulate a comprehensive security policy, including password policy and incident handling, and how to identify, update, and implement a security policy in organization. Areas covered include: vulnerabilities of the major network systems, from OS to architecture and protocols; protecting against hacker attacks; analysis of network traffic and log files to detect intrusion signatures.

Prerequisite: MBA 621 or permission; full admission to a graduate program of the university.

619 Information Systems: Strategy and Applications (3) Application of information systems concepts, database systems, and related techniques to practical situations selected from public and private sectors, including a discussion of implementation strategies of these concepts and techniques. Requires the completion of a major project.

Prerequisite: ISOM 613 or 617 or equivalent.

Open only to Miller College of Business students or by permission of the Miller College of Business director of graduate programs.

651 Supply Chain Management (3) Focuses on system design, structure, capacity, and management of an integrated supply chain. Subjects include cross functional analysis and treatment of sourcing, supply, transportation, maintenance, operations, and related logistics support issues in a system-wide approach. Provides an integrative approach to strategy, policy, and decision making.

Prerequisite: ISOM 551 or equivalent; admission to a graduate program.

Open only to Miller College of Business students or by permission of the department chairperson.

653 Operations Scheduling and Inventory Management (3) Basic theoretical, computational, and applied elements of aggregate scheduling and inventory management in manufacturing and service industries, including aggregation and disaggregation of production plans and deterministic and stochastic inventory management models and systems.

Prerequisite: ISOM 551 or equivalent; admission to a graduate program.

Open only to Miller College of Business students or by permission of the Miller College of Business director of graduate programs.

654 Project Management (3) Concepts and techniques addressing the project scope definition; plan development and execution; sequencing, scheduling, and controlling activities for timely completion of projects.

Prerequisite: MGT 500 or equivalent; admission to a graduate program of the university.

Open only to Miller College of Business students or by permission of the department chairperson.

655 Quality Management (3) A study of systems for managing, controlling, and assuring the quality of goods and services using statistical techniques to solve problems and achieve continuous improvement in planning and operations. Special emphasis on total quality management, Six-Sigma, ISO 9000, and Malcolm Baldrige.

Prerequisite: ISOM 551 or equivalent; full admission to a graduate program of the university.

Open only to Miller College of Business students or by permission of the department chairperson.

695 Advanced Topics in Information Systems and Operations Management (1-9) Exploration of advanced topics in information systems and operations management of interest to faculty and students.

Prerequisite: permission of the department chairperson.

A total of 9 credits may be earned.

Open only to Miller College of Business students or by permission of the Miller College of Business director of graduate programs.

697 Independent Study in Information Systems and Operations Management (1-6) Supervised study of some phase of information systems and operations management in depth. The topic selected, methods of study, and credits allowed must be approved by the department chairperson and the supervising faculty member.

Prerequisite: permission of the department chairperson; full admission to a graduate program of the university.

A total of 6 credits may be earned.

Open only to Miller College of Business students or by permission of the Miller College of Business director of graduate programs.

698 Seminar in Information Systems and Operations Management (1-4) Group or individual investigation into current problems, issues, and developments in information systems and operations management. Assigned readings and conferences.

Prerequisite: permission of the department chairperson; full admission to a graduate program of the university.

A total of 4 credits may be earned.

Open only to Miller College of Business students or by permission of the Miller College of Business director of graduate programs.

699 Internship in Information Systems and Operations Management (1-6) Actual job experience in an organization with a continuing cooperative information systems and operations management program. Requires periodic written progress reports that will be evaluated by the assigned faculty member and the intern supervisor from the hiring organization. The topic selected will depend on the student's option.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned.

Open only to Miller College of Business students or by permission of the Miller College of Business director of graduate programs.

MANAGEMENT

bsu.edu/management
Whitinger Business Building 205, 765-285-9022

MASTER OF SCIENCE IN MANAGEMENT, 36 credits

There is a college moratorium on admission to this degree.

MASTERS IN RESIDENTIAL PROPERTY MANAGEMENT, 33 credits

Admission requirements
Applicants must meet the admission requirements of, and be cleared by, the Ball State University Graduate School prior to being considered for admission into the program. In addition to completing the Graduate School ADMIT application, all applicants are required to submit a letter of intent, a resume, and two letters of recommendation, preferably using the Graduate School's online ADMIT system. At least one recommendation should come from a university faculty member (teacher, advisor, coach, etc.). Applicants are required to have an overall undergraduate GPA of 3.0 on a 4.0 scale. For conditional and probationary acceptance requirements, contact the program's Director of Graduate Studies.

Master of Arts in Residential Property Management, 33 credits

Foundation courses at the undergraduate level (PMGT 104, 235, 275, 305) are required except when equivalent competency has been documented. Students without a Residential Property Management (RPM) undergraduate degree or with less than six months of industry experience must use 6 of the elective credits to complete PMGT 669 Graduate Internship in Residential Property Management. Students must meet the following additional requirements:

- Grade of *C* or better in PMGT 535 and PMGT 669 (if applicable)
- Sit for the Certified Apartment Manager (CAM) exam

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
PMGT	530	Adv Apt Operations Management	3
	535	Advanced RPM Project	3
	585	Advanced Simulation in RPM	3
	635	Trends and Issues in Prop Mgt	3
3 credits from			
FCFC	680	Family Problems (3)	
PMGT	525	Adv Mgt of Government Housing (3)	
	615	Senior Housing Option (3)	
	696	Property Management Seminar (3)	3
			15 crs
Research component			
9-12 credits from			
EDPS	641	Intro Statistical Methods	3
FCS	697	Research Methods in FCS	3
RES	697	Research Paper (1-3)	
	or		
CRPR	698	Creative Project (3 or 6)	3 or 6
6-9 credits from Electives			6-9
			33 crs

Master of Science in Residential Property Management, 33 credits

Foundation courses at the undergraduate level (PMGT 104, 235, 275, 305) are required except when equivalent competency has been documented. Students without an RPM undergraduate degree or with less than six months of industry experience must use 6 of the elective credits to complete PMGT 669 Graduate Internship in Residential Property Management. Students must meet the following additional requirements:

- Grade of *C* or better in PMGT 535 and PMGT 669 (if applicable)
- Sit for the Certified Apartment Manager (CAM) exam

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
PMGT	530	Adv Apt Operations Management	3
	535	Advanced RPM Project	3
	585	Advanced Simulation in RPM	3
	635	Trends and Issues in Prop Mgt	3
3 credits from			
FCFC	680	Family Problems (3)	
PMGT	525	Adv Mgt of Government Housing (3)	
	615	Senior Housing Option (3)	
	696	Property Management Seminar (3)	3
			15 crs
Research component			
12 credits from			
EDPS	641	Intro Statistical Methods	3
FCS	697	Research Methods in FCS	3
THES	698	Thesis (1-6)	6
6 credits from Electives			6
			33 crs

Certificate in Selling and Sales Management, 12 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
MKG	505	Survey of Marketing (3)	
	or		
MBA	671	Marketing Management (3)	3
MKG	625	Prof Sell Skills and Practices	3
	630	Customer Relationship Mgt	3
	635	Sales Management	3
			12 crs

Certificate in Entrepreneurship, 12 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
MGT	640	Entrepreneurial Innovation	3
	647	Entr Planning and Feasibility	3
	649	Entrepreneurial Strategy	3

ACC 501 is required for students who do not have credit in ACC 201 or equivalent.

ACC	501	Financial Accounting (3)	
	or		
3 credits from			
MBA	601	Entrepreneurial Leadership (3)	
	671	Marketing Management (3)	
MKG	625	Prof Sell Skills and Practices (3)	
	630	Customer Relationship Mgt (3)	
	635	Sales Management (3)	3
			12 crs

This program is offered on-line only.

FAMILY AND CONSUMER SCIENCES (FCS)

500 Field Studies in Family and Consumer Sciences (1-6) Field study sites may either be domestic or international, and in any area of family and consumer sciences. Readings related to the field experience will be included.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned.

594 Workshop: Family and Consumer Sciences (1-3) Activity-oriented study of one topic in family and consumer sciences.

A total of 9 credits may be earned, but no more than 3 in any one semester or term.

595 Independent Study in Family and Consumer Sciences (1-3) Investigation and exploration of a topic in family and consumer sciences. Emphasizes extensive reading and the development of research skills.

Prerequisite: permission of the department chairperson.

A total of 9 credits may be earned, but no more than 3 in any one semester or term.

596 Seminar in Family and Consumer Sciences (1-6) Seminar topics will focus on current issues in the family and consumer sciences profession. Using the seminar format students will research, discuss, and disseminate information gathered on a given topic.

Prerequisite: permission of the department chairperson.

A total of 9 credits may be earned, but no more than 6 in any one semester or term.

669 Internship in Family and Consumer Sciences (3-6) Provides the opportunity for the student to work in established internship settings to gain professional experience in one's specific area of study.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned.

Open only to departmental majors.

690 Sustainable Practices for Designers and Merchandisers (3) Provides the graduate student the opportunity to learn sustainable theories and practices specific to apparel, merchandising, and interior design. Topics include ecological principles, consumer perspectives, process and practices, policy and performance assessments of various design methods and frameworks.

HOSPITALITY AND FOOD MANAGEMENT (HOSP)

500 (FCFN 500) Cost Control in Hospitality and Foodservice Industry (3) Controlling cost from a management perspective in the hospitality and foodservice industry.

Prerequisite: ACC 201.

Not open to students who have credit in HOSP 300.

576 (FCFN 576) Event Management (3) Management of hospitality and business-related activities such as conventions, professional and social events, catered activities, and their intra-industry interactions.

Not open to students who have credit in HOSP 376.

MANAGEMENT (MGT)

500 Managing Organizational Behavior (3) Examines theoretical and practical foundations of managing organizational behavior. Discusses functions of management, principles of individual and group behavior, human resource management/law, special issues of managing behavior in organizations, including quality of work-life, and ethical and social responsibility.

Prerequisite: admission to a graduate or certification program of the university.

Not open to students who have credit in MGT 300 or equivalent.

598 Seminar in Management Practices (3) Intended for nonbusiness graduate students. Covers current topics related to management issues in various settings. Methods may include lectures, discussions, group projects, site visits, and individual research.

Prerequisite: permission of the department chairperson.

Not applicable toward any graduate degree in the Miller College of Business.

601 International Issues in Marketing and Management (3) Discussion of business strategies in global industries within economic, political, and international firms. Topics include strategic management processes, methods, policies, and entry strategies for marketing overseas. Based on case studies and/or projects.

Prerequisite: full admission to a graduate program of the university; MGT 500, MKG 505 or equivalents.

620 Management and Marketing of Emerging Technologies (3) Focuses on the strategic management of technology-based innovation in the firm, and the marketing of such technologies globally. Includes business theories and concepts in the business-to-business and business-to-consumer markets. Specific topics include communication technologies, biotechnology, genetic engineering, and nanotechnology.

Prerequisite: full admission to a graduate program of the university; MGT 500, MKG 505 or equivalents.

640 Entrepreneurial Innovation (3) Focuses on the individual entrepreneur and the process of creating (or discovering) innovative entrepreneurial solutions for real-world market opportunities. Trains students in creative decision-making processes that will help them conceive their own entrepreneurial venture.

Prerequisite or parallel: ACC 501 or equivalent; full admission to a graduate or certificate program of the university.

Not open to students who have credit in ENT 346 or equivalent.

Open only to Miller College of Business students or by permission of the Miller College of Business director.

642 Financing for New and Emerging Ventures (3) Study of various financial considerations of venture creation including the sources of capital, components of financial management, venture and risk capital, and traditional and contemporary modes of investment in new start-ups.

Prerequisite: MGT 640.

646 New Venture Creation (3) Survey course examining the process of conceiving, organizing, and launching a new business venture. Semester project involves the creation of a viable and compelling business plan.

Prerequisite: ACC 501, FIN 500, MGT 500, and MKG 505 or their equivalents; full admission to a graduate program of the university.

Not open to students who have credit in ENT 449 or equivalent.

647 Entrepreneurial Planning and Feasibility (3) Reviews process for developing and evaluating an entrepreneurial idea. Specific emphasis on feasibility of the idea. An overview of business description, market research, basic business financials, and implementation strategy is provided.

Prerequisite: MGT 640; full admission to a graduate or certificate program of the university.

Not open to students who have credit in ENT 347 or equivalent.

Open only to Miller College of Business students or by permission of the Miller College of Business director.

649 Entrepreneurial Strategy (3) Integration of various principles, concepts, and theories of entrepreneurship including a critical analysis of various theories and the completion of a major field project under the guidance of an

approved faculty member.

Prerequisite: MGT 640, 647; full admission to a graduate or certificate program of the university.

Open only to Miller College of Business students or by permission of the Miller College of Business director.

661 Strategic Human Resource Management (3) Emphasizes the basic functions of human resource management including planning, job analysis, selection, training, compensation, evaluation, safety, labor relations, and international issues. A combination of lecture, discussion, applied exercises, and case analysis will be employed.

Prerequisite: full admission to a graduate program of the university.

Open only to Miller College of Business students or by permission of the Miller College of Business director of graduate programs.

695 Advanced Topics in Management (1-9) Exploration of advanced topics in management of interest to faculty and students.

Prerequisite: permission of the department chairperson.

A total of 9 credits may be earned.

Open only to Miller College of Business students or by permission of the Miller College of Business director of graduate programs.

697 Independent Study in Management (1-6) Supervised study of some phase of management in depth. The topic selected, methods of study, and credits allowed must be approved by the department chairperson and the supervising faculty member.

Prerequisite: permission of the department chairperson and full admission to a graduate program of the university.

A total of 6 credits may be earned.

Open only to Miller College of Business students or by permission of the Miller College of Business director of graduate programs.

698 Seminar in Management (1-4) Group or individual investigation into current problems, issues, and developments in management. Assigned readings and conferences.

Prerequisite: permission of the department chairperson and full admission to a graduate program of the university.

A total of 4 credits may be earned.

Open only to Miller College of Business students or by permission of the Miller College of Business director of graduate programs.

699 Internship in Management (1-6) Actual job experience in an organization with a continuing cooperative management program. Requires periodic written progress reports that will be evaluated by the assigned faculty member and the intern supervisor from the hiring organization. The topic selected will depend on the student's option.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned.

Open only to Miller College of Business students or by permission of the Miller College of Business director of graduate programs.

RESIDENTAL PROPERTY MANAGEMENT (PMGT)

515 (FCPM 515) Advanced Senior Housing: Design, Marketing, and Management (3) Exploration of the principles that guide the design, marketing, and management of housing for older adults. Conceptual development of these principles, applicable to a local setting.

525 (FCPM 525) Advanced Management of Government-Assisted Housing (3) Exploration of the practices that impact government-assisted housing programs and the role of management in meeting the needs of owners, residents, and regulatory agencies. Application of these practices through advanced projects and field experiences.

Not open to students who have credit in PMGT 405.

530 (FCPM 530) Advanced Apartment Operations Management (3) Residential property managers are responsible for day-to-day and long-term financial condition of the housing communities they manage. This course equips students with the knowledge and skills necessary to add value to multifamily residential communities.

Not open to students who have credit in PMGT 330.

535 (FCPM 535) Advanced Residential Property Management Project (3) Provides an advanced, hands-on opportunity to use industry standards to analyze an apartment community. The resulting project can provide the management company with information to remain competitive and profitable in the apartment market.

585 (FCPM 585) Advanced Simulation in Residential Property Management (3) Application of advanced residential property management skills practiced through simulation activities. Opportunity to research common problems in the industry to arrive at solutions.

615 (FCPM 615) Senior Housing Options (3) Examination of the challenges and solutions in housing older adults from independent living through dependent custodial care. Investigation and evaluation of senior housing options through research projects and field experiences. Exposure to senior housing from a global perspective.

635 (FCPM 635) Trends and Issues at the Corporate Level in Property Management (3) Research the trends and issues at the corporate level of property management making use of current demographic and other data. Examine legislative issues related to a balanced housing policy.

669 (FCPM 669) Graduate Internship in Residential Property Management (3 or 6) Provides the opportunity for

the student to work in an established internship setting to gain professional experience in one's specific area of study.

Prerequisite: ACC 201; HOSP 210; PMGT 275 and 305; permission of the department chairperson. A total of 12 credits may be earned, but no more than 6 in any one semester or term.

696 (FCPM 696) Property Management Seminar (3) Exploration of the professional practices of specialized property types. Using the seminar format, students will research, discuss, evaluate, and disseminate information related to a given property type.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

MARKETING

bsu.edu/marketing
Whitinger Business Building 309, 765-285-5180

MASTERS IN FASHION, 33 credits

Admission requirements
Applicants must meet the admission requirements of, and be cleared by, the Ball State University Graduate School prior to being considered for admission into the program. In addition to completing the Graduate School ADMIT application, all applicants are required to submit a letter of intent, a resume, and two letters of recommendation, preferably using the Graduate School's online ADMIT system. At least one recommendation should come from a university faculty member (teacher, advisor, coach, etc.). Applicants are required to have an overall undergraduate GPA of 3.0 on a 4.0 scale. For conditional and probationary acceptance requirements, contact the program's Director of Graduate Studies.

Master of Arts in Fashion, 33 credits

Students without a fashion (merchandising or design) undergraduate degree will be required to take one or more foundation courses (FCFA 270, 280, and/or 230 or equivalents)

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
FASH	625	Fash Theories	3
	630	Fashn Busn Stratg	3
	635	Crtvity in Fashn Dsgn & Mdse	3
	640	Fashn Prodct Develop	3
	645	Museum Stdy in Apprl Txtl	3
	or		
FCS	690	Sustain Des	3
			15 crs

Research component
9-12 credits from

EDPS	641	Intro Statistical Methods	3
FCS	697	Research Methods in FCS	3
RES	697	Research Paper (1-3)	
	or		
CRPR	698	Creative Project (3 or 6)	3 or 6
6-9 credits from Electives			6-9
			33 crs

Master of Science in Fashion, 33 credits

Students without a fashion (merchandising or design) undergraduate degree will be required to take one or more foundation courses (FCFA 270, 280, and/or 230 or equivalents)

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
FASH	625	Fash Theories	3
	630	Fashn Busn Stratg	3
	635	Crtvity in Fashn Dsgn & Mdse	3
	640	Fashn Prodct Develop	3
	645	Museum Stdy in Apprl Txtl	3
	or		
FCS	690	Sustain Des	3
			15 crs

Research component
12 credits from

EDPS	641	Intro Statistical Methods	3
FCS	697	Research Methods in FCS	3
THES	698	Thesis (1-6)	6
6 credits from Electives			6
			33 crs

FASHION (FASH)

500 (FCFA 500) Advanced Flat Pattern (3) Fundamental principles of pattern modification using a basic pattern. Emphasis on pattern alteration and fitting of basic dress and pants. Use of computer-aided design to produce a pattern for a garment of original design.

501 (FCFA 501) Advanced Construction for Apparel Design (3) Students will recognize characteristics typifying

high quality tailored garments and produce garments using advanced construction techniques. Application of appropriate techniques to construct a tailored garment. Students will apply advanced techniques to original design work. Provides experience in working in design and production teams.

503 (FCFA 503) Advanced Design by the Draping Method (3) Provides basic knowledge of apparel design using the draping method.

505 (FCFA 505) Advanced Computerized Apparel Product Development (3) Provides advanced knowledge of the use of computer skills in product development. Integration of design development skills in apparel design and illustration, apparel product prototype development, and presentation using industry software. Another topic covered is grading. Incorporates design and critical problem solving skills, design process models, and design theory including utilization of toolsets.

555 (FCFA 555) Advanced Fashion Product Analysis (3) Study of factors that contribute to the quality of fashion-related merchandise. Provides an opportunity to become skillful in evaluating the materials and construction quality and techniques used in the textile and apparel industry. Includes investigation of current trends related to apparel quality and sourcing.

Prerequisite: permission of the department chairperson.

565 (FCFA 565) Advanced Study of Fashion Designers and Forecasting (3) Study of present and historical fashion designers from around the world. Emphasis on understanding their contributions to the fashion industry and their influence in today's fashion markets. An understanding of the process of fashion forecasting is stressed.

Prerequisite: permission of the department chairperson.

570 (FCFA 570) Advanced Fashion Buying and Merchandising (3) Review of current trends in fashion merchandising. Building a knowledge base to make decisions on buying and merchandising to satisfy customers and maintain an adequate profit level.

Prerequisite: permission of the department chairperson.

575 (FCFA 575) Advanced International Apparel Markets (3) Provides an overview of the global textile and apparel industries. Considers the U.S. textile complex and market within an international context. Investigation of current trends in the international apparel marketplace.

Prerequisite: ECON 201 or 509; MKG 300 or 505; permission of the department chairperson.

596 (FCMR 596) Seminar in Merchandising (3) Exploration and integration of concepts related to the various elements of merchandising.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

625 (FCFA 625) Fashion Theories (3) An in-depth study of fashion theories, including theories related to fashion design and construction, social psychological aspects of fashion, consumer behavior, social change, and fashion history. Provides an opportunity to become skillful in identifying and evaluating theories used in fashion research.

630 (FCFA 630) Fashion Business Strategies (3) This course provides an examination of retail operations and strategies within the contemporary marketing context. Includes the study of contemporary fashion retailing strategies for consumption, merchandise mix and selection processes, product assortment analysis from the context of the retailer, the examination of retail store and space allocation for product assortments, and an investigation of current retail operations in the global marketplace.

635 (FCFA 635) Creativity in Fashion Design and Merchandising (3) An in-depth study of creativity in design and merchandising. Provides an opportunity to become skillful in identifying, applying, and analyzing research related to creativity in design and merchandising.

640 (FCFA 640) Fashion Product Development (3) An in-depth study of manufacturing as it applies to the global market place. Provides an opportunity to become skillful in identifying theories and methods used to examine fashion product development supply chain.

645 (FCFA 645) Museum Studies for Apparel and Textiles Collections (3) An in-depth analysis of museum studies for apparel and textiles collections. Provides an opportunity to become skillful in identifying and evaluating theories and practices in museums that have apparel and textiles collections. The course will allow opportunities to learn the role of apparel and textiles collections in museums.

FAMILY AND CONSUMER SCIENCES (FCS)

697 Research Methods in Family and Consumer Sciences (3) Introduces family and consumer science students to the research process as informed consumers and future investigators. Topics include the research process; quantitative, qualitative, mixed methods, and action research designs; and evaluation of research statistics. Includes scientific writing, strategies for conducting literature searches, research ethics, and elements of a research proposal.

Prerequisite: EDPS 641 or 642 or BIO 548 or HSC 687 or permission of the department chairperson.

Open only to departmental majors.

MARKETING (MKG)

505 Survey of Marketing (3) A survey of marketing that reflects the social, economic, and international challenges facing marketing managers. Examines the roles of marketing in both society and business.

Prerequisite: full admission to a graduate or certification program of the university.

610 Business and Sustainability (3) Examines business activity from an input-process-output perspective. Addresses design, materials flows, production, distribution, usage, and end-of-life disposition of materials throughout the life cycle of products and services and their impacts on resources and the integrity of environmental, social, and economic systems necessary for long-term human activity and quality of life.

Prerequisite: full admission to a graduate program of the university.

625 Professional Selling Skills and Practices (3) Introduces the managing of the sales process exploring prospecting, information gathering, presentations, handling sales resistance, earning commitment, and follow-up. Other topics include buyer behavior and communication skills.

Prerequisite: admission to a graduate program of the university; MKG 505 or its equivalent.

630 Customer Relationship Management (3) Examines the skills required in professional, service, and manufacturing organizations to satisfy customers with sound relationship strategies. In addition to covering the sales process, special topics include selling services, sales technology, ethics, customer lifetime value, and compensation structures. Discusses the links between business trends and needs for new approaches to selling.

Prerequisite: full admission to a graduate program of the university; MKG 505 or its equivalent.

635 Sales Management (3) The roles and functions of the business-to-business sales manager will be examined. Also explores practices in recruiting, selecting, training, compensating, leading, motivating, and controlling the sales force.

Prerequisite: admission to a graduate program of the university; MKG 505 or its equivalent.

655 Business Research Methods (3) Focuses on collecting, organizing, and using data as an aid to making managerial decisions. Business research and information gathering methods include design, development, information gathering, data interpretation, reporting, and strategic use of research findings. Students gather data from corporate sources, visits to Internet sites, field projects, or library files.

Prerequisite: full admission to a graduate program of the university.

697 Independent Study in Marketing (1-3) For graduate independent study in some phase of marketing. May consist of an experiment, library research, or the analysis of current marketing practices and methods.

Prerequisite: MKG 300 or 505, permission of the department chairperson, and full admission to a graduate program of the university.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

COLLEGE OF COMMUNICATION, INFORMATION, AND MEDIA

bsu.edu/ccim
David Letterman Communication and Media Building 102, 765-285-6000
Dean of the College: Paaige K. Turner
Associate Dean: Lori Byers

INTERDEPARTMENTAL

NEWS (NEWS)

585 Advanced News Seminar (3) Exposes students to multimedia storytelling. Working in teams, students produce integrated news or features presentations for varied media.

COMMUNICATION STUDIES

bsu.edu/commstudies
David Letterman Communication and Media Building, 351, 765-285-1882

PROGRAM

The graduate program of the Department of Communication Studies offers students the opportunity to pursue advanced study in many facets of communication studies, including rhetorical studies, interpersonal communication, and organizational communication. The master of arts in communication studies may serve as a terminal degree or as preparation for additional graduate study. The master of arts degree in communication studies can be completed in two years.

MASTER OF ARTS IN COMMUNICATION STUDIES, 36 credits

Admission requirements
Applicants must meet the admission requirements of the Graduate School. Applicants are also required to complete the Graduate Record Exam (GRE) to be eligible for admission into the program.

Degree requirements

- Candidates are required to complete a set of core requirements (21 credits) and a 15-credit concentration.
- Candidates are required to complete either a thesis or comprehensive exams. If pursuing a thesis, students must enroll in THES 698, submit an approved thesis, and successfully complete an oral defense of that thesis.

  Candidates who elect to pursue comprehensive exams must successfully complete both a written exam and the oral defense of that exam.
- Candidates who elect to take RES 697 must submit and have approved a scholarly research paper and successfully complete both written and oral comprehensive exams.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core requirements			
COMM	601	Intro to Comm Studies	3
	602	Quant Research in Comm	3
	605	Qual Research in Comm	3
	612	Rhetorical Criticism	3
Electives			9
			21 crs
Communication Liberal Arts and Sciences (CLAS) concentration, 15 credits			
COMM	611	Theories of Rhetoric	3
	635	Interpersonal Communication	3
	640	Interpersonal Comm Contexts	3
	660	Communication Theory	3
COMM elective			3
			36 crs

Organizational and Professional Communication Development (OPCD) concentration, 15 credits

COMM	650	Training in Organizations	3
	651	Organizational Comm: Micro	3
	652	Organization Comm: Macro	3
	653	Communication Consultation	3
	669	Professional Experience (3 or 6)	3
			36 crs

Courses required for one communication studies concentration (i.e., CLAS or OPCD) can serve as elective courses for students enrolled in the other concentration.

COMMUNICATION STUDIES (COMM)

601 Introduction to Communication Studies (3) Introduction to theory and research in communication studies through survey, discussion, and evaluation of historical and current trends, theoretical perspectives, and research exemplars. Includes research writing styles, critical reading, and literature searches. Designed for beginning graduate students in communication studies.

Prerequisite: permission of the department's director of graduate studies.

602 Quantitative Research in Communication (3) Explores quantitative research methods and statistics used in communication inquiry. Intended to enable students to understand, evaluate, design, and conduct research. Students will master basic techniques in data analysis and interpretation.

Prerequisite or parallel: COMM 601.

605 Qualitative Research in Communication (3) Provides an understanding of how communication research is conducted in natural settings using qualitative research methods. Covers a variety of interpretive techniques designed to describe, decode, interpret, and conduct studies in naturally occurring communicative phenomena in many social contexts.

Prerequisite or parallel: COMM 601.

610 Studies in Persuasion (3) Current theories, research, and practice in persuasion and social influence. Variables affecting implementation of persuasive principles and strategies.

611 Theories of Rhetoric (3) Comprehensive survey of the principle figures, theories, and movements in rhetoric from the classical period to the present. Relationships between rhetorical theory and political, social, and/or critical theory are explored.

612 Rhetorical Criticism (3) The description, analysis, interpretation, and evaluation of persuasive uses of symbols. Theories and methods of selected classical and modern critics are explored.

614 Contemporary Rhetoric and Public Issues (3) Use contemporary understandings of rhetoric to explore organized public discourse common to a democratic society. Specific rhetorical constructs will be used to examine the deliberation of issues as they relate to selected historical periods, institutions, campaigns, movements, crises, and programs.

620 Classical Rhetorical Theory (3) Explores the roots of rhetorical theory development by examining contributions of important theorists from ancient Greece and Rome. Offers insight into persuasion's role in these ancient cultures and the influence that ancient scholars and rhetors have had on modern theory and practice.

630 Health Communication (3) Examines theories, research, and applications of symbolic processes by which people individually and collectively understand, share ideas about, and experience health and illness. Overviews significant concepts and issues in health communication scholarship with particular attention to communication processes and communicative implications of health beliefs, practices, policies, and organizations.

635 Interpersonal Communication (3) Contemporary theories, models, and pertinent research related to the communication process in relatively unstructured face-to-face settings. Understanding message exchanges between people and their influence on social interaction. Topics include communication models, perception, symbols, systems, self-concept, attitudes, meaning, and nonverbal messages.

640 Interpersonal Communication in Contexts (3) Extensive and in-depth study of state-of-the-art scholarship in interpersonal communication. Survey of contemporary theoretical and applied social science literature pertaining to human interaction.

645 Intercultural Communication (3) Explores how various cultural world views shape communication, and how various communication strategies, structures, and practices can increase the potential for meaningful intercultural communication. Introduces a variety of epistemological approaches to intercultural theory and research.

650 Communication Training in Organizations (3) Application, research, and theory pertinent to training in organizations. Emphasizes methods of teaching effective communication skills to organizational members.

651 Organizational Communication: Interpersonal and Intrapersonal Processes (3) Application of research and theory in interpersonal and intrapersonal processes in organizations. Emphasizes practical approaches to determining the causes of communication problems in organizations and devising effective solutions for those problems.

652 Organizational Communication: Systems, Culture, and Critique (3) Application of research and theory to communication systems and cultures in organizations. Emphasizes critical approaches to analyzing communication in organizations.

653 Issues in Communication Consultation (3) Role and obligations of the communication consultant. Emphasizes process consulting, consultation models, interpersonal and team decision-making skills, practical communication analysis, problem diagnosis, intervention strategies, client approach alternatives, and implementation strategies.

Prerequisite: COMM 601, 650, 651; permission of the department chairperson.

655 Instructional Communication (3) Examines research, theory, practice, and philosophy in communication education. Overviews instructional communication scholarship including student learning, teacher behaviors, and communication processes that impact higher education, and instructional skill development.

660 Studies in Communication Theory (3) Survey and analysis of the theoretical and experimental literature in communication studies. Review of contemporary theories, including analysis of concepts, models, and pertinent research relevant to communication studies.

665 Mediated Communication (3) Survey of theory and research concerning communication mediated by technology. Historical, contemporary, and new technologies and their use, antecedents, processes, and outcomes in intrapersonal, interpersonal, group, organizational, and public communication. Includes social scientific, interpretive, and critical theories and research exemplars.

669 Professional Experience (3 or 6) Paid, supervised work and learning experience related to careers in human communication with business firms or public agencies. Job description may include, but is not limited to, research, training, planning, informative or persuasive campaigns, problem solving, and conflict management.

Prerequisite: permission of the internship coordinator and/or department chairperson; 18 credits in communication studies.

A total of 6 credits credit may be earned.

675 Coaching and Directing Forensics (3) The rationale and philosophy of coaching secondary school forensic programs. Concentrates on developing a forensic team, tournament administration, coaching methods, and philosophies. Aids in developing coaching methods for interpretive, public address, and debate events.

679 Practical Experience (3) Nonpaid supervised work and learning experience related to careers in human communication with business firms or public agencies. Job description may include, but is not limited to, research, training, planning, informative or persuasive campaigns, problem solving, and conflict management.

Prerequisite: permission of the internship coordinator and/or department chairperson; 18 credits in communication studies.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

690 Seminar in Communication (3) Intensive study of selected topics from the literature or practice of communication. Topics will vary each semester. Content will be drawn from areas not dealt with in the regular curriculum.

Prerequisite: permission of the instructor.

A total of 9 credits may be earned, but no more than 3 in any one semester or term.

696 Directed Study in Communication (3) Students study a particular topic in consultation with a member of the faculty.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

CENTER FOR INFORMATION AND COMMUNICATION SCIENCES

bsu.edu/cics
Ball Communication Building 221, 765-285-1889

PROGRAM

MASTER OF SCIENCE IN INFORMATION AND COMMUNICATION SCIENCES, 38 credits

The master of science in information and communication sciences (ICS) is a graduate professional program that prepares students for career opportunities and leadership positions in organizational settings where information and communication technologies (ICT) are used. Graduates of ICS are prepared to understand the implications of managing information and communication opportunities discovered in the design, production, and purposing of ICT products and services. Such opportunities arise in the financial, health care, government, education, information and communication sectors and in wide variety of tech-enabled businesses. ICT now plays a central role in the success of most business, government and non-profit endeavors.

Graduates will achieve an understanding of the ICT environment, including its human, regulatory, operational and business contexts. They will understand the technological options available for the delivery and distribution of emerging technology products and services across multiple industry platforms. They will become familiar with a variety of software applications and technology methodologies to meet business needs such as Cloud computing, Big Data, security practices, storage, networking, and unified communications.

This program also provides background and experiences in project management including design, development, regulation and usability factors, important in implementing technologies intended to solve business problems. Students will explore the role and function of strategic thinking and management related to business and ICT issues, including collaborative leadership, problem-solving, competitiveness, productivity, and finance. With participation from faculty, alumni and ICT companies, students explore the broad variety of career options, projects and related skills that support the ICT industry. The ICS master's program includes a project focus throughout the curriculum to enhance the integrative and systems thinking skills of the students.

This program assists students in learning how to become a professional in this field with an emphasis on developing resiliency and continuous improvement skills. Because the fields of information and communication are so dynamic, students must be able to identify needs and gather information to solve new problems independently and in teams and to constantly prioritize opportunities as technologies change around them.

Admission requirements
Applicants must meet the admission requirements of the Graduate School. Applicants will also submit a 1-2 page goal statement which the department will review.

Degree requirements
Students must complete a minimum of 38 credits.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Required courses			
ICS	600	Survey of Management	3
	601	Problems in Info and Comm Sci	3
	602	Human Communication	3
	620	Info and Comm Technologies	4
	621	Info Movemnt, Mgmt, Storage	4
	630	Research Methodologies	3
	642	Regulatory Research	3
	660	Human Factors	3
			26 crs
Business electives			
ICS	605	Interpersonal Mgmt Skills (3)	
	624	Knowledge Management (3)	
	633	Systems Analysis and Design (3)	
	634	Project Management (3)	
	635	Info and Comm Projects (1-2)	
	640	Info and Comm Industry (3)	
	643	Social Responsibility (3)	
	644	Tech, Fin, Economics of Choice (3)	
	646	Management of Telecom Network (3)	
	653	Issues in Comm Consultation (3)	
	655	Special Problems Seminar (3)	
	661	Entrepreneurship (3)	
	662	Usability Testing (3)	
	666	Strategic Planning for IT (3)	
	675	Info and Comm Marketing (3)	
Technology electives			
ICS	623	Systems Engineering in ICT (3)	
	625	Video, CATV, and Imaging Tech (4)	
	632	Problems in IC Tech Seminar (2)	
	645	Evolving Database Systems (3)	
	648	Wireless and Satellite Comm (3)	
	649	Comparative Operating Systems (3)	
	650	Wireless 2 (3)	
	663	Network Design (3)	
	664	Info Delivery Systems (3)	
	667	Video-Based Learning Systems (3)	
	684	Info Access and Mgmt Info Svc (3)	
	691	Internetworking, TCP and IP (3)	
	692	Advanced Network Configuration (3)	
	696	Info and Comm Research and App (2)	
	698	Problems in Information Sys (3)	
	699	Problems in Info and Comm Mgmt (3)	

At least one elective course outside CICS can be selected in consultation with the advisor and subject to the approval of the CICS director.

Degree recap

Core requirements	26 crs
Electives courses	12 crs
	38 crs

INFORMATION AND COMMUNICATION SCIENCES (ICS)

600 Survey of Management (3) General management principles and problems, including broad study of four primary functions of the manager—planning, organizing, motivating, and controlling. Emphasizes current management practices in a dynamic economy and ways that problem-solving techniques, communication, and coordination affect managerial success.

601 Problems in Information and Communication Sciences and Lab (3) Foundation course for the ICS Master's program. Serves as the initial vehicle for exploring the broad spectrum

of problems and issues and the contexts in which they occur in the information and communication fields today. Explores the integrated nature of problems involving human communication, technologies, and the leadership and management of organizations in the change-driven information economy. Helps students consider the complex and changing nature of problems in the field and encourages the development of holistic thinking and integrated approaches in problem solving as professionals, managers, and leaders. Includes performance-based, hands-on experiences.

602 Human Communication: Process and Theory (3) Examines effective communication in the professional setting by providing students an opportunity to improve upon their interpersonal and organizational communication skills. Teaches students about the theory and practice of communication, and how they work together to form the praxis of communication. This course is able to reach its goals through active participation by the students in the class discourses, as well as in formal presentations and research projects.

605 Interpersonal Management Skills (3) Addresses needs identified by managers over the past 10 years for effectiveness in varied businesses. Covers problems of perception, management choices, individual skills, and problem-handling abilities in a business context. Uses performance activities to stress people skills and individual effectiveness.

620 Telecom Technologies, Standards, and Lab (4) This course and its companion, ICS 621 (offered only in the spring semester), are required of all students in the M.S. degree program of Information and Communication Sciences. ICS 620 is a recommended precursor to ICS 621 and ICS 648 and the Internetworking elective courses. It is a technical component of the core curriculum developed to address the various technologies employed in information and communication systems and services. Concentrates on understanding the basic technologies employed in today's information and communication technology industry to provide fundamental engineering knowledge and examine the application of the technologies in business. ICS 620 is a 4-credit course that is rigorous by its content and design, which is presented through class lectures, research and presentations related to ICT, and hands-on labs. Intended to explore, expand and test student knowledge of current applications of existing and new technologies in the marketplace.

621 Information Communication Technologies: Collection, Storage, Movement and Analysis Technologies (4) This course and its companion, ICS 620, are required of all students in the M.S. degree program of Information and Communication Sciences. Students are encouraged to take ICS 620 prior to this course. Students taking this course out of sequence are required to be advised by the Director or Associate Director prior to registering. Explores the various technologies used in the ICT field – systems, theories, components and devices – employed in the ICT business environment. An emphasis will be on the use of these technologies to assist the various verticals within our economy and the emerging technologies of today. ICS 621 is a 4-credit course that includes hands-on labs which support the theories and concepts covered in lecture, projects and readings.

623 Systems Engineering in Information & Communication Technology (3) Provides students with theoretical and practical experiences in planning and organizing the technical aspects of projects, analyzing the problems posed by the stakeholders, and defining the stakeholders' problem by converting needs and expectations into validated and integrated technical requirements. Students will also learn how to develop detailed technical requirements to the extent necessary to enable feasible and economical design solutions, asses and evaluate alternatives which may satisfy the needs and expectations, and select a balanced solution for each systems element, as well as a balanced solution for the systems as a whole.

624 Knowledge Management (3) A compendium of ideas to introduce the methods and importance of transforming disparate information into knowledge in order to advance the profitability of the enterprise. Focus on the enormity and wealth of the information cache available from the lowest reaches of the companies joined, or in, to the farthest limits of the worldwide Internet.

625 Non-Broadcast Video, CATV, and Imaging Technologies (4) Examines CATV business, local franchising practices, economics, and uses of signal distribution, interconnection, and capabilities. Explores nonbroadcast video technologies, slow and fast scan, text, graphics, etc. Emphasizes application, acceptance, and relative cost of different choices in varied environments.

630 Research Methodologies and Problems Seminar (3) Intends to provide graduate students with the thought processes and methodologies for business problem solving, undertaking research to address problems, acquiring and analyzing data, as well as reporting on and using the results from gathered research. As an exercise in thinking about the research process, each student is expected to select an area for individual research and to design a research project appropriate to that area. From this experience, students are prepared for applied research in an information and communication environment, and understand how to effectively present the results.

632 Problems in Information and Communication Technologies Seminar (2) Emphasizes evolving problems in technologies in this field. Each semester students explore a different set of problems in some area of technology or problems that result from combining technologies to address an institutional problem.

633 Systems Analysis and Design (3) Study of various concepts and techniques for analysis of information needs, specification of system requirements, system-development life cycle, and design, development, and implementation of computer-based information systems in organizations. Includes structural and prototype approaches.

634 Project Management (3) The class helps to develop a definition and understanding of a project, its components, and the challenges and management of a project. Students work together on a team project during class to increase awareness of the processes and challenges of project management. The objective is to help make use of project management skills.

635 Information and Communication Projects (1-2) Provides a variable credit experience for faculty-guided I and C projects. Requires project report.

Prerequisite: permission of the director.

A total of 2 credits may be earned.

640 Information and Communication Industry (3) Overview of major areas in the industry; historic perspective of major companies and leaders; examination of cultures, markets, and needs being met. Includes such topics as print, broadcast, voice, data, video, software, satellite, and emerging special areas of the 21st century.

642 Regulatory Research in Context/Problems in Information Communication (3) This is a required course for students in the M.S. degree program of CICS, and optional for the M.A. degree program in Telecommunications. It is a component of the core curriculum intended to address issues surrounding the public and private policies of telecommunication systems and services. Includes the rigorous study of legislative and regulatory environments and how to develop successful public policy campaigns in the information age. Intended to expand and test student knowledge of the current public policy arena. Class sessions are composed of lecture, dialogue and discussion. Students are required to participate in meaningful discussion of the topics and related case law. Begins with a brief overview of regulation from the early twentieth century; however, a significant portion of the semester will be devoted to the post-1982 changes deregulating the telephone, cable, broadcast industries, and the Internet.

643 Social Responsibility in I/C Policy (3) Political, economic, social, and governmental elements that interact with I/C systems. Emphasizes major contemporary issues confronting broadcasters and others in the electronic media. Covers ethics in decision making, definition of standards, and responsibilities in electronic communication.

644 Technologies, Financial Aspects, and the Economics of Choice (3) Explores practical issues of choosing technologies cost effectively to meet human needs in organizations. Explores market analysis, developing criteria for choices, and impact of technologies on financials of an enterprise.

645 Evolving Database Systems (3) Explores data relationships, structures, normalization, modeling, and database methods. Includes design and applications in problem settings from small organizations to data-warehousing level problems.

646 Management of Telecom/Network (3) Acquaints students with the problems, trends, and responsibilities of management in the telecommunications industry with attention to CIO concept. Guest lectures, discussions, and management role playing help students become familiar with problems and practices in the industry.

648 Wireless and Satellite Communications (3) Explores design parameters of systems and emphasizes capabilities for users. Compares current and planned systems and considers future technologies. Explores practical applications and costs and provides experience through satellite, PCS, cellular, or other wireless area project.

649 Comparative Operating Systems (3) General functions of operating systems; comparative capabilities of varied operating systems from an enterprise perspective. Includes implementation mechanisms.

650 Wireless 2 (3) In-depth examination of CDMA, wireless data, both terrestrial and satellite based, wireless LANs, GSM, and wireless Internet. Field trips to sites using wireless technologies for various applications; subject matter experts from industry will be employed as guest speakers.

Prerequisite: ICS 648.

653 Issues in Communication Consultation (3) Issues related to the role and obligations of the communication consultant and business of consulting. Emphasizes process consulting, consultation models, interpersonal and team decision-making skills, practical communication analysis, problem diagnosis, intervention strategies, client approach alternatives, and implementation strategies.

655 Special Problems Seminar (3) Addresses varied problems related to operating organizations in the twenty-first century. Through case studies, students explore business issues, problems in using technologies in evolving areas and in new businesses. Topics vary with each offering.

A total of 9 credits may be earned, but no more than 3 in any one semester or term.

660 Human Factors, Needs Assessment, and User-Driven Design (3) Intended to provide insights into the human aspects of information and communications systems planning, design, implementation, and evaluation. Includes the practice of project management techniques, needs assessment instruments and problems and opportunities involved with transparent

system and user-driven technology development and deployment. Examines the user experience (UX) user needs, values, abilities and limitations within the context of business goals and objectives. This is a research and project based course.

661 Entrepreneurship/Intrapreneurship (3) Introduces general theories, principles, concepts, and practices of entrepreneurship and intrapreneurship emphasizing the evolving information and communication industries. Case study analysis and group projects.

662 Usability Testing (3) Discussion of the human factors, concepts, and techniques used in testing systems and products for their usability. This course involves designing and completing testing of a system or product selected by the student.

663 Network Design: The Problems of Moving Voice, Data, and Video (3) Explores the problems of moving voice, data, and video over networks and the use of the computer as an informational tool in network design for organizations. Discusses networking problems in both distributed and centralized systems.

664 Information Delivery Systems, Selection, Design, and Evaluation (3) Examines voice, data, and visual information problems in hybrid and digital projects. Explores design/configuration choices, reviews central office, private exchange, and internet telephony choices, LANS and intranets, video alternatives, and cost effective decision making.

666 Strategic Planning for Information Technology (3) Determination of corporate vision and alignment of technology-based solutions resulting in the strategic use of information and communication systems. Covers the positioning of the IT platform and the alignment of business with technology for the longer term.

667 Design of Video-Based Learning Systems (3) Explores various analog and digital applications of video in on-site and distance learning education and training environments. Alternative technologies and cost effective approaches for designing video-based systems and delivery are also discussed.

675 Information and Communication Marketing (3) Covers the special problems, techniques, trends, and responsibilities of the marketing function within technology systems including service providers to the enterprise users of communications and information technology. Case histories highlight and illustrate a number of the learning points and objectives.

684 Information Access and Management of Information Services (3) Explores document and data management problems in various information service enterprises or information centers. Surveys available technologies, such as imaging or data warehousing, to make information more user accessible and cost effective.

691 Internet, TCP/IP, and Internetworking (3) Insight into the field of internetworking, TCP/IP, and other components and services that underlie the Internet. In-depth view of components and their usefulness for the Internet. The technical side of the field with hands-on experiences, CAI, and lab activities.

Prerequisite: ICS 620.

692 Advanced Network Configuration (3) Delves deeper into the implementation, operation, and management of routed networks and more complex internetworking topics. Topics include advanced router configurations, VLSM, remote access, and trouble shooting in multi-vendor environments.

695 Independent Study (1-3) Individual study of specific topics in information and communication sciences. Group and individual investigations are included.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

696 Information and Communication Research and Applications (2) Project-oriented investigation into the application of IC concepts and techniques in practical situations selected from the public or private sectors. Implementation strategies are developed and applied within the problem.

698 Problems in Information Systems (3) Seminar on topics from various areas of information systems. Content will vary each offering and includes projects involving independent research and written and oral presentations. (May serve as capstone course.)

Prerequisite: permission of the director.

A total of 9 credits may be earned, but no more than 3 in any one semester or term.

699 Problems in Information and Communication Management (3) Seminar on various management topics and a supervised project on a management problem in information and communication. (Serves as capstone course.)

Prerequisite: permission of the director.

JOURNALISM

bsu.edu/journalism

PROGRAMS

Master of arts (MA) in emerging media design and development, journalism, and in public relations

MASTER OF ARTS IN EMERGING MEDIA DESIGN AND DEVELOPMENT, 36-42 credits

The Master of Arts in Emerging Media Design and Development includes two tracks for completing degree requirements. The first track is a traditional on-campus program. We also offer a low-residency track, which requires a one-week visit to the Ball State University campus at the start of each semester. The rest of the course work may be completed online. This track is appropriate for professionals and part-time students who are currently working or who manage cross-platform projects. The goal is to give working professionals the option to learn, understand, and apply the emerging media design and development skills, which are vital to the modern workplace.

Admission requirements

In addition to the Graduate School admission requirements, applicants must meet the admission requirements of the Department of Journalism's emerging media design program requirements:

- A cumulative baccalaureate grade-point average (GPA) of at least 3.0 on a 4.0 scale.
- A 1000-word statement of purpose that indicates the specific area of concentration the applicant wants to pursue, the reasons for undertaking graduate study in this department, and the relationship of such study to the applicant's long-term personal and professional goals and interests.
- Either an academic or professional writing sample(s) that best illustrates the applicant's ability to write and to think critically and logically, and is no less than 2,500 words and no more than 5,000 in total.
- A creative or design portfolio.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EMDD	600	Usability and Eval Res Meth	3
	610	Theory and Frameworks HCI	3
	620	Emerging Media Design Thinking	3
	630	Nonlinear and Interact Story	3
	640	Transmedia Story and Publish	3
	650	Interact Media Design and Dev	3
	660	Applied Research Lab	3-9
	670	Creative Project Lab	3-9
Choose one group			
CRPR	698	Creative Project (3 or 6)	6
THES	698	Thesis (1-6)	6
CRPR	698	Creative Project (3 or 6)	
THES	698	Thesis (6)	9-12
			36-42 crs

Students will choose one of three options for a culminating project: CRPR (6), THES (6), or CRPR (3 or 6) with a THES (6). The CRPR will be completed in the EMDD 670 Creative Project Lab, the THES will be completed in the EMDD 660 Applied Research Lab, and the dual culminating project CRPR and THES would be completed in the respective EMDD 660 Applied Research Lab and EMDD 670 Creative Project Lab.

GENERAL ADMISSION REQUIREMENTS AND CONDITIONAL ADMISSION

- Applicants must first meet the admission requirements of the Graduate School (See: Master's Degree Admission Requirements).
- A current resume or curriculum vitae.
- International applicants are required to submit scores for the Test of English as a Foreign Language (TOEFL) or the International Language Testing Systems (IELTS). International applicants must achieve a minimum score of 550 on the paper-based TOEFL, a 79 on the Internet-based TOEFL, or a minimum score of 6.5 on the IELTS. In addition, the TOEFL and IELTS scores will be further analyzed for writing skills assessment.
- Applicants who do not meet minimum departmental and program GPA, GRE and/or TOEFL or IELTS score requirements but who provide an otherwise meritorious application may be considered for conditional admission. The department will request supplemental evidence of preparedness for graduate study when considering conditional admission. Conditional admission will require the student to earn a minimum of *B* (3.0) in each of his/her first three graduate courses in the Department of Journalism. Failure to do so may result in the dismissal of the student from the program.

MASTER OF ARTS IN JOURNALISM, 36 credits

The MA, journalism program combines communication theory and research methods with innovative professional-skills training in advanced journalistic storytelling, media analytics, and emerging media technologies. The two-year graduate program prepares students to enter and to progress within journalism and communications fields, to achieve leadership positions, and to pursue continuing education opportunities. Graduate students may select a practicum or an internship to add a professional, immersive experience to their credentials. Graduate study also provides students with directed electives to enhance journalism graphics, news management, narrative

writing, and digital media instruction. Program requirements include a minimum grade of *C* or better in each graduate course. In addition, students are required to complete a comprehensive capstone experience (e.g., a three-credit creative project).

Admission requirements
In addition to the general admission requirements, applicants must meet the admission requirements of the department's journalism program requirements:

- A 1000-word statement of purpose that indicates the specific area of concentration the applicant wants to pursue, the reasons for undertaking graduate study in this department, and the relationship of such study to the applicant's long-term personal and professional goals and interests.
- Either an academic or professional writing sample(s) that best illustrates the applicant's ability to write and to think critically and logically, and is no less than 2,500 words and no more than 5,000 words in total.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core requirements			
JOUR	601	Studies in Journ Comm Theory	3
	625	Journalistic Judgments	3
	650	Audiences and Content Strategy	3
Research methods, 3 credits from			
EDPS	641	Intro Statistical Methods (3)	
	642	Analysis of Variance (3)	
	643	Research Design (3)	
EDST	650	Intro to Qual Res (3)	
	660	Ethno Res in Ed (3)	
MBA	611	Stats and Quantitative Methods (3)	
PR	680	Jour Mass Comm Research Meth (3)	3
Research requirement, 3 credits from			
CRPR	698	Creative Project (3 or 6)	
JOUR	681	Applied Research in Journalism (3)	
THES	698	Thesis (1-6)	3
Media analytics and management concentration, 36 credits			
JOUR	651	Social Media Analytics	3
	652	Media Analytics Measurement	3
	656	Media Management	3
Electives			3-6
6 credits from			
EMDD	610	Theory and Frameworks HCI (3)	
	620	Emerging Media Design Thinking (3)	
ICS	624	Knowledge Management (3)	
	645	Evolving Database Systems (3)	
ISOM	551	Operations Management (3)	
	654	Project Management (3)	
MBA	601	Entrepreneurial Leadership (3)	
	623	Electronic Commerce (3)	
MGT	500	Managing Org Behavior (3)	
MKG	505	Survey of Marketing (3)	
PR	605	Public Relations Management (3)	
	662	Public Relations Case Studies (3)	6
Electives			3
			21 crs
			36 crs
Reporting and storytelling concentration, 36 credits			
JOUR	615	Data Journalism	3
	623	Visual Storytelling	3
	643	Emerging Technologies	3
	653	Data Visualization	3
	655	Social and Cross-Media Strytlg	3
Electives			3-6
			15 crs
			36 crs

MASTER OF ARTS IN PUBLIC RELATIONS, 33-39 credits

Public relations graduate study stresses the planning and organization required to improve levels of public understanding based on two-way communications. Emphasis is placed on public relations as a professional activity. The program gives the student an understanding of the interrelationships of management, organization, and communication theories. Students are required to earn a grade of *C* or better in each graduate course.

Admission requirements
In addition to the department's admission requirements, applicants must meet the admission requirements of the department's journalism program requirements:

- A cumulative baccalaureate grade-point average (GPA) of at least 3.0 on a 4.0 scale.
- A 500-word statement of purpose that explains 1) personal information such as professional experience, academic achievements, and volunteer efforts; 2) your motivation and academic interests in graduate journalism degree; 3) why you think Ball State University's program best suits your needs. For the public relations area of concentration, the statement should also specify if the student is most interested in completing the program online, on campus, or by mix of online and on-campus courses.
- Either an academic or professional writing sample(s) that best illustrates the applicant's ability to think critically and write clearly. The sample(s) should be 1,500 to 2,000 words in total.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Required core, 15 credits			
JOUR	601	Studies in Journ Comm Theory	3
	651	Social Media Analytics	3
PR	605	Business Fund & Entrepre in PR	3
	660	P R Theories and Applications	3
	680	Jour Mass Comm Research Meth	3
			15 crs
Capstone, 3-6 credits			
CRPR	698	Creative Project (3 or 6)	
PR	681	Applied Research (3)	
RES	697	Research Paper (1-3)	
THES	698	Thesis (1-6)	3-6
Electives			3-6
Students may complete one concentration listed below to complement the MA in public relations.			
PR leadership concentration, 12 credits			
PR	662	Public Relations Case Studies	3
	664	P R Evaluation Techniques	3
	665	Public Relations Campaigns	3
Choose 3 credits from			
MGT	500	Managing Org Behavior (3)	
MKG	505	Survey of Marketing (3)	
ISOM	551	Operations Management (3)	3
			12 crs
Media analytics concentration, 12 credits			
JOUR	650	Audience and Content Strategy	3
	652	Media Analytics Measurement	3
	653	Data Visualization	3
	654	Media Analytics Consulting	3
			12 crs
			33-39 crs

CERTIFICATE PROGRAMS

Certificate in Emerging Media and Visual Reporting, 15 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
JOUR	603	Intro to Visual Reporting	3
	611	Digital Media Bootcamp	3
	623	Visual Storytelling	3
	643	Emerging Technologies	3
	655	Social and Cross-Media Strytlg	3
			15 crs

Certificate Emerging Media Design and Development, 18 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EMDD	600	Usability and Eval Res Meth	3
	610	Theory and Frameworks HCI	3
	620	Emerging Media Design Thinking	3
	630	Nonlinear and Interact Story	3
	640	Transmedia Story and Publish	3
	650	Interact Media Design and Dev	3
			18 crs

Certificate in Literary Journalism, 15 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
JOUR	601	Studies in Journ Comm Theory	3
	613	Seminar in Literary Journalism	3
	614	Writing Literary Journalism	3
	615	Data Journalism	3
	698	Special Topics: Storytelling	3
			15 crs

Certificate in Public Relations, Corporate Communications, 15 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
PR	620	Seminar in P R Foundations	3
	662	Public Relations Case Studies	3
	665	Public Relations Campaigns	3
6 credits from			
ACC	501	Financial Accounting (3)	
ECON	509	Survey of Economics (3)	
FIN	500	Corporation Finance (3)	
ISOM	551	Operations Management (3)	
MBA	601	Entrepreneurial Leadership (3)	
MGT	500	Managing Org Behavior (3)	
MKG	505	Survey of Marketing (3)	6
			15 crs

Certificate in Public Relations Education, 15 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
PR	620	Seminar in P R Foundations	3
	662	Public Relations Case Studies	3
	665	Public Relations Campaigns	3
6 credits from			
EDAD	600	Intro to Ed Leadership (3)	
	635	Educational Decision Making (3)	

	640	Edu Admin and Public Rltns (3)	
	684	Educational Finance and Ethics (3)	
	686	School Law (3)	
EDHI	610	Issues in Higher Education (3)	6
			15 crs

EMERGING MEDIA DESIGN AND DEVELOPMENT (EMDD)

600 Usability and Evaluation Research Methods (3) Explores usability principles for digital interactive communication content (e.g., news, information, strategic communication, transmedia storytelling). Students learn how to collect user requirements for new media content systems, core usability and user experience principles, usability testing processes and data analysis, iterative testing principles and processes, and techniques for development of usable interactive content communication systems. Principles of design research and visual communication are discussed in the context of interaction design, cognition and user behavior, and concept validation.

Open only to CCIM graduate students or with graduate director permission.

610 Theories and Frameworks in Human-Computer Interaction (3) Survey of human computer interaction theory. Students learn about the cognitive, behavioral, and social aspects of users and contexts of use within an interactive communication content (e.g., news, information, strategic communication, transmedia storytelling). Students explore design and development models commonly used in the design of interactive systems, such as lifecycle models and contextual inquiry, to develop strategic, interactive content.

Open only to CCIM graduate students or with graduate director permission.

620 Emerging Media and Design Thinking (3) Explores design thinking as a means to understand and explore problems early in the interaction design process. Students apply these perspectives to a series of real-world problems, especially as it relates to developing solutions that involve audience engagement, strategic communication, and transmedia storytelling.

Open only to CCIM graduate students or with graduate director permission.

630 Nonlinear and Interactive Storytelling (3) Explores principles of nonlinear storytelling and non-traditional narrative architectures and experiences. Introduces students to frameworks for interactive storytelling. Students will learn these basic principles through applied communication design, and explore the design process for testing and creating narrative experiences that rely upon user interaction.

Open only to CCIM graduate students or with graduate director permission.

640 Transmedia Storytelling and Publishing (3) Overview of basic principles of cross-platform storytelling, tools required to publish across various media platforms, and theoretical frameworks for creating cross-media and transmedia stories. Students will learn methods for establishing requirements, researching design alternatives, and building prototypes to aid in the creation of a cross-media story. Students will also learn how to evaluate available publishing tools so they may work with technologies designed to facilitate project goals.

Open only to CCIM graduate students or with graduate director permission.

650 Interactive Media Design and Development (3) Introduction to prototyping tools and other resources for developing new interactive content communication systems, Web communication tools and digital interfaces for communication distribution. Students will learn methods for designing and prototyping graphic user interfaces, including rapid (paper) and dynamic (interactive) prototypes. Students will learn how to transform an information or strategic communication concept to a prototype and then to a working system.

Open only to CCIM graduate students or with graduate director permission.

660 Applied Research Lab (3-9) Conduct research that addresses projects developed in the Creative Projects and Development lab and supports EMDD faculty research endeavors. Research may include iterative usability studies during design and development phases and/or summative research that generates new knowledge in fields related to those with an emphasis on strategic information and communication design. Students work closely with the Applied Research Lab director to determine appropriate research methods for projects, develop and submit research protocols for IRB approval, recruit participants for and conduct user studies, analyze and report results, and write and submit research papers for publication in academic journals and/or trade publications focused on innovative content dissemination strategies and communication design.

A total of 9 credits may be earned.

Open only to CCIM graduate students or with graduate director permission.

670 Creative Project Lab (3-9) Design and develop novel story forms, interactive systems, news platforms, multimedia apps, and other digital assets in the field of emerging media and communication design. Projects follow accepted communication design models and will use contextual design and inquiry, human factors research, and user-centered design models as applied to communication design. All projects adhere to a research-informed process, in collaboration with EMDD 660 Applied Research Lab, that provides designers and developers feedback for making design improvements at key points along the way. Project teams may include a variety of skill sets, including writers, editors, graphic designers,

photographers, and others as appropriate to the project.

A total of 9 credits may be earned.

Open only to CCIM graduate students or with graduate director permission.

JOURNALISM (JOUR)

534 Advertising Photography (3) Advertising, commercial, and concept illustration photography for the print media. Students must have their own 35mm cameras and photographic supplies.

Prerequisite: JOUR 236 or permission of the department chairperson.

535 Color Photojournalism (3) The principles, techniques, and materials of color photography as they apply to the publishing of color art work and photographs in printed publications. Students must have their own 35mm cameras and photographic supplies.

Prerequisite: JOUR 236 or permission of the department chairperson.

569 Journalism and Public Relations Internship (3) On-the-job training that culminates classroom experiences of journalism and public relations students who exercise assigned duties in an off-campus organization or firm with appropriate compensation.

Prerequisite: permission of the department chairperson.

Not open to students who have credit in JOUR 369.

579 Nonpaid Internship (3) On-the-job training in which journalism or public relations students get practical experience in applying what they have learned in the classroom. Involves assigned duties in a communications organization without compensation.

Prerequisite: permission of the department chairperson.

595 Journalism Seminar (1-6) Group and individual investigations and experience in journalistic media and techniques with special attention to current trends in American and international journalism and related fields.

Prerequisite: submission of a proposed study project and permission of the department chairperson.

A total of 6 credits may be earned.

601 Studies in Journalism and Communication Theory (3) The nature and purposes of graduate scholarly inquiry, major journalism traditions and literature, and communications theories and their applications to the study of journalism and mass communications.

603 Introduction to Visual Reporting (3) Focus on data visualization and information graphics reporting for print and online media. Students will gain experience in reporting and developing interactive charts, diagrams, and maps. Students will also explore how large data sets are used to tell complex stories and explore how data visualization has evolved across a number of disciplines. Students will also examine the evolution of visual storytelling and its role in contemporary society via theoretical and applied scholarly research.

611 Digital Media Bootcamp (3) An introduction to the theory and principles of journalistic and nonfiction storytelling. Students will learn to apply these fundamental techniques through the use of video, audio, and design software. Students will develop a basic level of understanding of newsgathering, journalistic storytelling and style, and emerging technologies.

613 Seminar in Literary Journalism (3) Introduction to literary journalism. Intensive, critical study of the genre's history, theories, topical issues, and techniques of authors of twentieth-century narrative nonfiction.

614 Writing Literary Journalism (3) An advanced writing workshop, emphasizing specialized journalistic research and narrative nonfiction techniques, including saturation reporting, exposition, description, characterization, and dramatization. Assignments range from moderate-length writing exercises to an extensive (5,000-7,500 words) original work of literary journalism.

615 Data Journalism and Research Methods (3) Introduction to in-depth reporting and research methods, with emphasis on both traditional scholarly approaches (quantitative and qualitative) as well as the application of social scientific techniques to the journalistic production of news (collection, analysis, and visualization of data).

623 Visual Storytelling (3) Explores journalistic information gathering and storytelling produced by traditional and interactive media technologies. Students will focus on visual presentation methods across a variety of media to present consumers with rich experiences. Emphasizes current research and technology as they apply to visual information presentation.

625 Journalistic Judgments and Sociology of News (3) Legal and ethical decision-making affecting news operations in print, broadcast, mobile, and online media, in context of interpersonal, organizational, and cultural forces that shape the production of news.

643 Emerging Technologies (3) A collaborative interdisciplinary effort to research, design, develop, and study interactive content for emerging technologies. A project-oriented effort, this course may address interface design from a variety of perspectives, from desktop and television platforms to mobile phones and tablets. Interface design will be explored through human computer interaction and contextual design. Students will be exposed to scholarly research and conduct usability studies and fieldwork assignments.

650 Media Audiences and Content Strategy (3) Explores cognitive, affective, and behavioral processes to understand news consumer decision making. Students will focus on content strategies to reach targeted audiences and increase audience engagement, in particular on mobile and online platforms.

651 Social Media Analytics and Engagement (3) Explores best practices in social media analytics for journalism and strategic communications. Students focus on implementing social media analytics within larger content strategies to enhance and measure audience experiences with media content on mobile and online platforms.

652 Media Analytics Measurement and Data Management (3) Explores best practices in media analytics measurement and data management for journalism and strategic communications. Students focus on creating measurement frameworks to quantify and qualify audience engagement with media content to enhance content strategies of media companies.

653 Data Visualization (3) Focuses on data visualization for journalism, media analytics, and strategic communication. Students will gain experience in advanced reporting and developing interactive charts, diagrams, and maps based on large databases that they generate through best practices in data mining and scraping, as well as from social media and web analytics data sources. Students will examine recent changes in the data visualization field via theoretical and applied scholarly research.

Prerequisite: JOUR 615 or 623 or 651, or by permission of the graduate director.

654 Content Strategy and Media Analytics Consulting (3) Immersive-learning experience to turn knowledge of media analytics into action for a community partner. Integrates theoretical and applied research in audience analytics and engagement. Students analyze the effectiveness of content strategies by a community partner and provide recommendations based on media analytics, metrics, and user experience testing.

Prerequisite: JOUR 651, or by permission of the graduate director.

655 Social and Cross-Media Storytelling (3) Students examine the history of media software and storytelling, and apply that knowledge through the development of an edited and curated crowd-sourced story. Students will focus on building a complex narrative, presented across multiple media platforms.

656 (606) Media Management and Entrepreneurship (3) News media management, exploring news media operations, newsroom dynamics, and the organizational, leadership, and decisions-making processes critical to managing in an industry in a time of transition, innovation, and entrepreneurship.

657 Advertising Foundations and Strategies (3) A critical examination of the industry and how advertising works. Covers the theories and strategies that apply to the advertising process, including consumer behavior and communication models. Major economic, social, and ethical issues are reviewed.

670 Producing and Advising Yearbooks (3) Theories of staff organization, yearbook organization and content, illustrations, production techniques, typography, style, theme, and the role of the advisor to student staff.

671 Producing and Advising School Newspapers (3) The content and organization of school newspapers, production techniques, staff organization and training, and the role of the advisor. Other school publications and news bureaus considered as time permits.

673 Teaching Journalism in the Secondary Schools (3) Recent developments in secondary-school journalism, teaching techniques, advising problems, and curriculum developments.

674 College Journalism (3) Development of college journalism curricula, teaching methodology, course relations to other disciplines, and effective use and production of student publications as communicative and instructional laboratory media. Special attention will be given to problems of the junior college, the nonaccredited and limited program college, and the major journalism school.

675 Journalism Teaching Internship (3) Designed to prepare and assist graduate students who are involved in instruction-related duties in journalism.

Prerequisite: submission of a proposal for a teaching internship and permission of the department chairperson.

676 Beginning Photojournalism for Advisors (3) An introduction to photography and darkroom techniques and their application to school publications. Composition, editing, and cropping. Laboratory experience ensures a working knowledge of black-and-white film development and printing. Students furnish 35mm or 120mm cameras and supplies. One-week summer workshop.

Prerequisite: permission of the department chairperson.

677 Journalistic Writing for School Publications (3) An introduction to newspaper writing with emphasis on its application to school publications. Designed to help advisors improve their writing skills and develop teaching techniques. Instruction in news, feature, opinion, and sports stories and in interviewing. One-week summer workshop.

Prerequisite: permission of the department chairperson.

678 Scholastic Publication Design for Advisors (3) This course is designed for secondary teachers seeking an understanding of design principles and how they are applied to

the high-school newspaper, yearbook, or magazine. Production techniques will be emphasized. Students will complete a research assignment. One-week summer workshop.

679 Advanced Photojournalism for Publication Advisors (3) This course is designed for secondary teachers wishing to engage in advanced projects involving news photography, darkroom management, page design, editing, and curriculum design and their application to school publications. Students will study the photo story/essay and complete a research assignment. One-week summer workshop.

Prerequisite: JOUR 676.

681 Applied Research in Journalism (3) Individual exploration, design, and implementation of research studies in journalism and media analytics. Students develop and conduct their own studies. Meets the Graduate School research plan requirement.

Prerequisite: JOUR 601.

698 Special Topics: Storytelling (3) Gives students the opportunity to produce original creative work demonstrating successful storytelling skills in print, Web, or multimedia formats.

Prerequisite: permission of the department chairperson.

PUBLIC RELATIONS (PR)

605 Business Fundamentals and Entrepreneurship in Public Relations (3) Basic business entrepreneurship skills and knowledge related to managing public relations or advertising firms or public relations departments in corporations, non-profits, or government agencies.

660 Public Relations Theories and Applications (3) Theories and principles applicable to the practice of public relations, the communications and management methodologies used, and the societal applications that can be made while maintaining harmony between human organizational structures and their social environment.

662 Case Studies of Global, Digital and Ethical Public Relations Practice (3) Study and critical analysis of how professionals handle public relations problems in a variety of circumstances, including global, digital and ethical contexts.

664 Public Relations Evaluation Techniques (3) Simple and scientific evaluation techniques for a variety of public relations activities. Emphasizes survey research.

Prerequisite: permission of the department chairperson.

665 Public Relations Campaigns (3) Detailed analysis of a variety of public relations campaigns. Fund raising, volunteerism, use of the mails, successful planning of large and small meetings.

Prerequisite: permission of the department chairperson.

680 Journalism and Mass Communication Research Methods (3) Survey of journalism and mass media research methods and strategies, including content analysis and other qualitative and quantitative research techniques. Emphasis on student preparation for graduate research options.

681 Applied Research in Strategic Communications (3) Individual exploration, design, and implementation of research studies in strategic communications. Students develop and conduct their own studies.

Prerequisite: PR 680.

Open only to graduate students in the public relations program.

TELECOMMUNICATIONS

bsu.edu/tcom
Ball Communication Building 201, 765-285-1480

MASTER OF ARTS IN TELECOMMUNICATIONS, 38 credits

Admission requirements
Students may enter the MA in telecommunications program only during fall semester of each academic year. Applicants must meet the admission requirements of the Graduate School.

In addition, applicants must demonstrate proficiency in (1) written communication; (2) visual communication; and (3) relevant computer skills. Proficiency will be demonstrated via submission of a portfolio upon application to the program. At minimum, this portfolio should contain: (1) a cover letter that introduces and explains the contents of the portfolio; (2) an original 1,500-word academic, creative, and/or professional writing sample; (3) an original project that emphasizes skill in visual communication (e.g., Web page design, graphic design, publication design, broadcast design, theatrical design, architectural design); and (4) a list of computer applications with which the applicant is fluent (above basic e-mailing and word-processing applications). Applicants may include other

items that are relevant to telecommunications such as technical experience.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
TCOM	601	Digital Storytelling 1	3
	610	Creativity	3
	630	Digital Production 1	3
	670	Special Projects (1-2)	2
Choose one of the following:			
TCOM	660	Intercultural Immersion (3)	
	669	Professional Experience (1)	1 or 3
Research methods, 3 credits from			
PR	680	Jour Mass Comm Research Meth (3)	
TCOM	602	Digital Storytelling 2 (3)	3
Research requirement, 6 credits from			
CRPR	698	Creative Project (3 or 6)	
	or		
THES	698	Thesis (1-6)	6
Design requirement, 6 credits from			
ICS	667	Video-Based Learning Systems (3)	
JOUR	623	Visual Storytelling (3)	
TCOM	631	Digital Production 2 (3)	
	632	Digital Media Design Seminar (3)	
	633	Digital Audio Production (3)	6
Production and applications, 9-11 credits from			
COMM	614	Contemp Rhet and Pub Issues (3)	
	650	Training in Organizations (3)	
	690	Seminar in Communication (3)	
ICS	620	Info and Comm Technologies (4)	
	642	Regulatory Research (3)	
	660	Human Factors (3)	
JOUR	613	Seminar in Literary Journalism (3)	
	614	Writing Literary Journalism (3)	
	615	Data Journalism (3)	
TCOM	631	Digital Production 2 (3)	
	632	Digital Media Design Seminar (3)	
	633	Digital Audio Production (3)	
	669	Professional Experience (1)	
	680	Current Topics Seminar (3-6)	
	690	Directed Study (3-6)	9-11
			38 crs

Other courses that meet the student's needs may be substituted, assuming that the student meets the course prerequisites and is preapproved by the program coordinator. Courses from English, history, theatre, marketing, art, music technology, architecture, and the Teachers College may be particularly useful supplements to the study of telecommunications.

TELECOMMUNICATIONS (TCOM)

601 Foundations of Digital Storytelling 1 (3) Presents the nature of graduate education, including purpose of scholarly activity and the scholarly environment. Explores the storytelling process from concept development to presentation; the history of storytelling; the societal impact and value of storytelling; and the influence of technology on the storytelling process.

Prerequisite: permission of the program coordinator.

602 Foundations of Digital Storytelling 2 (3) Survey of research methods especially relevant for the study of digital storytelling.

Prerequisite: permission of the program coordinator.

610 Approaches to Creativity (3) Examines techniques for developing creative ideas. Students will imagine, innovate, and create experiential presentations and mediated works. Students are encouraged to be risk-takers and learn from the failure of their creative endeavors.

Prerequisite: permission of the program coordinator.

630 Digital Production 1 (3) Explores and builds professional techniques of acquisition, manipulation, and construction of digital video content. Industry standard software and hardware tools are employed to capture, edit, and finish creative productions.

Prerequisite: permission of the program coordinator.

631 Digital Production 2 (3) Examines creative approaches to visual and time-based digital narrative story creation. Emphasizes the practice of narrative development applied specifically to various visual genres including television, cinema, and web-based video.

Prerequisite: TCOM 630 or permission of the program coordinator.

632 Digital Media Design Seminar (3) Writing and producing digital stories for entertainment, promotional, journalistic, artistic, and instructional applications. Students may work on projects designed using technologies and/or dissemination for web, cinema, print, or television media. Proficiency required in digital audio and video technologies.

Prerequisite: TCOM 630 or permission of the program coordinator.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

633 Digital Audio Production (3) Skills and techniques required for digital audio production designed for broadcast, cinema, and/or digital delivery. Includes all stages of the production process, including studio and field recording, surround sound, and post-production.

Prerequisite: TCOM 630 or permission of the program coordinator.

660 Intercultural Immersion (3) Directed residential immersion in another culture for the purpose of investigating the storytelling forms and traditions of that culture. Students later present the story of their intercultural experience to others.

Prerequisite: permission of the program coordinator.

669 Professional Experience (1) Supervised, practical experience in the field of digital storytelling. Students work with approved firms or agencies.

Prerequisite: permission of the program coordinator.

670 Special Projects (1-2) Enables students to pursue the ongoing development of storytelling projects. Emphasizes writing and producing digital stories. Projects will require a faculty advisor.

Prerequisite: TCOM 601; permission of the program coordinator.

A total of 2 credits may be earned.

680 Seminar in Current Topics (3-6) Intensive study of selected topics from the literature or practice of digital storytelling. Topics will vary each semester. Content will be drawn from areas not dealt with in the regular curriculum.

Prerequisite: permission of the program coordinator.

A total of 6 credits may be earned.

690 Directed Study (3-6) Intensive investigation of a topic related to digital storytelling that is not already addressed by regularly offered courses.

Prerequisite: TCOM 601; permission of the program coordinator.

A total of 6 credits may be earned.

COLLEGE OF FINE ARTS

bsu.edu/cfa
Arts and Communications Building 200, 765-285-5495
Dean: Robert A. Kvam
Associate Dean: Michael O'Hara

COLLEGE OF FINE ARTS (CFA)

598 Seminar in Museum Studies (1-5) Interdisciplinary introduction to museums and museum collections through formal lectures and independent research on various facets of a planned permanent collection exhibition. Participants act as interns in museum curation, education, registration, and/or preparation.

Prerequisite: permission of the instructor.
A total of 9 credits may be earned, but no more than 5 in any one semester or term.

651 The Arts in Contemporary Society (3) A study of three artists in each of the fields of fine art, music, and literature to explore the effect of the artist on contemporary society.

ART

bsu.edu/art
Art and Journalism Building 401, 765-285-5838

The graduate program in art is based on the department's mission to educate students to develop significant ideas within the discipline of visual arts education and to master the tools and methods of inquiry for creating art. Creating art forms and teaching art are highly individualized activities that require an understanding of the four major activities related to art—perceiving, producing, knowing, and evaluating—that help students understand themselves and the world they live in. Through the visual arts students learn to share their feelings, beliefs, and values.

PROGRAMS

The graduate program of study leading to Master of Fine Arts degree offers concentrations in animation, glass, ceramics, metals, and sculpture/intermedia.

Students are expected to develop and refine studio skills, education skills, and academic scholarship to a level of professional excellence. The program enables students to work closely with studio faculty in well-designed facilities, become ambassadors of the visual arts in school systems and communities, and enrich their lives with the traditions of the visual arts.

Admission requirements
Applicants must meet the admission requirements of the Graduate School and must be admitted formally by the Department of Art. Applicants must have an undergraduate degree in art and grade-point averages (GPA) in art courses of at least 3.0 on a 4.0 scale and must pass review by the Department of Art graduate committee. Each applicant must submit to the Graduate School an application for admission and to the Department of Art:

- a letter expressing goals in pursuing the degree;
- a resume;
- transcripts for all college-level course work;
- a portfolio of artwork (submitted as 20 slides or in CD format);
- three letters of recommendation;
- other supportive materials such as research and publications.

Master of Fine Arts, Visual Arts (Animation, Glass, Ceramics, Metals, Sculpture/Intermedia), 60 credits

The MFA visual arts program allows students to earn a terminal degree in the Visual Arts (animation, Glass, Ceramics, Metals, Sculpture/Intermedia) through studio and seminar courses. A total of 60 credits must be earned in a minimum six semesters.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core requirements, 33 credits			
AED	604	Teaching Studio Art	3
AHS	698	Art History Seminar	3
ART	600	Writing Practicum	3
	601	Critique Seminar (3)	15
	602	Professional Practice	3
CRPR	698	Creative Project (3 or 6)	6
Complete one studio concentration			
Animation, 18 credits			
ART	511	Advanced Animation (3-6)	9
	611	Animation Studio (3-6)	9

Glass, 18 credits

ACR	531	Advanced Glass (3-6)	9
	631	Glass Studio (3-6)	9

Ceramics, 18 credits

ACR	511	Advanced Ceramics (3-6)	9
	611	Ceramics Studio (3-6)	9

Metals, 18 credits

ACR	521	Advanced Metals (3-6)	9
	621	Metals Studio (3-6)	9

Sculpture/Intermedia, 18 credits

AFA	521	Advanced Sculpture/Intermedia (3-6)	9
	621	Sculpture/Intermedia Studio (3-6)	9
			18 crs
Studio/academic electives			9
			27 crs
			60 crs

ART: CRAFTS (ACR)

511 Advanced Ceramics (3-6) A continued study in ceramics for advanced ceramics students.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

521 Advanced Metals (3-6) Advanced work in metals that assumes a proficiency in basic techniques. Student and instructor will work together to establish an individual direction, emphasizing experimentation along with investigation of contemporary and historical trends.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

531 Advanced Glass (3-6) Advanced graduate-level study in studio glass.

A total of 9 credits may be earned, but no more than 6 in any one semester or term.

532 Neon (3-6) Challenges students with conceptual and material investigations of neon and light based art and design. Assignments will develop from technical and process based to resolved works of art and design whose underlying ideas are paramount. Research on historical and contemporary developments in this field will augment students understanding of this medium. Development of professional practices will be stressed as the student takes work from a concept to presentation.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

611 Ceramics Studio (3-6) Supervised, graduate-level problems in ceramics defining concepts and technical directions for the professional artist. Bi-weekly meetings and critical assessment of artwork required.

Prerequisite: ACR 511.

A total of 9 credits may be earned, but no more than 6 in any one semester or term.

621 Metals Studio (3-6) Supervised, graduate-level problems in metal defining concepts and technical directions for the professional artist. Bi-weekly meetings and critical assessment of artwork required.

Prerequisite: ACR 521.

A total of 9 credits may be earned, but no more than 6 in any one semester or term.

631 Glass Studio (3-6) Graduate supervised, time-intensive graduate level problems in glass defining aesthetic and technical directions for the professional artist. Bi-weekly meetings and exhibition of artwork required for final assessment.

Prerequisite: ACR 531 (6 total credits).

A total of 9 credits may be earned, but no more than 6 in any one semester or term.

ART: EDUCATION (AED)

604 Teaching Studio Art (3) Focuses on contemporary issues and approaches to undergraduate and graduate studio art education. Students will learn basic principles of art studio instruction, instructional planning, assessment, advising, and studio management through observations, discussions, assignments, and in-class practice.

608 Topics in Advanced Art Education (3) Advanced topical study of art teaching at the K-12 or higher education level.

A total of 12 credits may be earned, but no more than 3 in any one semester or term.

ART: FINE ARTS (AFA)

500 Special Topics in Studio Art (3-6) Investigation of a particular topic, problem, or issue in the studio arts. Specific content will be announced before offering.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

501 Advanced Drawing (3-6) Advanced drawing, stressing research and experimentation and individual problem-solving in a variety of media with greater expectations of proficiency in each successive course.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

511 Advanced Painting (3-6) Advanced painting, stressing continued individual growth in technical proficiency and personal creative and conceptual progress with each successive course in a variety of media.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

521 Advanced Sculpture/Intermedia (3-6) Advanced three-dimensional study, which may include a wide variety of media, time-based projects and/or social practice. Follows specific needs and encourages individual direction.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

531 Advanced Printmaking (3-6) Study in printmaking techniques. Emphasis on the ability to deal creatively and conceptually with the technical process.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

581 Bookmaking (3) Creative investigation of book structures (folded, glued, sewn) with an emphasis on integration of sequential imagery and type. A variety of media and approaches are presented including photo-etching and letterpress. Personal creativity is emphasized.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

621 Sculpture/Intermedia Studio (3-6) Supervised, graduate-level problems in sculpture/intermedia defining concepts and technical directions for the professional artist. Bi-weekly meetings and critical assessment of artwork required.

Prerequisite: AFA 521.

A total of 9 credits may be earned, but no more than 6 in any one semester or term.

ART: HISTORY (AHS)

501 Special Topics in the History of Art (3) Investigation of a particular topic, problem, or issue in art history, with content for any particular term to be announced.

A total of 9 credits may be earned, but no more than 3 in any one semester or term.

698 Art History Seminar (3) Applications of the major art historical methodologies and theory for the studio artist. Topics vary according to instructor.

ART (ART)

508 Graduate Experimental Animation (3) This class is designed to utilize multiple media and forms of animation to allow the student to explore, integrate, and develop new and interesting ways to create stories and ideas.

509 Graduate Visual Storytelling (3) This course provides an in-depth look into cinematic storytelling by investigating the effective visual communication of concepts and ideas. Readings, discussions, critiques, writings and practical application will help to explore these ideas and execute them.

510 Graduate Animation Methods (3) This class emphasizes visual storytelling through the development of writing, storyboards, and animatics. Additionally the course covers history, style, and personalities throughout animation history.

Open only to graduate students.

511 Advanced Animation (3-6) Advanced animation may include narrative and/or non-narrative approaches and focus on the principles of animation, story development, and pre-visualization through animatics. Students will use a wide variety of mediums.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

512 Animatics (3-6) Provides an advanced development of storytelling through film composition, pacing, scene values, and scene progression. Storytelling is the central competency, facilitated through animatics. Animatics are blueprints that guide a film's production pipeline towards an effective, central, and unified aesthetic.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

515 Independent Study in Visual Arts (1-3) Selective and intensive exploration of problems pertaining to the visual arts.

Prerequisite: sponsorship by a faculty member and permission of the graduate coordinator.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

521 Advanced Video and Intermedia Art (3-6) Advanced graduate-level study within video and intermedia art.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

531 Advanced Photography (3-6) Advanced study of photography or photo-related studies.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

600 Writing Practicum (3) A seminar devoted to developing the written proposal for the creative project, including research methodologies and submission guidelines; as well as, writing and researching in the profession, such as: the artist statement, teaching philosophy, critical reviews, article submissions, copyright, and professional ethics.

601 Critique Seminar (3) This interdisciplinary course for critical dialogue spans all three years of graduate study. From their respective studio areas, students will present in-progress and finished work for discussion with other course participants. Course assignments may include: additional studio projects, readings, research, and writing. Semester rotation of graduate faculty assures a diverse approach towards criticism and analysis.

A total of 15 credits may be earned, but no more than 3 in any one semester or term.

602 Professional Practice (3) This third year seminar covers a variety of professional practices, including: exhibition proposals, grants, the job search, residency and academic

employment applications, portfolios, and public presentations.

610 Graduate Production 1 (3) This class focuses on the designing and production of collaborative animations projects. Projects will be produced in collaboration with an interdisciplinary group of artists, animators, or composers.

612 Graduate Production 2 (3) Production 2 is a continuation of creating collaborative animation projects. Projects will be produced in collaboration with an interdisciplinary group of artists, animators, or composers.

611 Animation Studio (3-6) Graduate supervised, time intensive graduate-level problems in animation defining aesthetic and technical directions for the professional artist. Bi-weekly meetings and exhibition of artwork required for final assessment.

Prerequisite: ART 511 (6 credits).

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

SCHOOL OF MUSIC

bsu.edu/music
Hargreaves Music Building 203, 765-285-5400

PROGRAMS

Master of music (MM); master of arts (MA) in music; doctor of arts (DA) in music; an artist diploma certificate; and a certificate in entrepreneurial music.

ARTIST DIPLOMA, 24 credits

The artist diploma is a highly selective non-degree graduate certificate for the specialized training of the gifted and accomplished performer. The certificate focuses on the practical aspects of music performance: private instruction, solo performance, participation in musical ensembles, chamber music, musicianship skills, and may include nonperformance supportive music courses. Further information is contained in the School of Music Graduate Handbook, available from the School of Music website.

Admission requirements
To be accepted into the artist's diploma certificate, the applicant must have earned the bachelor's degree from an accredited institution and must have an overall grade-point average (GPA) of 2.75 (or 3.0 in the last two years of study).

A live audition, paralleling the graduate-level audition requirements used in existing graduate degree programs, on the Ball State campus is preferred for admission into the program. However, a recent (within one year) live, un-edited DVD recording of a full recital (such as a degree recital or professional recital) may be submitted for admission evaluation. The DVD should be a complete recording of an event with the printed program attached. In the case of an audition on campus, an accompanist fee may be applicable. Other forms of unedited media are acceptable with advance communication with the performance area or studio of concern.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Applied Study (MUSP 600, 610)			8-12
MUSP	595	Performance Career Seminar 1	2
	699	Independent Study (1-2)	2
			4 crs
Electives Courses selected may include: additional applied study, ensemble participation, chamber music, special topics, conducting, diction and literature, pedagogy, improvisation, courses in music technology, **courses from music theory or music history and musicology, etc.			8-12
			24 crs

Recital requirement
Two faculty-adjudicated solo recitals of approximately 50 minutes of music are required. For voice, the performance of a major opera role or a major performance with orchestra (40-50 minutes of singing) may be substituted for one recital, with advanced permission of the voice faculty. For jazz, the student will be accompanied by a rhythm section but will be the featured performer throughout.

Additional requirements

- Diploma students will be in residence for a minimum of two semesters (residence is defined as a minimum of 8 credits/semester [may include summer].)
- All requirements for the diploma must be met within a five-year period.
- **Students wishing to take graduate-level courses in theory (MUST) or music history (MUHI) must establish eligibility by passing the theory/history placement tests or successfully completing the review course(s).
- No course with a grade below 2.0 can be counted toward the diploma. Diploma students must maintain an overall GPA of 3.0. Students falling below that average will be placed on academic probation and will have one semester in which to bring the GPA up to a 3.0.
- Undergraduate courses may be taken during the course of the diploma program, but will not count toward the required 24 graduate credits. Undergraduate courses not required as prerequisites for the degree will not be covered by assistantship tuition remission.
- No transfer credits from other institutions are allowed.

MASTER OF MUSIC, 30-32 credits

The master of music (MM) degree requires that at least one-third of the credits be completed in a concentration. Concentrations include music performance, conducting, woodwinds, piano chamber music/accompanying, piano performance and pedagogy, music history and musicology, music education, music theory, and music composition. Each concentration offers in-depth study for students highly gifted in some facet of music performance, music composition, or research. To be eligible for acceptance into the Master of Music in music education program, applicants must have at least two years of K-12 school music teaching experience. A faculty-approved research project, creative project, recital, or thesis is required of all students. All master of music students are required to pass a comprehensive examination that is administered near the end of the program. Further information about the MM is contained in the School of Music Graduate Handbook, available from the School of Music website.

Admission requirements
Applicants must meet the admission requirements of the Graduate School and must also be approved by School of Music faculty. Performance applicants are asked to present an on-campus audition, or when a personal audition is not possible, to send an un-edited DVD of a full, live recital with attached program. (There may be an accompanist fee, as needed.) Other forms of unedited media are acceptable with advance communication with the performance co concentration or studio of concern. Conducting applicants must audition in person.
Applicants for concentrations other than performance are asked to send samples of research papers, class projects, and compositions as appropriate. Before enrolling in required course work in music theory and history, applicants must achieve acceptable scores on the graduate placement tests. Students not achieving acceptable scores must complete a review course in theory and/or history.

Degree requirements

PREFIX NO SHORT TITLE	*CREDITS*
Concentration courses and required courses in music including credit for a thesis, research paper, or creative project, etc.	22-32
electives in music, and electives	0-8
	30-32 crs

MASTER OF ARTS IN MUSIC, 30 credits

The requirements for the master of arts (MA) in music include a core of studies in music performance, music history and musicology, music theory, and music education. The degree is designed to meet the needs of students interested in securing broad coverage of the discipline at the graduate level. The elective credits may be earned in additional courses in music, in professionalization courses (for certified teachers), or in courses outside the School of Music. The degree includes a required research component that may take the form of a research methodology course, a research project or thesis, or a creative project. All master of arts in music students are required to pass a comprehensive examination that is administered near the end of the program. Further information about the MA is contained in the School of Music Graduate Handbook, available from the School of Music website.

Admission requirements
Applicants must meet the admission requirements of the Graduate School and will have majored or minored in music at the undergraduate level. Before enrolling in required course work in music theory and history, applicants must achieve acceptable scores on the graduate placement tests. Students not achieving acceptable scores must complete a review course in theory and/or history

Degree requirements

PREFIX NO SHORT TITLE	*CREDITS*
Area of focus in music, including credit for a research component	22-27
electives in music, and electives	3-8
	30 crs

DOCTOR OF ARTS IN MUSIC, 90 credits

The doctor of arts in music (DA) degree is designed to prepare superior musicians for careers in college teaching. The philosophy of the program is to integrate in-depth preparation in one of the traditional disciplines of music with general

studies in the remaining fields of music and several supervised teaching experiences at the college level. Graduates will be effective and productive artists and scholars qualified to teach specific music disciplines at the college level and to assume the more diverse responsibilities characteristic of faculty positions at small colleges and universities. The program requires a total of 90 graduate credits beyond the bachelor's degree. The School of Music core includes foundational course work in music education, research methods, music theory, and music history.

The area of primary emphasis may be in music performance, conducting, piano chamber music/accompanying, music theory and composition, or music education. The area of secondary emphasis may be in music performance, piano chamber music/accompanying, conducting, music theory and composition, music history and musicology, music education, entrepreneurial music, or an area outside the School of Music in a subject that relates to the primary field of study.

The area of college teaching and learning includes a college teaching internship and an externship, and courses in such subjects as the role of music in college education, teaching music for the listener/non major, or music theory pedagogy.

Comprehensive written and oral exams are taken near the end of required coursework. The dissertation will make an original contribution to knowledge in the primary or secondary field. It may result in innovative teaching materials or methods, annotated catalogs of repertoire, research focused on a problem identifiable with college teaching, original scores or digital media materials, in-depth historical or theoretical analyses, or professional-grade recorded performances. No matter the direction, each dissertation contains an original contribution and a substantial and substantive written component.
Further information about the DA is contained in the School of Music Graduate Handbook, available from the School of Music website.

Admission requirements
Applicants must meet the admission requirements of the Graduate School and must also be approved by School of Music faculty. Performance applicants are asked to present an on-campus audition (there may be an accompanist fee, as needed), or when a personal audition is not possible, send an un-edited DVD from a full, live recital with attached program. Other forms of unedited media are acceptable with advance communication with the performance area or studio of concern. Conducting applicants must audition in person.
If the proposed primary area is in one of the academic disciplines of music, then CDs/DVDs, scores, research projects, course papers, publications, reviews, and the like are required, as appropriate. Music education applicants must have had a minimum of three years of teaching experience. Applicants will be invited to the School of Music for interviews, or an interview will be conducted via Skype or a similar method. Recent scores from the Graduate Record Exam (GRE) general test as well as letters of professional reference are also required. Before enrolling in required course work in music theory and history, applicants must achieve acceptable scores on the graduate placement tests. Students not achieving acceptable scores must complete a review course in theory and/or history.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Area of primary emphasis			24
Area of secondary emphasis			15
Supplementary studies in music			18
College teaching and learning			17
Dissertation			10
Electives			6
			90 crs

CERTIFICATE PROGRAM

The Certificate in Entrepreneurial Music allows students in the School of Music to gain the necessary 21st-century business, management, marketing, and entrepreneurial grounding for successful careers in music. The certificate will be supported by faculty members who already are doing new and innovative projects in the field. It is designed as an add-on to a music degree program or as a secondary area of study for a doctoral student; interested students should contact the School of Music regarding application procedures. Further information about the certificate is contained in the School of Music Graduate Handbook, available from the School of Music website.

Certificate in Entrepreneurial Music, 17 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
ACC	501	Financial Accounting	3
MKG	505	Survey of Marketing	3
MUSP	595	Performance Career Seminar 1	2
	596	Performance Career Seminar 2	3
	597	Capstone Entrepreneurial Music	3
3 credits from			
MGT	500	Managing Org Behavior (3)	
MUSC	692	Special Topics in Music (1-6)	
MUSP	692	Special Topics (1-6)	
MUST	692	Special Topics (1-4)	3
			17 crs

MUSIC HISTORY AND MUSICOLOGY (MUHI)
(There is a fee for all courses in the School of Music.)

501 Piano Literature (3) Standard literature for the piano from Bach through the twentieth century.

535 Music in the Baroque Era (3) The vocal and instrumental music of western Europe during the seventeenth

and early eighteenth centuries, including figured bass, opera, oratorio, and cantata, and the development of such instrumental genres as concerto, sonata, and suite.

Not open to students who have credit in MUHI 435.

536 Music in the Classical Era (3) Vocal and instrumental music of the eighteenth century, including the various styles that marked the transition from baroque to classical music, the rise of comic opera, and the development of the symphony, concerto, sonata, chamber music, and keyboard literature.

Not open to students who have credit in MUHI 436.

Open only to music majors.

537 Music in the Romantic Era (3) Vocal and instrumental music in Western civilization in the nineteenth century, emphasizing Lieder and choral, operatic, piano, chamber, and orchestral literature. Important composers and works from the various time periods: early, middle, late, and post-Romanticism.

Not open to students who have credit in MUHI 437.

538 Opera History from 1780 to 1980 (3) Types of opera and changing styles from the mid-eighteenth century to the present. Considers in detail works from the standard repertoire and encourages students to explore less familiar operas.

Not open to students who have credit in MUHI 438.

541 Jazz History (3) The evolution of jazz from its origins in the late 19th century to the present. Works from the standard repertory will be examined in detail, focusing on the stylistic innovations and contributions of selected groups and individuals.

Not open to students who have credit in MUHI 441.

Open only to music majors.

592 Special Topics in Musicology (1-3) Musicological topics and issues of special interest to students and instructor. Permits the study of topics not formally treated in other courses.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

593 Workshop in Music History and Musicology (1-3) A one- or two-week workshop on special topics in music history and musicology.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

596 History of Organ Literature and Design (2) The organ and its music from the Renaissance. Emphasizes baroque, Romantic, and contemporary instruments and literature. Field trips to pipe organ installations.

Not open to students who have credit in MUHI 496.

598 Choral Music and Hymnody of the Church (3) Hymns, anthems, motets, cantatas, and oratorios from the fifteenth century to the present; their musical, theological, and liturgical contexts and contemporary use.

Not open to students who have credit in MUHI 498.

599 Collegium Musicum (1-2) The study, realization, and performance of medieval, Renaissance, and baroque music.

A total of 4 credits may be earned, but no more than 2 in any one semester or term.

600 Methodology and Bibliography in Musicology (3) Bibliographical materials and research methods in musicology.

601 Graduate History Review (3) A concise review of music history from the medieval period through the twentieth century. Required for those who did not pass the Graduate History Placement Test. Credits may not be used to meet graduate degree requirements.

602 Seminar in Teaching Introduction to Music (3) Content, organization, textbooks, materials, tests, and methods of teaching courses dealing with the introduction to music for nonmajors.

603 Chamber Music Literature (3) Chamber music from its beginnings through the mid-twentieth century, with an analysis of examples representative of the periods.

605 Vocal Literature (3) A stylistic and analytical study of vocal literature, both solo and choral, chosen from the eighteenth, nineteenth, and twentieth centuries.

611 History of American Music (3) Our American musical heritage: national origins, schools of composition, contributing influences, important trends, and the works of composers whose diversified styles have shaped art music in this country.

631 Music in the Middle Ages (3) Studies in Gregorian chant, the rise of polyphony, the various schools of secular monophony, and the evolving styles of the fourteenth century in France, Italy, and England.

632 Music in the Renaissance (3) Studies in the polyphony of the fifteenth and sixteenth centuries with emphases on the mass, motet, chanson, and madrigal by such composers as Dufay, Ockeghem, Josquin, Willaert, Palestrina, and Byrd.

633 Music in the Twentieth Century (3) Music from the works of Debussy and Stravinsky to recent composers. Music studied will be drawn from the standard repertoire of the twentieth century.

680 Symphonic Literature (3) Orchestral music from its origins in the seventeenth century through the twentieth century, with an analysis of examples representative of the periods.

686 Ethnomusicology and World Musics (3) Introduction to the musics of non-Western cultures and ethnic music of Western cultures and a study of research methods.

687 Early Keyboard Performance Practice (2) Keyboard performance practices from the Renaissance through the

baroque. The instruments, tempi, rhythmic conventions, articulations and phrasing, fingering, ornamentation, temperaments, and tunings.

Prerequisite: previous keyboard study.

691 Independent Study in Music History (1-6) Guided reading, intensive study, and/or research in an area of music history of particular interest that is not covered by regular offerings.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned.

692 Special Topics in Musicology (1-6) Musicological topics and issues of special interest to students and instructor. Permits the study of topics not formally treated in other courses.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

695 History of Musical Instruments (3) History of musical instruments and their development in Western and other civilizations. Emphasizes construction, tuning, and use.

791 Independent Study in Music History (1-6) Guided reading and intensive study and/or research in an area of music history of particular interest not covered by regular offerings.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned.

SCHOOL OF MUSIC (MUSC)
(There is a fee for all courses in the School of Music.)

540 Large Instrumental Ensemble (1-3) A major performing ensemble, normally rehearsing five hours a week. Included in this category are the wind ensemble, the symphony band, the marching show band, the symphony orchestra, and jazz ensemble.

A total of 21 credits may be earned, but no more than 3 in any one semester or term.

550 Large Vocal Ensemble (1-3) A major performing ensemble normally rehearsing five hours a week.

A total of 21 credits may be earned, but no more than 3 in any one semester or term.

593 Workshop in Music (1-3) A one- or two-week workshop on specialized, interdisciplinary topics in music.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

611 Internship in Professional Experience (1-3) Professional-related musical experience in performing (including conducting) or teaching under the supervision of a master musician or teacher, on or off campus. A summary log or journal is required; remuneration is allowed.

Prerequisite: permission of the graduate coordinator.

A total of 3 credits may be earned.

692 Special Topics in Music (1-6) Explores problems of special interest to students and the instructor. Permits study of topics not formally treated in other courses.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

699X Experimental/Developmental Topics (1-3) Topics relevant to the discipline. Course titles will be announced before each semester.

Prerequisite: permission of the director of the school.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

710 Internship in College Music Teaching (1-6) Guided teaching of Ball State undergraduate students. An analysis of objectives, teaching approaches, and evaluative techniques.

A total of 6 credits may be earned.

Open only to doctor of arts students with majors in music.

711 Externship in College Music Teaching (3-6) Guided teaching of undergraduates at a campus of a different size from Ball State. An analysis of objectives, teaching approaches, and evaluative techniques.

A total of 6 credits may be earned.

Open only to doctor of arts students with majors in music.

MUSIC EDUCATION (MUSE)
(There is a fee for all courses in the School of Music.)

558 Methods for Organ Teaching (1) Methods for teaching the pipe organ. An application of these methods to recital literature and the music of the church.

Prerequisite: previous organ study at the university level.

Not open to students who have credit in MUSE 458.

565 Jazz Ensemble Techniques (2) Introduces the style characteristics of jazz performance. Includes preparation in the administration and teaching of jazz ensembles in school settings.

Not open to students who have credit in MUSE 465.

592 Special Topics in Music Education (1-6) Issues of importance in music education. Permits the study of topics not formally treated in other courses.

A total of 6 credits may be earned.

593 Workshop in Music Education (1-6) A one- or two-week workshop on special topics in music education.

A total of 6 credits may be earned.

600 History and Philosophy of Music Education (3) Study of some of the major philosophical bases of music education from a historical perspective. Focuses on the investigation of pedagogical procedures inherent in those philosophies and on a comparison of possible results to be expected through their implementation.

610 Music Teaching and Learning (3) Learning theories, their application to the music classroom, and curricula in

music education. Students will complete projects in their areas of teaching specialization.

620 Assessment Techniques in Music Education (3) Assessment techniques for music aptitude, achievement, and preference. Emphasizes authentic assessment techniques, developing teacher-made tests, and available standardized music tests.

640 Advanced Studies in General Music (3) Strategies and techniques for the development and maintenance of quality general music education programs at the elementary and/or secondary levels. Topics may include: approaches and methodologies, national and state standards, technology, assessment, listening strategies, and music creation.

650 Advanced Studies in Choral Music Education (3) Strategies and techniques for the development and maintenance of quality choral music education programs. Topics may include: selecting and adapting quality literature, rehearsal structures and strategies, maximizing teaching effectiveness and student motivation, developing music literacy skills, building vocal technique, and assessment.

660 Advanced Studies in Instrumental Music Education (3) Strategies and techniques for the development and maintenance of quality instrumental music education programs. Topics may include: selecting materials, pedagogy, rehearsal techniques, instrumental music research, technology in instrumental music education, assessment, and developing and implementing instrumental music curricula.

668 Research in Music Education (3) Analysis of paradigms and methods in music education research, sources of research information, and challenges facing contemporary music education researchers and users of research. A major research study/paper is required.

681 Psychology of Music (3) Study of the psychological and physical aspects of human musical perception, including the nature of musicality. Attention is given to research, possible applications to the teaching and learning of music, and processes in the development of musical preference.

691 Independent Study in Music Education (1-3) For superior students: intensive study and research in a particular part of music education.

Prerequisite: permission of the director of the school.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

692 Special Topics in Music Education (1-6) Issues of importance in music education. Permits the study of topics not formally treated in other courses.

A total of 6 credits may be earned.

743 Music in Collegiate Education (3) Philosophies of music education at the college level and the administrative challenges in developing music programs serving a wide range of interests and purposes.

791 Independent Study in Music Education (1-3) Intensive study and research in a particular part of music education.

Prerequisite: permission of the director of the school.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

MUSIC PERFORMANCE (MUSP)
(There is a fee for all courses in the School of Music.)

520 Instrumental Literature and Pedagogy (1-2) Introduction to and preparation of music and materials for instrumental music literature. May include audition preparation, solo and ensemble repertoire, practice techniques, and pedagogy techniques. This is an elective course.

A total of 4 credits may be earned.

Open only to graduate-level students accepted into an instrumental performance degree program.

525 Elementary Piano Pedagogy and Literature (3) Methods and materials of elementary-level piano teaching, studio management, observation, and practice teaching of elementary-level students.

Not open to students who have credit in MUSP 425.

526 Intermediate Piano Pedagogy and Literature (3) Methods and materials of intermediate-level piano teaching, observation, and practice teaching of undergraduate piano minors or other intermediate-level students.

Not open to students who have credit in MUSP 426.

529 Vocal Pedagogy (2) Materials for vocal instruction. Includes methods of teaching vocal techniques for practice and performance emphasizing studio teaching and learning.

Not open to students who have credit in MUSP 429.

545 Vocal Coaching (1-2) Thirty minutes (1 credit) or one hour (2 credits) of weekly private vocal coaching to improve diction in singing; to embrace classical vocal repertoire, addressing the execution of appropriate technical challenges for each period; to enhance skills of communication in performance, both in the understanding and the delivery of the text and in the mode of collaboration with one's musical partner; and to increase confidence as a performer through self-awareness and self-acceptance.

A total of 6 credits may be earned, but no more than 2 in any one semester or term.

548 Opera Theatre (1-4) Study and/or performance of operatic literature. Combines all art forms related to the lyric theatre, including production techniques and performance activities.

Prerequisite: audition and permission of the director of opera.

A total of 12 credits may be earned, but no more than 4 in any one semester or term.

577 Continuo Playing and Keyboard Improvisation (1-2) Development of facility in reading from figured basses or improvisation in the church service, free harmonization of hymns.

A total of 4 credits may be earned, but no more than 2 in any one semester or term.

592 Special Topics in Applied Music (0) Individual applied instruction (according to proficiency) for the study of music of any period or style.

593 Workshop in Music Performance (1-3) A one- or two-week workshop on special topics in music performance.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

595 Performance and Career Seminar 1 (2) Provide students with an overview of employment opportunities available for musicians, and to help them gain the skills necessary to establish a career as professional musicians. Class time will be devoted to development of a personal portfolio of materials needed to apply for positions in music, and to improving presentation skills for auditions and interviews.

Prerequisite: permission of the director of the school.

A total of 4 credits may be earned, but no more than 2 in any one semester or term.

Open only to music students.

596 Performance and Career Seminar 2 (3) Extend requisite knowledge and skills developed in Career Seminar 1. Topics will include (but are not limited to): grant and proposal writing, marketing in the arts, basic media design (including recording and video techniques), and community outreach in the arts.

Prerequisite: MUSP 595 and permission of the director of the school.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

Open only to music students.

597 Capstone in Entrepreneurial Music (3) Allows students to develop, engage, and experience real-world applications in music. This course is designed for students to use all of their acquired requisite skills from previous experiences and course work and put them into one final project. This project will be evaluated by a team of faculty members at the end of the semester.

Prerequisite: MUSP 596 and permission of the director of the school.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

Open only to music students.

598 Diction for Singers (2) Study of effective pronunciation of English, French, German, and Italian with emphasis on techniques in producing vowel sounds and consonant articulation appropriate to the work performed.

A total of 4 credits may be earned, but no more than 2 in any one semester or term.

599 Advanced Vocal Diction (2) Advanced study of diction in major western languages as it pertains to singing and applications in performance of music literature for singers. Includes a survey of diction reference materials.

Prerequisite: MUSP 598 or permission of the instructor.

Not open to students who have credit in MUSP 440.

600 Major Study (1-4) Thirty to 120 minutes of weekly private lesson(s) based on credit enrollment. For master's and artist diploma students approved for major study (for elective study, see MUSP 620).

A total of 20 credits may be earned, but no more than 4 in any one semester or term.

Not open to students enrolled in MUSP 610.

610 Applied Recital Study (4) Sixty-minute private lesson weekly with additional recital coaching sessions (to average an additional hour per week). Available one time for each full recital given. For master's and artist diploma students.

A total of 20 credits may be earned, but no more than 4 in any one semester or term.

Not open to students enrolled in MUSP 600.

620 Elective Study (1-2) Thirty to sixty minutes of weekly private lessons based on credit enrollment. Open to all graduate students; this usually functions as "elective" credits not on the student's major instrument.

A total of 20 credits may be earned, but no more than 2 in any one semester or term.

626 Piano for the Conductor (1-2) Development of the facility to transpose and condense full score at the keyboard. Does not require advanced piano technique. To be used as a tool for better understanding the total musical and compositional process and acquiring an aural comprehension of the score.

A total of 10 credits may be earned, but no more than 2 in any one semester or term.

637 Church Music Performance Practice (1-2) Performance projects of interest to organists and church musicians. Reading of anthems, motets, oratorio movements; music for organ and instruments; music for graded church choirs; conducting from the keyboard. Material varies each semester.

A total of 4 credits may be earned, but no more than 2 in any one semester or term.

640 Independent Applied Study (1-2) Independent time for the master's or artist diploma student to work on repertoire that is being covered in concurrent enrollment in MUSP 600 for 2 credits. With permission of the graduate coordinator; may be repeated up to 2 times.

A total of 6 credits may be earned, but no more than 2 in any one semester or term.

Open only to students registered in MUSP 600 for 2 credits.

643 Chamber Music (1-4) Advanced development in the art of chamber music performance. Emphasizes the study of a

variety of types of literature of musical worth in program building. Refinement of ensemble skills and individual techniques.

A total of 12 credits may be earned, but no more than 4 in any one semester or term.

690 Advanced Conducting (4) Baton technique, advanced study of vocal and instrumental scores, repertory development, and rehearsal techniques.

A total of 40 credits may be earned, but no more than 4 in any one semester or term.

691 Lessons in Advanced Conducting (1-2) One private half-hour lesson weekly for conducting students.

A total of 4 credits may be earned, but no more than 2 in any one semester or term.

692 Special Topics in Music Performance (1-6) Explores problems of special interest to students and the instructor. Permits study of topics not formally treated in other courses.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

699 Independent Study in Music Performance (1-2) Opportunity to study specific needs or interests not covered by the regular course offerings in applied studies in music.

Prerequisite: permission of the associate director of applied studies in music.

A total of 4 credits may be earned, but no more than 2 in any one semester or term.

700 Primary Area Study (1-4) Thirty to 120 minutes of weekly private lesson(s) based on credit- enrollment. For doctoral primary area study only.

A total of 20 credits may be earned, but no more than 4 in any one semester or term.

Not open to students enrolled in MUSP 710.

710 Applied Recital Study (4) Sixty-minute private lesson weekly with additional recital coaching sessions (to average an additional hour per week). Available one time for each full recital given. For doctoral students only.

A total of 16 credits may be earned, but no more than 4 in any one semester or term.

Not open to students enrolled in MUSP 700.

720 Secondary Study (1-2) Thirty to sixty minutes of weekly private lessons based on credit enrollment. For approved doctor of arts secondary area study only (for elective study on an instrument, see MUSP 620).

A total of 16 credits may be earned, but no more than 2 in any one semester or term.

740 Independent Applied Study (1-2) Independent time for the doctoral student to work on repertoire that is being covered in concurrent enrollment in MUSP 700 for 2 credits. With permission of the graduate coordinator; may be repeated up to 3 times.

A total of 6 credits may be earned, but no more than 2 in any one semester or term.

Open only to students registered in MUSP 700 for 2 credits.

743 Chamber Music (1-4) Advanced development in the art of chamber music performance. Study of a variety of types of literature with emphasis on mature works. Refinement of ensemble skills and individual techniques.

A total of 12 credits may be earned, but no more than 4 in any one semester or term.

790 Advanced Conducting (4) Baton technique, advanced study of vocal and instrumental scores, repertory development, and rehearsal techniques.

A total of 20 credits may be earned, but no more than 4 in any one semester or term.

791 Lessons in Advanced Conducting (1-2) One private half-hour lesson weekly for conducting students.

A total of 4 credits may be earned, but no more than 2 in any one semester or term.

799 Independent Study in Music Performance (1-2) Opportunity to study specific needs or interests not covered by the regular course offerings in applied studies in music.

Prerequisite: permission of the associate director of applied studies in music.

A total of 4 credits may be earned, but no more than 2 in any one semester or term.

MUSIC THEORY AND COMPOSITION (MUST)
(There is a fee for all courses in the School of Music.)

510 Choral Arranging (2) Scoring for choir and choral ensembles. Gives particular attention to voicing, soloistic treatment of voices, texts, and other elements of traditional and contemporary scoring.

Not open to students who have credit in MUST 410.

511 Instrumentation and Orchestration (2) Instruments and their uses in orchestral practice. Develops creative writing concepts through orchestration. Principles of solo and combination writing presented through analysis. Required projects in solo and ensemble writing.

Not open to students who have credit in MUST 411.

513 Band Arranging (2) Scoring for symphonic band and wind ensemble. Gives particular attention to voicing, sectional and cross-sectional doubling, soloistic treatment of instruments, and other elements of contemporary treatment in scoring.

Not open to students who have credit in MUST 413.

514 Commercial Arranging (2) Arranging concepts in commercial music. Writing in commercial idioms. The composer-arranger in the recording studio environment. Students will be assigned individual projects requiring laboratory participation.

Not open to students who have credit in MUST 414.

520 Sixteenth-Century Counterpoint (3) Exercises in contrapuntal writing designed to develop sensitivity to sixteenth-century polyphonic practice.

Not open to students who have credit in MUST 420.

527 Introduction to Computer Applications in Music (3) Computer systems and languages for musical analysis, composition, and sound synthesis. A historical perspective of applications for these purposes. Programming procedures. Individual projects in students' special interest areas.

592 Special Topics in Music Theory and Composition (1-3) Explores problems of special interest to students and the instructor. Permits study of topics not formally treated in other courses.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

593 Workshop in Music Theory and Composition (1-3) A one- or two-week workshop on special topics in music theory and composition.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

601 Graduate Theory Review (3) Concise and thorough presentation of basic theoretical principles as taught in undergraduate courses. Required for those who did not pass the Graduate Theory Placement Test. Credits may not be used to meet graduate degree requirements.

612 Compositional Practices of the Seventeenth and Eighteenth Centuries (3) General trends with focus (to be announced) on one or more composers, major works, or special developments of the period.

Prerequisite: MUST 621.

616 Theory of Nineteenth-Century Music (3) Stylistic devices of selected composers of the nineteenth century.

Prerequisite: MUST 621.

617 Theory of Twentieth- and Twenty-First Century Music (3) Vocabulary, devices, tonal organization, notation, and other elements that characterize the compositional practices of twentieth- and twenty-first centuries.

Prerequisite: MUST 621.

621 Analytical Technique (3) Identification and analysis of significant compositional elements as determined by the musical context. Special attention given to musical practices before and after the period of tertian harmony.

623 Twentieth- and Twenty-First Century Counterpoint (2) Exercises in contrapuntal writing designed to develop sensitivity to significant principles and procedures of music of the twentieth- and twenty-first centuries.

625 Electronic Music Studio 1 (2) Fundamentals of the physical and perceptual dimensions of sound as a basis for the electronic synthesis and analysis of musical sounds. Studio laboratory time required.

A total of 6 credits may be earned, but no more than 2 in any one semester or term.

626 Electronic Music Studio 2 (2-6) Individualized approach to the application of electronic sound synthesis compositionally or in educational research. Studio laboratory time required.

Prerequisite: MUST 625.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

628 Composition (1-4) Musical composition suited to the needs of graduate students whose major professional interests lie outside the field of composition; students are free to work in the shorter forms and in less-advanced idioms.

A total of 8 credits may be earned, but no more than 4 in any one semester or term.

629 Composition (3-6) Experience in writing for any size instrumental or vocal ensemble with emphasis on the cultivation of a personal style within the framework of current practice. Encourages students to examine and cultivate facility in the use of serialism and electronic techniques.

A total of 24 credits may be earned, but no more than 6 in any one semester or term.

635 Arranging Workshop (1-4) Individualized, project-oriented, advanced skill development in arranging. Scoring of commercials, show components, marching band shows, and background music for film, TV, radio, and media productions.

Prerequisite: permission of the instructor.

A total of 8 credits may be earned, but no more than 4 in any one semester or term.

691 Independent Study in Music Theory (1-3) Independent study in any branch of music theory or pedagogical practice by means of readings, analysis, research, speculative writing, or survey.

Prerequisite: permission of the director of the school.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

692 Special Topics in Music Theory and Composition (1-4) Explores problems of special interest to students and the instructor. Permits study of topics not formally treated in other courses.

A total of 6 credits may be earned, but no more than 4 in any one semester or term.

722 Seminar in the Principles of Music Theory (3) Discursive study of theoretical principles from a historical and pedagogical point of view. Includes readings, research, writing, contemporary materials and their applications in program organization, implementation, and administration.

729 Composition (3) Continuation of MUST 629 with emphasis on personal style development.

A total of 18 credits may be earned, but no more than 3 in any one semester or term.

791 Independent Study in Music Theory (1-3) Independent study in any branch of music theory or pedagogical practice by means of readings, analysis, research, speculative writing, or survey.

Prerequisite: permission of the director of the school.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

THEATRE AND DANCE

bsu.edu/theatre
Arts and Communications Building 306, 765-285-8740

PERFORMANCE STUDIES (PS)

532 Oral Interpretation of Prose Fiction (3) Study of the novel through the medium of solo performance.

534 Oral Interpretation of Poetry (3) The study of poetry through the medium of oral performance.

535 Oral Interpretation of Drama (3) The study of dramatic literature through the medium of oral performance.

Not open to students who have credit in THEA 435.

536 Studies in Oral Interpretation (2) Students with an interest in oral interpretation pursue a particular subject of study in depth.

A total of 4 credits may be earned, but no more than 2 in any one semester or term.

THEATRE (THEA)

513 Studies in American Theatre (3) Significant movements in the American professional theatre and its drama.

517 History of Theatre 1 (3) Study of the Western theatre from its origins through the Renaissance, with emphasis on theatre architecture, production elements, theory, and representative dramatic literature.

Not open to students who have credit in THEA 317.

518 History of Theatre 2 (3) Study of Western theatre from the Renaissance to the foundations of modern theatre in the late nineteenth century, with emphasis on theatre architecture, production elements, theory, and representative dramatic literature.

Not open to students who have credit in THEA 318.

519 Modern Theatre (3) Study of major movements in modern Western theatre since 1875, with emphasis on theoretical documents, production elements, and representative dramatic literature.

Not open to students who have credit in THEA 319.

520 Scene Design (3) Advanced training and experience in the problems of set design and lighting for theatrical productions in many forms and styles. Some elements of television design will be covered.

Not open to students who have credit in THEA 420.

523 Theatre Costume Design (3) Practice in the research, design, and building techniques involved in the preparation of period costumes for use in theatre productions. Special consideration is given to the costume problems facing the elementary or secondary school teacher involved in drama.

Not open to students who have credit in THEA 423.

526 Stage Lighting Design (3) Training and experience in the problems of stage lighting design for the proscenium and nonproscenium stage. Practical laboratory work in stage lighting of university productions.

Prerequisite: THEA 326 or equivalent.

Not open to students who have credit in THEA 426.

529 Principles of Stage Makeup (3) An investigation of the principles, techniques, and materials of stage makeup and practical experience in their application.

Not open to students who have credit in THEA 229.

533 Styles of Acting (3) Styles of acting appropriate to major types of drama from antiquity to the present.

Prerequisite: 6 hours of acting or the equivalent in theatre production.

Not open to students who have credit in THEA 433.

551 Directing 2 (3) Further investigation of the work of the director with special reference to directing the various styles, modes, and periods of theatre.

Prerequisite: THEA 250 or equivalent.

Not open to students who have credit in THEA 350.

552 Directing for the Musical Theatre (3) The selection, organization, and direction of musical theatre productions. For practical laboratory work, the student may elect to concentrate

on the production problems of either a specific musical comedy or an opera.

570 Methods and Materials in School Play Production (3) For prospective and actual directors of secondary school plays. Choice of plays, community values, casting, secondary-school stages, advanced makeup, lighting, and stagecraft.

576 Creative Drama (3) Principles of developing original dramatizations through improvisational techniques. Students are expected to observe and work with children as well as with college adults.

580 Summer Theatre Workshop (2-4) Participation in the Summer Festival Theatre.

Prerequisite: permission of the department chairperson.

A total of 4 credits may be earned.

591 Theatre Management (3) Study and practice in box office procedures, house management, publicity, and promotions as related to college, community, and professional theatres.

Not open to students who have credit in THEA 491.

601 Introduction to Research in Theatre (3) The research methods available to theatre scholars.

625 Studies in Technical Theatre (2-4) Technical problems of theatre production. Students must arrange to meet with the costume lab, the scenery lab, or the lighting lab.

Prerequisite: 6 hours of technical theatre or the equivalent.

A total of 4 credits may be earned.

640 Theory and Criticism of Drama (3) The nature, function, and significance of the drama as examined by major and minor critics and theorists of the past and present.

650 Directing Theory (3) Past and present theories of directing drama. Secondary emphasis on practice of theories in directing stage, radio, and classroom dramatics.

690 Seminar: Theatre History (2-6) Selected periods of theatre history, with emphasis on research and reporting in the specified areas.

Prerequisite: THEA 517, 518, 519, or the equivalent.

A total of 6 credits may be earned.

696 Directed Study in Theatre (1) Individual and directed study of research or creative projects in design, playwriting, acting, or directing, meeting the approval of the theatre staff.

A total of 4 credits may be earned, but no more than 1 in any one semester or term.

COLLEGE OF HEALTH

Dean of the College: Mitch Whaley
Associate Deans: Jayanthi Kandiah, Anthony Mahon

COUNSELING PSYCHOLOGY, SOCIAL PSYCHOLOGY, AND COUNSELING

bsu.edu/counselingpsychology
Teachers College 605, 765-285-8040

The department's graduate programs train community agency, mental health, and rehabilitation counselors at the master's level, offer master's degree-level studies in, social psychology, clinical mental health and rehabilitation counseling, and prepare counseling psychologists at the doctoral level. The master's degree programs in clinical mental health counseling and rehabilitation counseling are accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP). The doctoral program is accredited by the American Psychological Association (APA). Degree minors are available to students from other degree or certification programs.
Departmental programs emphasize a balance between didactic and experiential course contact. The scientist-professional model of training emphasizes the integration of practice and research as a mode of problem solving and thinking. A departmental clinic provides opportunity for practicum experiences. Field experiences and internships offer additional integrative experiences.

Student financial support includes doctoral and graduate assistantships.

PROGRAMS

Master's of arts degree (MA) counseling, MA in social psychology, dual major in social psychology and clinical mental health counseling; doctor of philosophy degree (PhD) in counseling psychology.

Admission requirements
Applicants must apply to both the Graduate School and the Department of Counseling Psychology, Social Psychology, and Counseling. Applicants are screened according to departmental criteria after they have been admitted by the Graduate School. Application deadlines for the programs are as follows: December 15 for the doctoral program; March 1 and June 15 for the MA in counseling (clinical mental health counseling) and MA in social psychology programs; there is no deadline for the MA in rehabilitation counseling program. Contact the Department before applying to the June 15 deadline to ensure there are spaces available. Separate application forms are required by the Graduate School and the department.

MASTER OF ARTS IN COUNSELING, 48-60 credits

An entry-level degree designed for students interested in starting careers in the helping professions. Designed to give students the beginnings of a professional identity as counselors so that they can work in a variety of community settings (clinical mental health counseling concentration), in public schools (school concentration), or in rehabilitation. It is also designed as a predoctoral study program in counseling psychology.

Admissions requirements
- Completion of 15-semester or 24-quarter credits of undergraduate psychology courses with 3.0 GPA on a 4.0 scale.
- Application to the department as well as to the Graduate School.

Degree requirements
MA candidates must pass a written content examination after completing at least 30 credits of course work, pass an ethics test, and receive a grade of *B* or better in pre-practicum, practicum, and internships. THES 698 (6) or RES 697 (3) may substitute for CPSY 653.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Clinical Mental Health Counseling Concentration, 60 credits			
Counseling Psychology			
CPSY	605	Intro CMH Counseling	3
	606	Pre-Practicum Skills	3
	607	Appraisal Methods	3
	610	Career Theories and Realities	3
	621	Theories and Techniques Couns	3
	636	Psychopathology	3
	637	Psychopharmacology	3
	644	Practicum in Counseling	3
	646	Advanced Practicum Counseling	3
	653	Research Counseling Guidance	3
	678	Counseling Culturally Diverse	3
	688	Group Counseling Techniques	3
	695	Internship Counseling (3-6)	6

3 credits from			
EDPS	603	Human Development (3)	
PSYS	613	Developmental Psychology (3)	3
3 credits from			
EDPS	641	Intro Statistical Methods (3)	
	642	Analysis of Variance (3)	3
Electives			
Approved courses in psychology or related area			12
Highly recommended elective courses			
CPSY	609	Counseling Ethics Prof Issues (3)	
	624	Program Development (3)	
			60 crs

Rehabilitation Concentration, 48 credits

CPSY	603	Intro Rehabilitation	3
	606	Pre-Practicum Skills	3
	607	Appraisal Methods	3
	608	Psychosocial Rehabilitation	3
	610	Career Theories and Realities	3
	621	Theories and Techniques Couns	3
	635	Medical Disabilities	3
	636	Psychopathology	3
	644	Practicum in Counseling	3
	653	Research Counseling Guidance	3
	678	Counseling Culturally Diverse	3
	688	Group Counseling Techniques	3
	689	Rehabilitation Case Management	3
	695	Internship Counseling (3-6)	6
EDPS	603	Human Development	3
			48 crs

MASTER OF ARTS IN SOCIAL PSYCHOLOGY, 30 credits

The MA program in social psychology is designed to give students a strong background for entry into professions such as junior college teaching or program evaluation and personnel work in schools, industry, and other organizations or for further graduate study leading to the doctorate. The MA in social psychology can be of great value in support of careers in education, counseling, social work, criminology, anthropology, special education, and personnel work.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
General Concentration, 30 credits			
Social Psychology			
Four courses from			
SOPS	610	Social Psychology (3)	
	615	Social Cognition (3)	
	620	Group Dynamics (3)	
	640	Social Psychology of Attitudes (3)	
	655	Counsel Apps of Soc Psych (3)	
	660	Contemporary Social Psychology (3)	12
Educational Psychology			
One course from			
EDPS	641	Intro Statistical Methods (3)	
	642	Analysis of Variance (3)	3
Counseling Psychology			
CPSY	653	Research Counseling Guidance	3
Directed electives from ANTH, CPSY, EDPS, PSYS, SOC, SOPS, THES; professionalization of a teaching major; or minors and electives			12
			30 crs

MASTER OF ARTS WITH DUAL MAJOR IN SOCIAL PSYCHOLOGY AND CLINICAL MENTAL HEALTH COUNSELING, 60 credits

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
CPSY	605	Intro CMH Counseling	3
	606	Pre-Practicum Skills	3
	607	Appraisal Methods	3
	610	Career Theories and Realities	3
	621	Theories and Techniques Couns	3
	636	Psychopathology	3
	637	Psychopharmacology	3
	644	Practicum in Counseling	3
	646	Advanced Practicum Counseling	3
	653	Research Counseling Guidance	3
	678	Counseling Culturally Diverse	3
	688	Group Counseling Techniques	3
	695	Internship Counseling (3-6)	6
EDPS	603	Human Development	3
	641	Intro Statistical Methods	3
			48 crs
Four courses from			
SOPS	610	Social Psychology (3)	
	615	Social Cognition (3)	
	620	Group Dynamics (3)	
	640	Social Psychology of Attitudes (3)	
	655	Counsel Apps of Soc Psych (3)	
	660	Contemporary Social Psychology (3)	
Recommended elective course			
CPSY	624	Program Development (3)	12
			60 crs

SOPS 610 must be one of the four courses taken.

DOCTOR OF PHILOSOPHY IN COUNSELING PSYCHOLOGY, 106-112 credits

The PhD in counseling psychology includes theoretical bases, an experiential component, a research component, and a variety of training assignments. The program contains a core of psychology courses in the social, biological, cognitive, affective, and individual bases of behavior. Most students complete the degree in four to five years.

Degree requirements
Comparable courses may be substituted for some of these courses upon approval of the student's doctoral committee.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Counseling Psychology			
CPSY	610	Career Theories and Realities	3
	636	Psychopathology	3
	678	Counseling Culturally Diverse	3
	688	Group Counseling Techniques	3
	720	Advanced Theories Counseling	3
	722	Theories Counselor Supervision	2
	740	Prac Counselor Supervision	1
	746	Counseling Psych Practicum 1	3
	747	Counseling Psych Practicum 2	3
	749	Counseling Practicum (1)	6
	753	Advanced Research	3
	797	Seminar Counseling Psychology	3
	799	Internship Counseling Psych	0
One course from			
CPSY	652	Projective Appraisal (3)	
	657	Objective Appraisal (3)	3
Educational Psychology			
EDPS	642	Analysis of Variance	3
	650	Individual Testing WS	3
	746	Theory of Measurement	3
One course from			
EDPS	741	Applied Regression Analysis (3)	
	742	Multivariate Statistics (3)	
	743	Factor Analysis (3)	3
Psychological Science			
PSYS	613	Developmental Psychology	3
	691	Systems of Psychology	3
One course from			
EDPS	652	Intro Neuropsychology (3)	
PSYS	668	Physiological Psychology (3)	3
One course from			
EDPS	765	Theories of Learning (3)	
PSYS	615	Learning and Motivation (3)	
	616	Perception and Cognition (3)	3
Social Psychology			
SOPS	610	Social Psychology	3
One course from			
SOPS	615	Social Cognition (3)	
	620	Group Dynamics (3)	
	640	Social Psychology of Attitudes (3)	
	655	Counsel Apps of Soc Psych (3)	
	660	Contemporary Social Psychology (3)	3
Dissertation			
DISS	799	Doctoral Dissertation (1-24)	10
Research Requirement			
ID	705	Research Colloquium (1-3)	3
Cognate(s)			24 or 30

The cognate requirement consists of either one 24-credit cognate in psychology or two 15-credit cognates, at least one of which must be in psychology. Some of the above courses may be applied to the cognate(s), depending on which cognates are chosen. Cognates in psychology are available in couples and family counseling, diversity in counseling psychology, health psychology, social justice in counseling psychology, and vocational psychology.

106-112 crs

In addition to the requirements listed above, each candidate for the PhD in counseling psychology must:

- have an assistantship position, which is automatically awarded upon acceptance to the program, of 20 hours a week during the first academic year of required residence. One first-year student per year may decline the assistantship during the first year, with permission of the department. Assistantships are also available during the second and third years. Responsibilities include instructional services, counselor supervision, administrative assignments, practicum clinic staffing, and research. In addition to a stipend, an assistantship includes a remission of fees for course work.
- have at the end of master's and doctoral work at least 400 hours of practicum experience, with at least 150 hours in direct service experience and 75 hours in formally scheduled supervision. Students are expected to enroll in CPSY 749 Practicum in Supervised Experience in Counseling Psychology (1) every semester in which they see clients before internship.
- have proficiency in two of the following as demonstrated by meeting departmental criteria: using computers, research techniques, foreign language (proficiency will be determined by the Department of Modern Languages and Classics).
- have research experience supervised by departmental faculty before and in addition to the dissertation.
- complete an APA- or APPIC-approved internship (CPSY 799) for a minimum of 1,500 hours or a calendar year.

Before accepting an internship, students must satisfactorily complete the following experiences: ethics examination, written and oral preliminary examination, comprehensive practitioner skills examination, and dissertation proposal.

COUNSELING PSYCHOLOGY (CPSY)

601 Introduction to Identity and Leadership Development for Counselors (3) Expands upon the Identity and Leadership Development Workshop for Counselors. Students focus on the Nine-Step Success Process and develop the knowledge and skills they need to meet the identity needs of secondary students especially those from diverse backgrounds, or who may be at risk.

Open only to students enrolled in Identity and Leadership Development for Counselors Workshop.

603 Introduction to Rehabilitation Counseling (3) Introduction to and overview of the profession of rehabilitation counseling including history, philosophy, role, function, preparation, practice, and ethics of the rehabilitation counselor. Includes legislation, societal trends, and organizational structure affecting rehabilitation counseling.

605 Introduction to Clinical Mental Health Counseling (3) Principles and problems of counseling in an agency setting. History and philosophy of clinical mental health counseling, role and training of the counselor, modes of intervention (e.g., direct service, consultation), and ethics of counseling are included.

Prerequisite: permission of the department chairperson.

Open only to counseling psychology, social psychology, and counseling masters students; other graduate students by permission.

606 Pre-Practicum Interviewing Skills (3) Experimental laboratory designed to build basic counseling and interviewing skills. Practice in applying skills will take place through simulations, role playing, and audio and videotapes.

607 Appraisal Methods in Counseling (3) Overview of measurement principles and major approaches to appraisal of individuals, groups, and environments. Comprehensive appraisal methods, specific techniques for selected problem areas, and standardized vocational and personality tests will be examined relative to the appraisal process in counseling.

608 Psychosocial Aspects of Rehabilitation (3) Designed to build experience in counseling persons with disabilities and/or chronic health conditions. Emphasizes an understanding of both the psychological and sociological implications of disability.

609 Counseling Ethics and Professional Issues (3) An advanced professional issues seminar for mental health counseling students focused on the practice of the licensed mental health counselor in both the private and public sectors. Issues for special attention will include legal, financial, governmental, and ethical considerations.

Prerequisite: CPSY 603 or 605 or SCCO 600.

Parallel: CPSY 606.

610 Career Theories and Realities (3) Career development theories; relationships among career choice, lifestyle, and life-span development; psychosocial and reality considerations in life career development; and applications of theories and reality conditions to self and others.

621 Theories and Techniques of Counseling (3) Investigation of major theories and techniques of counseling and psychotherapy. Examination of behavioral, psychoanalytic, person-centered, existential, and relationship-oriented counseling theories. Therapeutic attitudes, ethics, and techniques and their relationship to theoretical principles and concepts will be addressed.

Parallel: CPSY 603 or 605 or SCCO 600.

623 Specialized Techniques of Counseling Psychology (3) Seminar devoted to theory and research in treatment and intervention strategies. Topics vary depending upon current interest and importance in counseling psychology.

Prerequisite: CPSY 621.

Parallel: CPSY 645 may be required for some students.

A total of 12 credits may be earned, but no more than 3 in any one semester or term.

624 Program Development and Evaluation in Counseling Psychology (3) Investigate principles and applications of program development, implementation, and evaluation in counseling psychology. Design programs focusing on identified mental health needs in the community and propose methods for evaluating such programs. Explore commonly used program development and evaluation methods for various counseling settings.

Prerequisite recommended: CPSY 653 or equivalent.

631 Introduction to the Study of Personality (3) An application of psychological principles to an introductory understanding of personality and interpersonal adjustment. Content includes social motivation, frustration, conflicts, adjustive mechanisms, assessment of personality, and some exposure to problems of mental hygiene and psychotherapy.

634 Introduction to Behavioral Medicine (3) An introduction to interventions appropriate for the counseling psychologist in such areas as smoking cessation, weight management, cardiovascular disease, chronic illness, cancer, and stress management. The theoretical, conceptual, and empirical bases of these interventions will be stressed.

635 Medical Aspects of Disability in Rehabilitation Counseling (3) Overview of the various systems of the human body that are involved in disabilities. Acquaintance with terminology, medical specialties that treat physical systems, various therapeutic approaches, and resources for restoring mental and physical functioning.

Prerequisite: CPSY 603.

636 Psychopathology (3) Symptoms and dynamics of psychological disorders with primary emphasis on their development, etiology, prevention, and supporting research evidence.

637 Introduction to Psychopharmacology (3) Introduction to the use of psychotropic medications for treatment of mental disorders as applied to children, adolescents and older adults. Covers function of central nervous system and role of neurotransmitter systems on etiology of mental disorders. Addresses basic principles of pharmacodynamics and pharmacokenetics.

Prerequisite: permission of the department chairperson.

Open only to counseling psychology, social psychology, and counseling graduate students; other graduate students by permission.

640 Practicum in Group Counseling (3) Supervised experience in a leadership role in various facets of counseling and therapeutic group interaction.

Prerequisite: CPSY 644, 688.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

644 Practicum in Counseling (3) Supervised experience that includes counseling with one or more of the following populations: children, adolescents, adults, couples, and families under the supervision of a professional counselor. Practical experience with the delivery of mental health services including conducting intake assessments and record keeping.

Prerequisite: CPSY 606; CPSY 605 or SCCO 600; permission of the department chairperson.

Prerequisite or parallel: CPSY 621.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

Open only to counseling psychology, social psychology, and counseling masters students; other graduate students by permission.

645 Specialized Practicum in Counseling Psychology (3) Advanced experience in counseling psychology using specialized techniques under supervision.

Prerequisite: CPSY 644.

Parallel: CPSY 623.

A total of 12 credits may be earned, but no more than 3 in any one semester or term.

646 Advanced Practicum in Counseling (3) Advanced supervised experience that includes counseling with one or more of the following populations: children, adolescents, adults, couples, and families under the supervision of a professional counselor. Practical experience with the delivery of mental health services including conducting intake assessments and record keeping.

Prerequisite: CPSY 644; permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

Open only to counseling psychology, social psychology, and counseling masters students; other graduate students by permission.

648 Field Experience in Counseling and Guidance (3) Supervised on-the-job experience in a school, business, industry, or community agency in counseling and guidance activities.

Prerequisite: CPSY 646.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

652 Projective Personality Appraisal (3) History and theory of projective testing. Types and uses of projectives in relation to diagnosis, therapy, and evaluation.

653 Research in Counseling Psychology and Guidance (3) Students will investigate, summarize, and interpret research in counseling psychology and guidance. Each student will write and submit a research report to fulfill course requirements.

657 Objective Personality Appraisal (3) The application of objective personality tests to counseling. The primary emphasis is upon using tests as adjuncts to counseling, i.e., diagnosis, evaluation, and therapy. The major emphasis of the course will be on the MMPI.

662 Couples and Sex Therapy (3) Principles and techniques for couples, divorce, and sexual counseling. Psychological features of human sexual development and adjustment with emphasis on dysfunction and remediation.

664 Theories and Techniques of Family Therapy (3) Introduction to various theories and approaches to family therapy including psychoanalytic, systems, strategic, structural, communications, and behavioral. Examination of research in family therapy. Pre-practicum experience in conducting family assessment interviews and family counseling interviews.

676 Principles and Practices of Counseling the Older Adult (3) Fundamentals of the interviewing and counseling process with older persons. Emphasizes basic concepts, principles, and skills of the helping relationship as applied to the special problems of older adults. The counselor's attitudes and feelings toward aging and the aged and their influence on the relationship will be considered.

678 Theories and Techniques of Counseling the Culturally Diverse (3) Designed to build expertise in counseling people of black, Hispanic, Asian, and Native American heritage. Emphasizes understanding the social and political bases of counseling and therapy. Activities may include student case presentation of a client from a different cultural background.

Parallel: CPSY 621.

679 Advanced Theories and Techniques of Counseling the Culturally Diverse (3) Designed to develop advanced knowledge of multicultural and cross-cultural issues in

counseling psychology. Emphasizes understanding the social and political bases of counseling and therapy. Includes didactic and experiential activities.

Prerequisite: CPSY 678 or equivalent.

680 Social Justice in Counseling Psychology (3) The history and current status of social justice activities in counseling psychology will be reviewed. Theories, strategies, and ethics of social justice work will be evaluated and applied to different situations. Course includes didactic and experiential activities.

688 Process and Techniques of Group Counseling (3) Major approaches to group counseling, including theoretical assumptions and basic principles and techniques. Participation experience provides practice in using various approaches and focuses on dynamics and processes of interaction(s) in group counseling.

Parallel: CPSY 603 or 605 or SCCO 600.

689 Case Management in Rehabilitation Counseling (3) Includes case management techniques; planning for the provision of rehabilitation services; use of community resources and services; referral; and use of technology in caseload management. Integration of information from program course work with a focus on delivery of services by the rehabilitation counselor.

Prerequisite: CPSY 603, 635, 644; SPCE 566; permission of the department chairperson.

Open only to departmental majors.

690 Issues in Counseling (1-12) Advanced and intensive study in selected areas of student need and interest in counseling. Opportunity for students to choose particular areas for in-depth study under faculty supervision.

A total of 12 credits may be earned.

695 Field Internship in Counseling (3-6) Intensive supervised experience in application of basic psychotherapeutic procedures and evaluation techniques in an approved and appropriate setting. Experience will be gained in one or several approved agencies under joint supervision of a university faculty member and an agency representative designated for this responsibility.

Prerequisite: CPSY 644, 646.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

720 Advanced Theories of Counseling (3) An in-depth study of selected theories of and approaches to counseling and psychotherapy; further development of students' personal theories.

Prerequisite: 16 credits of graduate work in counseling psychology.

722 Theories and Techniques of Counselor Supervision (2) An introduction to and survey of models and methods of counseling supervision. Ethical issues, evaluation methods, research, and developmental issues in supervision are presented. Current readings, videotapes, and role playing are used to study the supervision process.

Prerequisite: CPSY 746.

740 Practicum in Counselor Supervision (1) Supervised experience in the supervision of counselors-in-training. Students will be assigned to graduate practica to supervise practicum students seeing clients in the practicum clinic of the department.

Prerequisite or parallel: CPSY 722.

746 Integrated Scientist-Professional Practicum 1 in Counseling Psychology (3) Advanced scientist-practitioner training in counseling research and practice, combining a counseling research seminar with a counseling practicum. The seminar covers counseling outcome research. The practicum involves intensive group and individual supervision of student's counseling experiences.

Open only to doctoral students in counseling psychology or a related field.

747 Integrated Scientist-Professional Practicum 2 in Counseling Psychology (3) The second semester of an advanced scientist-practitioner combined counseling research seminar and counseling practicum. The seminar covers research and practice aspects of the process of counseling. The practicum involves intensive group and individual supervision of student's counseling experiences.

Prerequisite: CPSY 746.

Open only to doctoral students in counseling psychology or a related field.

749 Practicum in Supervised Experience in Counseling Psychology (1) Individualized advanced experience in counseling and psychotherapy under the supervision of a faculty member.

Prerequisite: doctoral status; CPSY 746; and at least two other CPSY graduate courses.

A total of 12 credits may be earned, but no more than 1 in any one semester or term.

753 Advanced Research Methods in Counseling Psychology (3) Covers doctoral-level understanding of research methods, particularly techniques used in the field of counseling psychology. Students will learn to critically evaluate relevant literature and research designs. Provides students with the opportunity to initiate their dissertation project. Students complete a thorough literature review suitable as an extended literature review for their dissertation. Students will identify and define a problem worthy of investigation, review and critically evaluate relevant literature, and determine their research questions and/or hypotheses.

Prerequisite: CPSY 653 or equivalent; EDPS 642 or equivalent; or permission of the department chairperson.

Open only to doctoral students in counseling psychology.

797 Seminar in Counseling Psychology (3) An advanced professional seminar for doctoral students in counseling psychology. The seminar will focus on ethics, legal issues,

professional identity, and practice and research issues in counseling psychology.

Open only to doctoral students in counseling psychology.

799 Internship in Counseling Psychology (0) Experience in duties and responsibilities of the counseling psychologist. Full-time internship (minimum 1,500 hours) in an approved agency under the joint supervision of the university and the internship site professional staff. Normally taken for two or more consecutive semesters. Offered credit/no credit only.

Prerequisite: admission to the doctoral program and permission of the departmental director of doctoral programs.

Open only to doctoral students in counseling psychology.

SOCIAL PSYCHOLOGY (SOPS)

610 Social Psychology (3) Introduction to theories, findings, and methodology of social psychology.

615 Social Cognition (3) Includes intensive examination of the current literature and theory of social psychology; gives particular attention to theories of social cognition and perception.

Prerequisite: SOPS 610.

620 Group Dynamics (3) Research on and theory of behavior in small groups, effects on the individual of membership and participation in small and large groups, interaction of group structure and personality, and the effects of an individual on the group.

Parallel: SOPS 610.

640 Social Psychology of Attitudes (3) Examines theoretical and assessment perspectives pertaining to the psychological concept of attitudes.

Parallel: SOPS 610.

655 Counseling Applications of Social Psychology (3) Current social psychological theory and research on such topics as social cognition, person perception, and attitude formation and change. Implications for counseling psychology practice and research.

Prerequisite: SOPS 610.

660 Contemporary Social Psychology (3) Selected areas of current interest in social psychology. Deals with contemporary research and publications from both foreign and American sources.

Prerequisite: SOPS 610.

670 Independent Study in Social Psychology (1-6) Intensive individual study of selected topics in social psychology.

Prerequisite: permission of the instructor and program director.

A total of 6 credits may be earned.

690 Seminar in Applied Social Psychology (1) Advanced examination of how social psychology can be applied to problems or questions found in industrial, organizational, and health-care settings. Existing research will be reviewed, and new approaches will be considered.

Prerequisite: SOPS 610; PSYS 680 or CPSY 653.

695 Internship in Applied Social Psychology (3) Experience in applied social psychological research in industrial, organizational, or health-care settings. Students will be jointly supervised by university and internship site staff. Normally taken for two consecutive semesters.

Prerequisite: permission of the director of the MA program in social psychology.

SCHOOL OF KINESIOLOGY

bsu.edu/kinesiology
Health and Physical Activity Building 360, 765-285-8746

PROGRAMS

Master of arts (MA) in applied gerontology; master of science (MS) in exercise science with concentrations in biomechanics and exercise physiology; master of arts (MA) or master of science (MS) in exercise science with concentrations in clinical exercise physiology and sports performance; master of arts (MA) or master of science (MS) in physical education and sport with concentrations in athletic coaching education, sport and exercise psychology, and sport administration; master of arts (MA) or master of science (MS) in wellness management; doctor of philosophy (PhD) in human bioenergetics.

MASTER OF ARTS IN APPLIED GERONTOLOGY, 36 credits

The course work for the degree in applied gerontology may be completed in less than two years, or it may be combined with another degree program in order to obtain a double major. For example, a student in an MA program in adult and community education, biology, counseling, physical education and sport, wellness management, etc., may take the core course requirement in gerontology and then apply related electives and internship experience to a degree in applied gerontology.

The master's degree in applied gerontology is an interdisciplinary degree that provides the student with a broad-based overview of aging, as well as more focused training in a

selected area of study. Faculty from wellness, health sciences, educational psychology, sociology, counseling, physical education, nutrition, nursing, and other disciplines teach a variety of courses on special issues in aging and in serving an older population.

Educational programs are focused on three levels: exposure to information about processes of aging and the needs of an aging society for a wide variety of students and the general public; proficiency training of professionals and other service providers who are involved with serving older adults; and the development of expertise for professionals who are planning to specialize in geriatric services.

Research programs center on two aspects of gerontology: interdisciplinary studies of the processes of aging and applied research regarding the delivery of services and program evaluation.

The faculty provides consultation, training, and other resources for agencies serving an older clientele and for community groups of older adults.

In addition to the MA degree in applied gerontology, several other options are available for the study of gerontology, including an undergraduate minor, a graduate minor, and a graduate certificate. A curriculum advisor is available to discuss these options with any interested student.

Admission requirements
Applicants must meet the admission requirements of the Graduate School. A grade-point average (GPA) of 3.0 on a scale of 4.0, a combined score of 300 on the verbal and quantitative sections of the Graduate Record Examination (GRE), and/or approval of the program director for gerontology are required for acceptance into the program.

Degree requirements
The minimum requirement for the degree is 36 credits, including a core of gerontology courses, a research experience, and electives in related areas.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
15 credits			
GERO	535	Aging in Communities	3
	605	Aging Well: A Systems Approach	3
	630	Health Wellness and Aging	3
	635	Adaptations in Later Life	3
	640	Service Learn in Gerontology	3
3-9 credits from			
EDPS	641	Intro Statistical Methods (3)	
RES	697	Research Paper (1-3)	
THES	698	Thesis (1-6)	
WELN	670	Wellness Research Design (3)	3-9
12-18 credits from			
Electives either from Concentration 1 or Concentration 2			
Concentration 1—Aging well electives, 12-18 credits			
GERO	540	Women and Aging (3)	
	598	Seminar in Applied Gerontology (3-6)	
	610	Public Policy and Aging (3)	
	620	Guided Life Review (3)	
	625	Changing Hlth Wlns Behaviors (3)	
	641	Pract Applic Geron Programming (3)	
	699	Internship in Gerontology (1-6)	
NUTR	652	Geriatric Nutrition (3)	
PHYS	515	Physiology of Aging (3)	
WELN	680	Eval Hlth and Wlns Initiatives (3)	12-18
Concentration 2—Aging management electives, 12-18 credits			
ACC	501	Financial Accounting (3)	
BL	560	Survey of Business Law (3)	
ECON	509	Survey of Economics (3)	
	662	Health and Economics (3)	
FIN	500	Corporation Finance (3)	
GERO	515	Technology in Aging (3)	
	598	Seminar in Applied Gerontology (3-6)	
MGT	500	Managing Org Behavior (3)	
MKG	505	Survey of Marketing (3)	
WELN	605	Wellness Management Admin (3)	
	645	Social Mkg in Wlns Mgmt Prac (3)	
	665	Tech and Media for Wlns Mgrs (3)	
	680	Eval Hlth and Wlns Initiatives (3)	12-18
			36 crs

MASTER OF SCIENCE (MS) IN EXERCISE SCIENCE, 33-38 credits

Admission requirements
Applicants must meet the admission requirements of the Graduate School; have bachelor's degrees from regionally accredited institutions in education, kinesiology, biology, or other appropriate majors; have grade-point averages (GPA) of at least 2.75 on a scale of 4.0; and submit transcripts, three letters of recommendation, resumes, and the exercise science application form. Applicants for the exercise science degree must obtain approval from a review board in the area of specialization. Requirements include a GPA of at least 2.75 on a 4.0 scale and the Graduate Record Examination (GRE) general test. Students with satisfactory scores on the GRE will be considered for admission to the program. Any deficiencies must be made up through course work taken in addition to degree requirements.

Degree requirements
Students must complete a minimum of 33 credits in graduate courses including 6 credits of a thesis project (THES 698) for the master of science degree. Students must take a final oral examination covering the thesis to be given by the thesis committee.

Concentration in Biomechanics, 33 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core requirements, 15 credits			
EXSC	616	Motor Control	3
	634	Mechan Analysis of Movement	3
	651	Lab Techniques in Biomechanics	3

	652	Clinical Biomechanics	3
	655	Advanced Biomechanics	3

Research requirements, 12 credits

EDPS	641	Intro Statistical Methods	3
EXSC	611	Research Methods (Thesis)	3
THES	698	Thesis (1-6)	6

6 credits from directed electives

BIO	548	Biometry (3)	
CS	699	Reading and Honors (3)	
EDPS	642	Analysis of Variance (3)	
EXSC	603	Exercise Physiology 1 (3)	
	604	Resistance Training and Cond (3)	
	633	Seminar in Exercise Science (1-18)	6
			33 crs

Concentration in Exercise Physiology, 33-38 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*

Core requirements, 9 credits from

EXSC	603	Exercise Physiology 1	3
	630	Exercise Physiology 2	3
	637	Applied Physiology	3

Directed electives, 6-10 credits from

CHEM	563	Principles of Biochemistry 1 (3)	
	564	Principles of Biochemistry 2 (3)	
	or		
	560	Essentials of Biochemistry (4)	
EXSC	633	Seminar in Exercise Science (1-18)	6-10

Research requirements, 9 credits from

EXSC	611	Research Methods (Thesis)	3
THES	698	Thesis (1-6)	6

Electives, 9-10 credits from

BIO	557	Molecular Biology (4)	
EDPS	641	Intro Statistical Methods (3)	
	or		
	642	Analysis of Variance (3)	
EXSC	623	Exer Test and Interpretation (3)	
	634	Mechan Analysis of Movement (3)	
PHYS	514	Cardiovascular Physiology (3)	9-10
			33-38 crs

MASTERS OF ARTS OR SCIENCE (MA/MS) IN EXERCISE SCIENCE, 33 credits

Admission requirements
Applicants must meet the admission requirements of the Graduate School; have bachelor's degrees from regionally accredited institutions in education, physical education, biology, or other appropriate majors; have grade-point averages (GPA) of at least 2.75 on a scale of 4.0; and submit transcripts, three letters of recommendation, resumes, and the exercise science application form. Applicants for the exercise science division must obtain approval from a review board in the area of specialization. A student with a GPA of less than 2.75 on a 4.0 scale must take the Graduate Record Examination (GRE) general test. Students with satisfactory scores on the GRE will be considered for admission to the program. Any deficiencies must be made up through course work taken in addition to degree requirements.

Degree requirements
Students must complete a minimum of 33 credits in graduate courses including 6 credits of a thesis project (THES 698) for the master of science or 3 credits of a research project (RES 697) for the master of arts degree. Students electing THES 698 must take a final oral examination covering the thesis to be given by the thesis committee.

Concentration in Clinical Exercise Physiology, 33 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EXSC	603	Exercise Physiology 1	3
	622	Foundation of Physical Fitness	3
	623	Exer Test and Interpretation	3
	630	Exercise Physiology 2	3
	637	Applied Physiology	3
	638	Electrocardiography	3
	639	Cardiopulmonary Rehabilitation	3

Research requirements

Master of Arts, research paper/creative project

PEP	601	Research App Non-Thesis (3)	
RES	697	Research Paper (1-3)	
	or		
CRPR	698	Creative Project (3 or 6)	6-9

Master of Science, thesis

EXSC	611	Research Methods (Thesis)	3
THES	698	Thesis (1-6)	6

Directed electives

CPSY	634	Intro Behavioral Medicine (3)	
EDPS	641	Intro Statistical Methods (3)	
	or		
	642	Analysis of Variance (3)	
EXSC	633	Seminar in Exercise Science (1-18)	
	634	Mechan Analysis of Movement (3)	
	640	Exercise for Chronic Diseases (3)	
	698	Internship in Exercise Program (1-6)	
NUTR	644	Nutrition for Exer and Sport (3)	
PHYS	514	Cardiovascular Physiology (3)	3-6
			33 crs

Concentration in in Sports Performance, 33 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
AT	696	Advanced Techniques in AT	3

EXSC	600	Internship in Exercise Science (1-12)	3
	603	Exercise Physiology 1	3
	604	Resistance Training and Cond	3
	634	Mechan Analysis of Movement	3
NUTR	644	Nutrition for Exer and Sport	3
PEP	609	Sport Psychology	3

Research requirements: 12 credits from one area (choose one)

Master of Arts, non-thesis concentration

EDPS	641	Intro Statistical Methods	3
PEP	601	Research App Non-Thesis	3

Electives			6

Master of Arts, research paper/creative project

PEP	601	Research App Non-Thesis	3
CRPR	698	Creative Project (3 or 6)	
	or		
RES	697	Research Paper (1-3)	3-6

Electives			3-6

Master of Science, thesis

EXSC	611	Research Methods (Thesis)	3
THES	698	Thesis (1-6)	6

Electives			3
			12 crs
			33 crs

MASTERS OF ARTS OR SCIENCE (MA/MS) IN KINESIOLOGY, 30-33 credits

Admission requirements

Applicants must have a bachelor's degree from an accredited institution in education, physical education, biology, or other appropriate major; grade-point average (GPA) of at least 2.75 on a scale of 4.0; GRE scores; a statement of purpose, three letters of recommendation, resume, and other supporting documents. GRE scores are waived for Athletic Coaching Education.

Applicants must meet the admission requirements of the Graduate School and complete an application from the School of Kinesiology. A student with a GPA of less than 2.75 on a 4.0 scale must take the Graduate Record Examination (GRE) general test. Students with satisfactory scores on the GRE will be considered for admission under probationary status to the program. Any deficiencies must be made up through course work taken in addition to degree requirements.

Degree requirements

Students completing athletic coaching education must complete a minimum of 30 credits of graduate courses. Students completing Sport Administration and Sport and Exercise Psychology must complete a minimum of 33 credits of graduate courses. In order to earn a master of science degree, these courses must include 6 credits of a thesis project (THES 698). In order to earn a master of arts degree, these courses must include 3 credits of a research project (RES 697) or creative project (CRPR 698), except students in sport administration and athletic coaching education have an additional concentration which includes internship hours. Students electing RES 697, CRPR 698, or THES 698 must make a final oral defense.

Concentration in Athletic Coaching Education, 30 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core requirements			
ACE	604	Physical Preparation	3
	612	Growth and Development	3
	618	Skills and Tactics for Coaches	3
	625	Evaluation in Coaching	3
	632	Philosophy and Ethics	3
	670	Sport Safety	3
	675	Teach and Motivation Coaches	3

Research requirements: 9 credits from one area (choose one)

Master of Arts, internship

ACE	688	Current Issues Coach Research (3)	
	or		
	692	Administration for Coaches (3)	
PEP	600	Internship in Sport and PE (1-6)	
	601	Research App Non-Thesis (3)	9

Master of Arts, research paper/creative project

PEP	600	Internship in Sport and PE (1-6)	
	601	Research App Non-Thesis (3)	
RES	697	Research Paper (1-3)	
	or		
CRPR	698	Creative Project (3)	9

Master of Science, thesis

EXSC	611	Research Methods (Thesis)	3
THES	698	Thesis (1-6)	6
			30 crs

Concentration in Sport and Exercise Psychology, 33 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core requirements			
AT	577	Psych of Injury Rehabilitation	3
PEP	609	Sport Psychology	3
	644	Psych-Social Processes Sport	3
	660	Psych Exercise and Health	3
	690	Sport Sociology	3

Directed electives

ACE	610	Psychology of Coaching (3)	
ANTH	559	Ethnographic Methods (3)	

CPSY	621	Theories and Techniques Couns (3)	
EDPS	603	Human Development (3)	
	640	Research Methods (3)	
	642	Analysis of Variance (3)	
	646	Tests and Measurements (3)	
	742	Multivariate Stats Data Mining (3)	
EXSC	603	Exercise Physiology 1 (3)	
PEP	608	Motor Learning (3)	
	611	Practicum Sport Exercise Psych (3)	
	612	Motor Development (3)	
PSYS	613	Developmental Psychology (3)	
	615	Learning and Motivation (3)	
	616	Perception and Cognition (3)	
	623	Theories of Personality (3)	
	632	Science of Psychopathology (3)	6-9

Research requirements: 9-12 credits from one area (choose one)

Master of Arts, research paper/creative project

EDPS	641	Intro Statistical Methods (3)	
PEP	601	Research App Non-Thesis (3)	
RES	697	Research Paper (1-3)	
	or		
CRPR	698	Creative Project (3 or 6)	9-12

Master of Science, thesis

EDPS	641	Intro Statistical Methods	3
EXSC	611	Research Methods (Thesis)	3
THES	698	Thesis (1-6)	6
			33 crs

Concentration in in Sport Administration, 33 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*

Core requirements

SPTA	611	Sport Marketing and Promotions	3
	615	Sport Law	3
	617	Financial Principles in Sport	3
	676	Sport Administration	3

Directed electives

ACC	501	Financial Accounting (3)	
AT	696	Advanced Techniques in AT (3)	
ECON	509	Survey of Economics (3)	
EDAD	600	Intro to Ed Leadership (3)	
	630	Human Resource Development (3)	
	640	Edu Admin and Public Rltns (3)	
	686	School Law (3)	
	687	Legal Aspects of Education (3)	
	688	Schl Bldings, Grnds, and Equip (3)	
	698	Sem and Theory of Ed Admin (3)	
EDFO	631	Philosophy of Education (3)	
MGT	500	Managing Org Behavior (3)	
MKG	505	Survey of Marketing (3)	
PEP	609	Sport Psychology (3)	
	630	Evaluation in PE (3)	
	644	Psych-Social Processes Sport (3)	
	685	Curriculum Development in PE (3)	
	690	Sport Sociology (3)	
PR	660	P R Theories and Applications (3)	
	664	P R Evaluation Techniques (3)	
SPTA	603	Sport Ethics and Philosophy (3)	
	605	Administration of Recreation (3)	
	619	Sport Facilities and Events (3)	
	620	Seminar in Sport Admin (1-6)	
	628	International Sport (3)	
	677	Intercollegiate Athletics (3)	
	691	Historical Foundations Sport (3)	9-12

Research requirements: 9-12 credits from one area (choose one)

Master of Arts, internship

PEP	601	Research App Non-Thesis	3
SPTA	698	Internship in Sport Admin	6

Master of Arts, research paper/creative project

EDPS	641	Intro Statistical Methods (3)	
PEP	601	Research App Non-Thesis (3)	
RES	697	Research Paper (1-3)	
	or		
CRPR	698	Creative Project (3 or 6)	9-12

Master of Science, thesis

EDPS	641	Intro Statistical Methods	3
EXSC	611	Research Methods (Thesis)	3
THES	698	Thesis (1-6)	6
			33 crs

Due to the differences in research requirements, the MA requires 12 credits of directed electives and the MS requires 9 credits of electives.

MASTERS IN WELLNESS MANAGEMENT, 36-39 credits

Admission requirements

Applicants must meet the admission requirements of the Graduate School, have a grade-point average (GPA) of 3.0 on a 4.0 scale, Graduate Record Examination (GRE) scores of at least 300 (quantitative and verbal), and the approval of the program director for Wellness Management. Students who do not meet these standards may be admitted on probation at the discretion of the program director. Students will be removed from academic probation upon successful completion (GPA of 3.0 or higher) of 9 credits of approved course work. All students will be required to participate in selected university and community wellness activities as part of the wellness management major.

Students who have not completed an undergraduate major or minor in business and an undergraduate major or minor in a health-related discipline will be required to complete graduate course work in these areas in addition to the core course work. Students without an undergraduate major or minor in business are expected to complete the minor in general foundations of business for wellness majors. Students without an undergraduate major or minor in an approved allied health

field will be required to complete at least 6 credits in an approved graduate specialization.

Master of Arts in Wellness Management, 36 credits

The master's degree in wellness management is an interdisciplinary degree that coordinates the university's strong resources to give students comprehensive training in wellness. Faculty from physical education, food and nutrition, psychological sciences, health science, and the Miller College of Business combine knowledge and skills in a well-rounded and challenging curriculum.

Degree requirements
The requirement for the degree is 36 credits for students who have undergraduate majors or minors in business. Students entering the program without this background will be required to complete a minor in general foundations of business through the Miller College of Business. All students complete the wellness core.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core courses			
WELN	605	Wellness Management Admin	3
	630	Health and Productivity Mgmt	3
	650	Foundations of Wellness	3
	660	Critical Issues Worksite Wlns	3
	670	Wellness Research Design	3
	698	Internship in Wellness Mgmt	6
3 credits from			
EDPS	641	Intro Statistical Methods (3)	
HSC	687	Stat Thry and Meth in Hlth Sci (3)	
RES	697	Research Paper (1-3)	3
Directed electives			12
			36 crs

Master of Science in Wellness Management, 39 credits

Degree requirements
The requirement for the degree is 39 credits for students who have undergraduate majors or minors in business and a supporting undergraduate major or minor in allied health. Students entering the program without this background will be required to complete a minor in general foundations of business through the Miller College of Business. All students complete the wellness core.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
THES	698	Thesis (1-6)	6
WELN	605	Wellness Management Admin	3
	630	Health and Productivity Mgmt	3
	650	Foundations of Wellness	3
	660	Critical Issues Worksite Wlns	3
	670	Wellness Research Design	3
	698	Internship in Wellness Mgmt	6
Directed electives			12
			39 crs

DOCTOR OF PHILOSOPHY IN HUMAN BIOENERGETICS, 90-96 credits

The doctor of philosophy (PhD) degree in human bioenergetics is designed to prepare students for research careers in exercise physiology. The doctoral degree will require approximately three years to complete and will give students the competencies necessary to deal with biochemical and physiological problems in exercise physiology. It is conducted in cooperation with the Department of Biology.

Admission requirements
Applicants must meet the admission requirements of the Graduate School; have a master's degree from an accredited institution in kinesiology, biology, or other appropriate majors; have a grade-point average (GPA) of 3.2 on a scale of 4.0; complete the Graduate Record Examination (GRE); submit three letters of recommendation; demonstrate interest and ability to conduct independent research; and obtain the approval of the Human Performance Laboratory selection committee.

Degree requirements
Students must complete a minimum of 90 credits of graduate work including the dissertation and master's degree credits. In addition to the core requirement, one 24-credit cognate or two 15-credit cognates in such related fields as biology, physiology, and chemistry are required. Students must complete the dissertation (DISS 799) for 10-24 credits on research problems that will contribute new knowledge to the field. Candidates will take final oral examinations given by their PhD committees when the dissertation is completed.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core requirements			
EXSC	603	Exercise Physiology 1	3
	630	Exercise Physiology 2	3
	637	Applied Physiology	3
Cognate(s)			24 or 30
Dissertation			10-24
Electives			0-17
Master's degree credits (maximum allowed)			30
			90-96 crs

CERTIFICATE PROGRAMS

Certificate in Athletic Coaching Education, 12 credits

Admission requirements
Applicants must meet the admission requirements of the Graduate School. An undergraduate cumulative GPA of at

least 2.75 on a 4.0 scale (all undergraduate course work, including work completed prior to the baccalaureate degree, is used to calculate the GPA). (No GRE score required). A cumulative GPA of at least 3.0 on a 4.0 scale in the latter half of the baccalaureate.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
ACE	604	Physical Preparation	3
	612	Growth and Development	3
	670	Sport Safety	3
	675	Teach and Motivation Coaches	3
			12 crs

ATHLETIC COACHING EDUCATION (ACE)

604 Physical Preparation and Conditioning (3) Study of the response of physiological systems to training and conditioning, design training and conditioning programs, the effects of nutrition on health and performance, and the use and abuse of drugs in athletes.

Prerequisite: permission of the athletic coaching education program coordinator.

Open only to students in the School of Kinesiology.

610 Psychology of Coaching (3) Study of the social psychological forces that have profound effects on the interactions of coach and athlete.

Prerequisite: permission of the athletic coaching education program coordinator.

Open only to students in the School of Kinesiology.

612 Growth and Development for Coaches (3) Study of the physical, social, and emotional development of athletes from youth through adulthood, providing experiences appropriate to the development period.

Prerequisite: permission of the athletic coaching education program coordinator.

Open only to students in the School of Kinesiology.

618 Skills and Tactics for Coaches (3) Study of competitive tactics and strategies, scouting, practice planning, and some analysis in athletics.

Prerequisite: permission of the athletic coaching education program coordinator.

Open only to students in the School of Kinesiology.

625 Evaluation in Coaching (3) Includes development of athlete, team, athletic personnel, and program evaluation procedures.

Prerequisite: permission of the athletic coaching education program coordinator.

Open only to students in the School of Kinesiology.

632 Philosophy and Ethics (3) The study of methods to reinforce and advocate for positive opportunities resulting from sport involvement, values to be developed through sport involvement, ethical conduct, and how to facilitate social and emotional growth of athletes.

Prerequisite: permission of the athletic coaching education program coordinator.

Open only to students in the School of Kinesiology.

670 Sport Safety and Injury Prevention (3) Includes methods for recognizing and ensuring safe playing conditions; role of protective equipment and proper conditioning procedures for injury prevention; management of injuries.

Prerequisite: permission of the athletic coaching education program coordinator.

Open only to students in the School of Kinesiology.

675 Teaching and Motivation for Coaches (3) The study of the use of effective teaching methods to introduce and refine sport principles and technical skills and to appropriately and effectively motivate athletes.

Prerequisite: permission of the athletic coaching education program coordinator.

Open only to students in the School of Kinesiology.

688 Current Issues in Coaching Research (3) In-depth study of emerging research in coaching athletic teams. Special emphasis on collecting, analyzing, and applying research from related disciplines for application to future research on coaching.

Prerequisite: PEP 601; permission of the athletic coaching education program coordinator.

Open only to students in the School of Kinesiology.

692 Organization and Administration for Coaches (3) Studies the development of objective and effective procedures for the evaluation and selection of personnel involved in athletic programs and for program reviews, facilitation of appropriate emergency care procedures, legal responsibilities associated with coaching, and organization required for implementing sport programs.

Prerequisite: permission of the athletic coaching education program coordinator.

Open only to students in the School of Kinesiology.

ATHLETIC TRAINING (AT)

577 Psychology of Injury Rehabilitation (3) Presents the psychological impact of musculoskeletal injury and related factors involved in the rehabilitation process. Includes the sociocultural, mental, emotional, and physical behaviors of patients involved in injury rehabilitation.

Prerequisite: AT 373 or PEP 609.

Not open to students who have credit in AT 477.

696 Advanced Techniques in Athletic Training (3) Study in the administration of and techniques involved in athletic training practice.

EXERCISE SCIENCE (EXSC)

600 Internship in Exercise Science (1-12) An in-depth practical experience in the application of knowledge and skills

related to one of the specialization areas within exercise science.

Prerequisite: permission of the program coordinator.
A total of 12 credits may be earned.

603 Exercise Physiology 1 (3) Advanced study of the physiological responses to exercise. Emphasis is on the neuromuscular, metabolic and cardiorespiratory responses.

Prerequisite: permission of the program coordinator.

604 Essentials of Resistance Training and Conditioning (3) Designed to give the scientific basis of resistance training and conditioning and the ability to apply that knowledge with specific training techniques.

Prerequisite: permission of the program coordinator.

611 Research Methods (Thesis) (3) Focuses on research methods used in physical education, sport, and exercise science. Emphasizes selecting a research topic, writing and presenting a research proposal, and using appropriate statistical methods.

Prerequisite: permission of the program coordinator.

616 Motor Control (3) Provides an examination of the neural structures and processes involved in the control of movement and in the maintenance of body posture.

622 Foundations of Adult Physical Fitness (3) Introduction to the exercise specialist curriculum. Provides the foundation for acquiring the philosophy, principles, and guidelines for establishing and directing adult fitness programs.

Prerequisite: permission of the program coordinator.

623 Principles of Exercise Testing and Interpretation (3) Involves the study of the theoretical bases for exercise testing and the practical procedures used in pre-exercise screening and exercise testing. Students will learn how to interpret information from pre-exercise screening and apply this to the selection of appropriate exercise test protocols. Interpretation of results from various exercise test protocols will be emphasized using a case-study approach.

Prerequisite: permission of the program coordinator.

630 Exercise Physiology 2 (3) Examines the physiological adaptations resulting from aerobic and anaerobic exercise training as well as from environmental stress.

Prerequisite: permission of the program coordinator.

633 Seminar in Exercise Science (1-18) In-depth study on advanced or selected topics in the field of kinesiology. Topics chosen based on students' needs and interests in the field of kinesiology.

Prerequisite: permission of the program coordinator.
A total of 18 credits may be earned.

634 Mechanical Analysis of Movement (3) Applications of the principles of mechanics to the analysis of motor skills; study of methods of execution of various athletic and sporting skills.

Prerequisite: permission of the program coordinator.

637 Applied Physiology (3) A concise summary of physiology as applied to human bioenergetics using an organ-system approach.

Prerequisite: permission of the program coordinator.

638 Electrocardiography (3) A concise summary of cardiac electrophysiology. Identification of normal and abnormal resting and exercise electrocardiograms (ECG). Effects of various cardiac medications on resting and exercise ECG will be discussed.

Prerequisite: permission of the program coordinator.

639 Seminar in Cardiac and Pulmonary Rehabilitation (3) Study of the characteristics of contemporary cardiac and pulmonary rehabilitation programs. Includes an overview of routine diagnostic assessments, exercise prescription principles, and program administration issues associated with these rehabilitation programs. Also includes a review of current research related to cardiac and pulmonary rehabilitation.

Prerequisite: EXSC 622, 623, 638; permission of the program coordinator.

640 Exercise in Prevention and Rehabilitation of Chronic Diseases (3) Covers the role of regular aerobic exercise and/or resistance training in the prevention and rehabilitation of various chronic diseases through discussions of disease etiology and review of available exercise training literature.

Prerequisite: permission of the program coordinator.

651 Laboratory Techniques in Biomechanics (3) Theoretical and practical applications of data recording methods commonly used in biomechanical analysis.

Prerequisite: permission of the program coordinator.

652 Clinical Biomechanics (3) Biomechanical concepts related to disorders of the skeletal system.

Prerequisite: permission of the program coordinator.

655 Advanced Biomechanics (3) Biomechanical analyses emphasizing research techniques and procedures.

Prerequisite: EXSC 634; permission of the program coordinator.

698 Internship in Exercise Program (1-6) Provides practical experiences in physical fitness and clinical assessments and in exercise programming in both health/fitness and clinical environments.

Prerequisite: permission of the program coordinator.
A total of 6 credits may be earned.

699 Independent Study (1-6) Designed for students who wish to conduct independent study in exercise science.

Prerequisite: permission of the program coordinator.
A total of 6 credits may be earned.

GERONTOLOGY (GERO)

515 Technology in Aging (3) Explores the impact of assistive and other technologies on the lives of aging adults. Identification of technologies, utilization by and for aging adults, and implications for service delivery will be explored.

Not open to students who have credit in GERO 415.

535 Aging in Communities (3) Focus on community aging as it applies to all the dimensions of life: biological, physiological, sociological, psychological, political, occupational, economical, educational, familial, and societal.

Not open to students who have credit in GERO 435.

540 Women and Aging (3) Typical lifespan occurrences that largely impact women such as elder caregiving, familial systems maintenance, widowhood, health changes, and economic issues will be explored. Historical and theoretical perspectives; introduction to health, psychological and living issues; introduction to racial and ethnic diversity; and social relationships will also be covered.

Not open to students who have credit in GERO 440.

592 Workshop in Applied Gerontology (1-10) Preservice or inservice education in selected topics in applied gerontology using a workshop format of concentrated study, presentations, demonstrations, and practice. Specific content will depend upon the problem or special interest with which the workshop is concerned. Learners are encouraged to work out a program of personal study with help from other workshop participants and resource persons.

Prerequisite: permission of the director.

Credit may be applied to a major or minor in applied gerontology only with permission of the program director for gerontology.

A total of 10 credits may be earned in this course or in combination with GERO 392.

598 Topical Seminar in Applied Gerontology (3-6) Individual and group investigation of topics, problems, or issues in applied gerontology with discussion by all seminar participants under the guidance of the instructor.

Credit may be applied to a major or minor in applied gerontology only with permission of the program director for gerontology.

A total of 6 credits may be earned in this course or in combination with GERO 398.

605 Aging Well: A Systems Approach (3) An application of the Fisher Institute Wellness Model to the processes of aging well. Seven dimensions of wellness will be examined, highlighting the potential for successful aging. Emphasizes mid-life to late-life challenges and how the principles of systems theory deepen understanding of wellness and aging.

610 Public Policy and Aging (3) Emphasis on the governmental infrastructure that facilitates the development and implementation of policy that impacts aging Americans and the public and private response to policy initiatives.

615 Wellness and Aging: Practical Applications for Health Professionals (3) Evidenced-based wellness and aging content for health professionals. Experience leading intergenerational discussions and conducting health contracts with older adults.

620 Guided Life Review (3) Learn the skill of helping older adults produce written components of a life review. These components include family of origin, marriage, children, grandchildren, work career, major historical events, retirement, health, meaning and purpose, aging and death, and major turning points.

625 Changing Health/Wellness Behaviors (3) Focus on helping adult clients increase exercise, improve nutrition, stop smoking, and manage stress using the instructor's field-tested health contract/calendar technique. Also includes theory, assessment, support groups, cultural competency, health materials, and proposal writing. Special emphasis on older adults.

630 Health, Wellness, and Aging (3) An overview of the aging process and old age with specific emphasis on health. The range of topics includes exercise, nutrition, clinical preventive services, health behavior, mental health, professional-client communication, model programs, diversity, and public policy.

635 Aging Well: Adaptations in Later Life (3) Examination of the adaptations of the last half of the life span (i.e. ages 50-100+). Content includes the various theories of aging, multidimensional perspectives on changes in health and well-being, and strategies for coping with the change. Emphases are placed on developmental process, adaptations, and mental/emotional changes as people age.

Prerequisite: GERO 605.

640 Service Learning in Gerontology (3) Students will take a leadership role in a community-based project and apply research, theory, knowledge, and skills.

Prerequisite: GERO 605 and at least one additional core course.

641 Practical Applications of Gerontological Programming (3) Students will focus on applying research, knowledge, and skills to deliver gerontological programming. Techniques for delivery and management of gerontological programs and evaluating effectiveness of programs/interventions will be examined.

Prerequisite: GERO 605, 640, and one additional core course.

699 Internship in Gerontology (1-6) Experience in one or more of the agencies, institutions, or programs now providing gerontological services or otherwise related to gerontology. Carried out under the joint supervision of the program director and a practitioner representing the agency, institution, or program. A student chooses the setting with guidance from a faculty sponsor and approval of the practitioner.

Prerequisite: permission of the program director.

A total of 6 credits may be earned.

PHYSICAL EDUCATION: PROFESSIONAL (PEP)

560 Development of Exercise Program for the Older Adult (3) Characteristics of the older adult and the implications of the aging process for exercise potential. Students will plan, implement, and evaluate a program of activity based upon the special needs of the older adult.

Not open to students who have credit in EXSC 312.

594 Teaching Physical Education to People with Disabilities (3) Understanding of the various physical (orthopedic, muscular-skeletal, cardiovascular, and postural) defects and sensory (hearing and sight) disorders in relation to physical education programming and activities.

595 Medical Aspects of Sport and Physical Activity (3) A collection of knowledge, skills, and values that the entry-level certified athletic trainer must possess to recognize, treat, and refer, when appropriate, the general medical conditions and disabilities of athletes and others involved in physical activity.

Prerequisite: AT 370, 371, 372, 373; permission of the instructor.

Open only to nursing majors.

600 Internship in Sport and Physical Education (1-6) An in-depth practical experience in the application of knowledge and skills related to one of the specialization areas within sport and physical education.

Prerequisite: permission of the graduate coordinator.

A total of 6 credits may be earned.

601 Research Applications (non-Thesis) (3) Examination of research related to sport studies. Emphasis placed on the critical evaluation of research and its applicability to practice.

602 Technology Applications in Sport and Physical Education (3) An introduction to technology and its application in sport and physical education. Emphasis placed on cutting-edge hardware and software available to the practitioner.

608 Motor Learning (3) A study of the relationship between principles of psychology and the learning of motor activities. Classroom and laboratory experience.

609 Sport Psychology (3) Introduces the field of sport psychology, emphasizing the role of psychological phenomena in behavior in sport and physical activity settings and how participation in sport and physical activity influences the psychological characteristics of the individual.

611 Practicum in Sport and Exercise Psychology (3) This course, taught by a certified sport psychology consultant, will entail analysis, synthesis, and application of advanced sport and exercise psychology topics and techniques with individuals and teams. Special emphasis will be placed on blending theory and ethical guidelines with applied issues through fieldwork experiences with various populations.

Prerequisite: PEP 609; permission of the instructor or program coordinator.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

612 Motor Development (3) Lifespan human motor development emphasizing major theoretical viewpoints, research methodology, and conditions affecting motor development including physical growth, physiological change, perceptual change, cognitive change, sociocultural practices, and intervention.

613 Physical Fitness Seminar (3) The role of physical fitness in society today with emphasis on scientific principles and methods for developing physical fitness. Promotion and future directions of physical fitness programs.

616 Developing Motor Behavior: Theory and Practice (3) Focus on the theory and practice of movement skill learning with emphasis on Laban's movement analysis framework, stages of learning, teaching styles, and application of research findings to the instructional setting.

619 Introduction to Adapted Physical Education (3) Designed to expand graduate students' knowledge in the area of adapted physical education activity. Framed around the national standards, or APENS, and prepares students to take the national certification exam.

620 Physical Education Workshop (1-8) Workshop offerings: physical education and sports, athletic training, officiating and judging, athletic administration, and specialized coaching.

A total of 8 credits may be earned.

621 Assessment in Adapted Physical Education (3) Students will review how to establish appropriate program placement in the least restrictive environment (LRE) for students with disabilities in physical education. Students will administer, interpret, plan, and develop appropriate programming using their assessment data. Students will develop a top-down plan based on their assessment results.

630 Evaluation in Physical Education (3) Designed to acquaint learners with various types of performance-based assessments and show how they can be integrated into the curriculum to enhance student learning.

644 Psycho-Social Processes of Sport and Physical Activity (3) Focuses on dynamic nature and function of sport teams and physical activity groups. Topics include group structure, norms, and roles; motivation and climate; and group/team identity, cohesion, and leadership. Introduces concepts, principles, theories, and practical applications.

660 Psychology of Exercise and Health (3) Provides an overview of psychological and social issues related to exercise and health behavior. Emphasizes understanding concepts,

principles, and theories, and their application in the practice of promoting and supporting regular exercise participation and positive health behaviors.

685 Curriculum Development in Physical Education (3) Curriculum development in physical education focusing on current theories and models including conditions affecting the curriculum, proper scope and sequence, scheduling, implementation and change theories, and curriculum evaluation techniques.

690 Sport Sociology (3) An insight into America's heritage of sports and physical education and how this and various cultural and social institutions influence contemporary sports in the United States.

695 Current Teaching Methodology in Physical Education (3) The sequential experiences of public school children, special problems encountered, and methods for improving the effectiveness of teaching physical education.

699 Independent Study (1-3) Designed for students who wish to conduct independent study in physical education.

Prerequisite: permission of the director of physical education graduate studies through formal petition.

A total of 3 credits may be earned.

SPORT ADMINISTRATION (SPTA)

603 Sport Administration Ethics and Philosophy (3) The ethical and philosophical concepts that determine the direction and reputation of amateur and professional sport programs will be identified and applied to major issues and problems facing the sport industry.

Prerequisite: permission of the program coordinator.

Open only to physical education and sport: sport administration majors.

605 Organization and Administration of Recreation Programs (3) Study of the general functions and overall operations of recreational programs, services, and facilities.

611 Sport Marketing and Promotions (3) The application of the principles of promotion and marketing to the sport and fitness industry including the areas of professional sports, corporate fitness, college/high school athletics, clubs, and resorts.

Prerequisite: permission of the program coordinator.

Open only to physical education and sport: sport administration majors.

615 Sport Law (3) Demonstrates the necessity of a working knowledge of sport law as a tool of strategic management, as a tool in effective negotiations, as a tool of risk management, and as a tool for gaining competitive advantage.

Prerequisite: permission of the program coordinator.

Open only to physical education and sport: sport administration majors.

617 Financial Principles in Sport (3) Examination of issues and economic forces impacting public and private funding sources relied upon by professional, intercollegiate, and interscholastic sport organizations including allocated funds (i.e. student fees, tax revenue, and appropriations) and generated funds (i.e. ticket sales, fundraising, sponsorship, and media rights). Introduces the role of budgeting and financial analysis.

Prerequisite: permission of the program coordinator.

Open only to physical education and sport: sport administration majors.

619 Sport Facility and Event Administration (3) Affords students the opportunity to study techniques and strategies for successful planning, implementation, and evaluations of events as well as the planning, construction, and maintenance recommendations for sport-related facilities. Students will gain practical experience in creating and conducting an event during the course.

Prerequisite: permission of the program coordinator.

Open only to physical education and sport: sport administration majors.

620 Seminar in Sport Administration (1-6) The seminar in sport administration is designed to cover in-depth contemporary topics in the sport administration/management field. The topic of the course is unique to the semester of delivery and will have practical implications for students desiring employment in the sport industry. Topics will be determined based on industry demands, faculty expertise/interest, student interest, and feasibility of delivery. Potential seminar topics include, but are not limited to: sport sales/sponsorship, youth sport, professional sport, and sport media/communication.

Prerequisite: permission of the program coordinator.

A total of 6 credits may be earned.

Open only to physical education and sport: sport administration majors.

628 International and Comparative Administration of Sport (3) An investigation of the nature and role of the sport industry of different world regions. Includes an analysis of selected national systems, international and comparative sport management, and application of theory to manage the growing diversity in U.S. sport organizations due to growing migration of athletes, coaches, and professionals.

Prerequisite: permission of the program coordinator.

Open only to physical education and sport: sport administration majors.

676 Sport Administration Theory and Policy Development (3) Case studies and other techniques will be utilized to challenge students to think systematically about issues that confront professional managers and will therefore produce critically thinking managers for sport organizations. Includes an overview of management theory as it relates to sport organizations.

Prerequisite: permission of the program coordinator.

Open only to physical education and sport: sport administration majors.

677 Intercollegiate Athletics Policy (3) Examines historical foundations of intercollegiate sport, the development of sport in higher education, and the contemporary business landscape of college sports. Explores policy development at the institutional and national governance level including the effect of NCAA policy on member institutions. Surveys the NCAA Manual including amateurism, recruiting, and eligibility legislation.

Prerequisite: permission of the program coordinator.

Open only to physical education and sport: sport administration majors.

691 Historical Foundations of Sport (3) An investigation into the history of American sport. In addition to exploring the major sporting eras, this course will emphasize sport as a sociocultural phenomenon ever-present in popular American culture. Specific attention will be given to sport organizations, leagues, teams, and individuals relative to their impact on American culture.

698 Internship in Sport Administration (6) A supervised work and learning experience in the application of sport management knowledge and skills. Internships are to be completed with organizations within the sport industry approved by the program coordinator including professional, collegiate, interscholastic, and amateur organizations.

Prerequisite: 12 credits earned (*C* or better) from the graduate sport administration program (core or approved electives), permission of the program coordinator.

Open only to physical education and sport: sport administration majors.

WELLNESS (WELN)

605 Wellness Management Administration (3) Improving the efficiency of administrative tasks and communication practices can greatly impact wellness management practice. This class focuses on computer skills and technologies important for wellness program administration, including developing budgets, communicating effectively, and writing and administering grants and contracts.

625 Community Collaboration and Service Learning in Wellness Management (3) During this course, students assist in the administrative functions of community-based, professionally-led wellness management projects.

630 Wellness Programming for Health and Productivity Management (3) Examination of Health and Productivity Management (HPM) as a wellness program approach in the workplace. Techniques for delivery and management of HPM programs and cost effectiveness of interventions will be examined.

635 Wellness Coaching (3) This course introduces theory, skills, and techniques related to guiding groups and individuals through meaningful lifestyle changes by emphasizing motivational strategies and behavioral and holistic practices. Features include lifestyle assessments, in-depth wellness and lifestyle change models, basic interviewing and referral skills, and contact with leaders in the wellness field.

640 Survey of Wellness Policy, Advocacy, and Ethics (3) Understanding political and ethical issues impacting well-being plays a role in the success of both individual and system-level changes that lead to more holistic, health-promoting lifestyles. This class introduces wellness program managers and other health professionals to important issues that need to be considered during decision-making processes.

645 Social Marketing in Wellness Management Practice (3) Social marketing is the use of marketing principles and a customer-driven approach when developing health behavior change strategies. This class focuses on helping wellness managers and other health professionals "think like a marketer" as they design, implement, and evaluate wellness-related programs.

650 Foundations of Wellness (3) First-year introduction to a wide variety of concepts and foundational thinking associated with the notion of wellness. Encourages integrative thinking about the meaning and application of wellness in life and in relation to careers as managers in the wellness environment.

655 Practical Applications for Worksite Wellness (3) Focuses on applying research, knowledge, and skills to manage the wellness process.

660 Critical Issues in Worksite Wellness (3) An exploration of critical wellness management issues covering organizational, programmatic, and emerging events affecting wellness and health promotion at the work site.

665 Technology and Media for Wellness Managers (3) Provides wellness professionals with the basic skills to initiate, maintain, and expand technology and media into daily business. Emphasizes obtaining resources, information, skills, and strategies through practical application.

670 Interdisciplinary Wellness Research Design (3) An introduction to basic research design and its application to wellness programs. Emphasizes the interdisciplinary nature of research from wellness-related disciplines and focuses on creating research hypotheses, design, data collection, and analysis.

675 Alternative and Complementary Therapies (3) A graduate seminar focusing on a cultural, philosophical, and intellectual analysis of a selective number of alternative, complementary "medical" delivery systems including their history. Key concepts, methods of delivery, effectiveness, and supportive research data will be reviewed emphasizing their potential for supporting wellness.

680 Evaluating Health and Wellness Initiatives (3) Provides an introduction to logic-model driven program evaluation. The knowledge and skills developed will help participants systematically examine health and wellness initiatives, design data collection methods, analyze information gathered, and generate reports that can be used to improve program services and assess program outcomes.

697 Special Studies in Wellness (1-3) Problems of special interest in wellness. Work under the direction of a staff member. May include one or more of the following: experimental work, attendance in special classes, wide reading, and development of special techniques or skills in wellness management.

Prerequisite: permission of the academic coordinator or the director of the institute.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

698 Internship in Wellness Management (6) Full-time experience in an approved wellness program. Management experience will be offered at the work site under the joint supervision of a university faculty member and a wellness director responsible for program management.

Prerequisite: completion of the wellness management core requirement.

SCHOOL OF NURSING

bsu.edu/nursing
Cooper Science Complex, Room CN 418, 765-285-5571

PROGRAMS

MASTER OF SCIENCE (MS) IN NURSING, 36 credits

Admission requirements
Applicants must meet the admission requirements of the Graduate School. Applicants must also

- be a graduate of a National League for Nursing Accrediting Commission (NLNAC) now ACEN Accreditation Commission for Education in Nursing or Association of Colleges of Nursing (CCNE) accredited nursing program. Registered nurses holding baccalaureate degrees in another field who demonstrate successful completion of an upper-division major in nursing may qualify.
- have earned overall grade-point average (GPA) of 3.0 on a 4.0 scale.
- have earned a grade of *C* or better in at least 2-quarter, or semester, credits in an undergraduate research course.
- have had a physical assessment course (required for clinical majors).
- hold an unencumbered license as a registered nurse in state of practice.
- show evidence of training in standard precautions.
- have health clearance.
- clear criminal background checks.
- have minimum of one year clinical experience before enrolling in clinical courses for new graduates.
- have recent clinical experiences (three of past five years) before enrolling in clinical courses for experienced nurses.

This program is delivered on-line.

Retention Standards

An overall scholastic ratio of 3.0 (*B* average) must be attained before admission to candidacy and the final awarding of any master's degree. No course with grades below *B* (3.0) may be counted toward any degree program.

Registered Nurse to Master of Science Nursing Mobility
This program is designed for nurses holding an associate degree in nursing and a baccalaureate degree in another field. Contact the School of Nursing for more information.

All students take the following research and nursing core courses.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Research core			
EDPS	641	Intro Statistical Methods (3)	
	or		
NUR	607	Data Analys in Nurs Res (3)	3
	604	Research	3
			6 crs
Nursing core			
NUR	603	Nursing Theory	3
	605	Nursing Information Technology	2
	610	Nurs Concepts Health Promotion	3
	611	Concs Analy 2: Dec Mkng	3
			8-11 crs

NUR 611 is only required for the administrator and educator concentrations.

Complete one of the following concentrations:

Nurse Administrator concentration, 36 credits

Research core			6
Nursing core			11
NUR	640	Nurs Admin and Complex Orgs	3
	642	Admin Mgt for Nurses	3
	643	Financial Management Nurses	3
	672	Practicum of Role Expectations	4
Electives			6
			36 crs

Nurse Educator concentration, 36 credits

Research core			6
Nursing core			11
NUR	608	Pathophys and Pharmacology	3
	609	Assessment Clinical Practice	3
	620	Curricular Designs in Nursing	3
	622	Teaching in Nursing	3
	626	Program Evaluation	3
	672	Practicum of Role Expectations	4
			36 crs

DOCTORATE IN NURSING PRACTICE (DNP), 90 credits

There is a college moratorium on admission to this degree.

CERTIFICATE PROGRAMS

Admission requirements
Applicants must meet the admission requirements of the Graduate School and the School of Nursing. Preference for admission will be given to applicants who graduated from the Ball State University School of Nursing Master's Program (graduation from the Ball State University School of Nursing Master's Program does not guarantee admission into the Post-Master's certificate program).

The post-master's certificate nurse practitioner program (adult/gerontology and family concentrations) is designed for nurses who have completed a master's degree in nursing. Transcripts and course descriptions from the student's master's program will be reviewed to determine what additional courses must be completed for certification eligibility as an adult/gerontology or family nurse practitioner.*

*Conditional to the student's transcript(s) the following courses may be required for these Post-Master's Certificates: Family Nurse Practitioner, and Family Nurse Practitioner for the Adult or Adult/Gerontology Nurse Practitioner

NUR	614	Issues Aging Adult Pop (3)
	630	Adv Pract Nurs and Role Thry (3)
	632	Pathophys and Nurs Pract (3)
	634	Advanced Health Assessment (3)
	638	Advanced Clinical Pharmacology (3)

Post-Master's Certificate Family Nurse Practitioner, 21-23 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
NUR	605	Nursing Information Technology	2
	673	Pract-Family Nrs Practitioner	5
	681	Primary Care of the Adult 1	4
	682	Primary Care of Children	4
	683	Primary Care of the Adult 2	4
	684	Primary Care of Women	4
			21-23 crs

NUR 605 required if student does not have nursing master's degree from BSU.

Post-Master's Certificate Family Nurse Practitioner for the Adult Nurse Practitioner or Adult/Gerontology Nurse Practitioner, 13-15 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
NUR	605	Nursing Information Technology	2
	673	Pract-Family Nrs Practitioner	5
	682	Primary Care of Children	4
	684	Primary Care of Women	4
			13-15 crs

NUR 605 required if student does not have nursing master's degree from BSU.

Post-Master's Certificate in Nurse Educator, 19-21 credits

The post-master's certificate nurse educator program is designed for nurses who have completed a master's degree in nursing.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
NUR	605	Nursing Information Technology	2
	608	Pathophys and Pharmacology	3
	609	Assessment Clinical Practice	3
	620	Curricular Designs in Nursing	3
	622	Teaching in Nursing	3
	626	Program Evaluation	3
	672	Practicum of Role Expectations	4
			19-21 crs

NUR 605 required if student does not have nursing master's degree from BSU.

NURSING (NUR)

603 Nursing Theory (3) Exploration and analysis of theory development in the field of nursing, emphasizing current

research, conceptual models, and theory development in nursing.
Prerequisite or parallel: NUR 605.
Open only to graduate nursing students.

604 Research (3) Research methodology in nursing emphasizing the critical evaluation of research and its applicability to practice.
Prerequisite or parallel: NUR 607.
Open only to graduate nursing students.

605 Nursing Information Technology (2) Evaluates the impact of information and health-care technology in relationship to advanced nursing. Experiences include the utilization of computer hardware and software and initiating a line of inquiry via database use.

606 Nursing and Computer Technology 2 (2) Builds on experience in the use of computers. Emphasizes a further exploration of computer integration in nursing practice, service administration, education, or research. Computer laboratory experience included.
Prerequisite: NUR 605 or equivalent.

607 Data Analysis in Nursing Research (3) Emphasizes the interpretation and application of descriptive, inferential, and advanced statistical analyses of data. Critical examination of data collection, data analyses, and interpretation of quantitative and qualitative nursing studies will be the focus.
Prerequisite or parallel: NUR 605.
Open only to graduate nursing students.

608 Pathophysiology and Pharmacology for Clinical Practice (3) Focuses on advanced knowledge of pathophysiology and pharmacology for application in clinical practice, and on teaching pathophysiology and pharmacology related to the nursing care of patients with health alterations across the lifespan.
Prerequisite or parallel: NUR 605.
Open only to graduate nursing students.

609 Health Assessment for Clinical Practice (3) Enhance knowledge and skills to integrate science and technology into holistic health assessments. Focuses on application of an evidence-based nursing process for patient care across the life-span in a variety of clinical settings.
Prerequisite: NUR 605.
Open only to graduate nursing students.

610 Nursing Concepts in Health Promotion/Disease and Injury Prevention in Populations (3) Analyzes selected nursing concepts of health policy, health promotion/disease and injury prevention and impact on target population aggregates. Relationship of concepts to advanced practice models is explored. Clinical experiences focus on applying research-based client assessment of knowledge deficits, understanding and planning of policy-driven health promotion/disease and injury prevention activities for populations in various stages of the life cycle.
Prerequisite or parallel: NUR 605.
Open only to graduate nursing students.

611 Concepts Analysis 2: Decision Making (3) Analyzes selected nursing concepts and related research with emphasis on ethics and decision making.
Prerequisite or parallel: NUR 605.
Open only to graduate nursing students.

614 Issues in the Aging Adult Population (3) Issues of the aging adult population are applied. Research findings are analyzed related to quality care. Impact of fiscal management health care policies and technology are explored.
Prerequisite: NUR 610.
Open only to graduate nursing students.

618 Application of Clinical Concepts in Community-Based Settings (3) Applies nursing process, primary health-care principles, and primary and secondary prevention with community-based populations. Explores community practice models and the effect of health policy on health care delivery. Clinical focus includes interdisciplinary and intersectoral collaboration in addressing consumer health needs.
Prerequisite: NUR 603, 604.

620 Curricular Designs in Nursing (3) Opportunity to develop, implement, and/or evaluate student-selected aspects of existing nursing curricula. Emphasizes a group experience in assessing a curricular problem and applying current theory of practice in seeking solutions to a practical curriculum issue.
Prerequisite or parallel: NUR 605.
Open only to graduate nursing students.

622 Teaching in Nursing (3) Focuses on teacher behaviors that promote student learning, including course development and use of technology in a variety of post-secondary nursing environments. Includes faculty roles and responsibilities in nursing education.
Prerequisite or parallel: NUR 605.
Open only to graduate nursing students.

626 Program Evaluation (3) Focuses on program evaluation of a nursing unit by exploring the components of a systematic evaluation plan and identifying evaluational tools for educational assessment using collaborative strategies.
Prerequisite: NUR 620 and 622.
Open only to graduate nursing students.

630 Advanced Practice Nursing and Role Theory (3) A variety of theories and conceptual models are analyzed as the roles of advanced practice nurses are explored. Professional practice issues are examined through the synthesis of professional and research literature. A conceptual model for advanced practice nursing is developed.
Open only to graduate nursing students.

632 Pathophysiology and Nursing Practice (3) Provides a comprehensive scientific background and understanding of pathophysiology as it relates to client assessment across the

lifespan in a variety of health care settings. Forms the basis for advanced nursing practice.

Prerequisite or parallel: NUR 605.

Open only to graduate nursing students.

634 Advanced Health Assessment (3) Practice of advanced health-assessment techniques across the lifespan. Emphasizes the use of critical thinking and decision-making abilities to formulate differential diagnosis and a plan of care based on assessment data.

Prerequisite or parallel: NUR 632.

Open only to graduate nursing students.

638 Advanced Clinical Pharmacology (3) Provides principles of advanced pharmacology based on pharmacotherapeutics, pharmacokinetics, and pharmacodynamics of broad categories of drugs. Emphasizes pharmacological management of clients across the lifespan in diverse settings.

Prerequisite: NUR 605.

Open only to graduate nursing students.

640 Nursing Administration in Complex Organizations (3) Introduction to administration of nursing. Relates organizational and administrative theories to the delivery of nursing care with emphasis on the health-care environment.

Prerequisite or parallel: NUR 605.

Open only to graduate nursing students.

642 Administrative Management for Nurses (3) Introduction to organizational planning, budgeting, human-resources management, conflict-management issues, quality management, and ethics.

Prerequisite: NUR 605.

Open only to graduate nursing students.

643 Financial Management for Nurses (3) Introduction to organizational planning, budgeting, human resources management, conflict-management issues, quality management, and ethics.

Prerequisite: NUR 640 and 642.

Open only to graduate nursing students.

662 Health Care Business and Economics (3) Focuses on principles of business, finance, economics, and health-care informatics utilized in developing and evaluating care delivery approaches within health-care systems and clinical practice. Emphasis on cost-effective practice initiatives for elimination of health disparities and improvement of health care outcomes.

672 Practicum of Role Expectations (4) Practicum in either an educational or administrative setting of student's selected functional role. Seminars for guidance and analysis of role relationships. Topics include teacher in nursing or administrator in nursing.

Prerequisite: all other courses required for program concentration.

Open only to graduate nursing students.

673 Practicum-Family Nurse Practitioner (5) Synthesis of theoretical and clinical decision making in the provision of primary care practice across the life span. Emphasis on quality management, legal, policy and economic issues in relation to advanced practice. Offered on-line only.

Prerequisite: all other courses required for the family nurse practitioner concentration.

Open only to graduate nursing students.

680 Primary Care of Adult/Geriatric Clients (7) Focuses on the application and evaluation of advanced practice knowledge and skills required for the care of adult/geriatric clients.

Prerequisite: NUR 630 and 632 and 634 and 638.

Open only to graduate nursing students.

681 Primary Care of the Adult 1 (4) Focuses on the development of clinical decision making for the family nurse practitioner student in providing primary health-care for adults, older adults and maturing families across the life span. Emphasis is on health promotion, disease prevention, health education, and treatment of common acute and chronic conditions in young adults through geriatrics. Offered on-line only.

Prerequisite: NUR 632 and 634 and 638.

Open only to graduate nursing students.

682 Primary Care of Children (4) Focuses on the application and evaluation of advanced nursing practice knowledge and skills required for the care of children and their families.

Prerequisite: NUR 632 and 634 and 638.

Open only to graduate nursing students.

683 Primary Care of the Adult 2 (4) Focuses on the continued development of clinical decision making for the family nurse practitioner student in providing primary health-care for adults, older adults, and maturing families across the life span. Emphasis is on health promotion, disease prevention, health education, and treatment of common acute and chronic conditions in young adults through geriatrics. Offered on-line only.

Prerequisite: NUR 681.

Open only to graduate nursing students.

684 Primary Care of Women (4) Focuses on the application and evaluation of advanced nursing practice knowledge and skills required for the care of women and their families.

Prerequisite: NUR 681.

Open only to graduate nursing students.

690 Special Studies in Nursing (1-4) Group study of topics of special interest in nursing.

A total of 4 credits may be earned.

699 Independent Study (1-3) Independent study under the direction of a faculty member. May involve experimental inquiry, independent exploration of literature and resources, or development of special techniques.

Prerequisite: permission of the coordinator of graduate studies in nursing and the department chairperson.

A total of 3 credits may be earned.

730 Statistics for Health Care Research (3) Focuses on application of advanced statistical methods and analysis of data used in research for evidence-based practice and clinical decision making.

740 Theory-Based Models of Care (3) Focuses on the development and evaluation of models of care within the framework of nursing theories and theories from other disciplines. Emphasis on integrating nursing science with knowledge from the biophysical, psychosocial, and behavioral sciences and ethics as the basis for advanced nursing practice.

742 Research for Evidence-Based Practice (3) Focuses on critical analysis of scientific evidence and its application and evaluation in advanced nursing practice. Emphasis on ethical, cultural, and financial implications of evidence-based practice. The role of the advanced-practice nurse in collaborative research and dissemination of findings is explored.
Prerequisite: NUR 730.

744 Outcomes Research and Evaluation (3) Focuses on the design and implementation of processes to evaluate health outcomes at patient, population, community, and health-care systems levels. Emphasis on the application of relevant outcomes research and evaluation findings for quality improvement at all levels of care.
Prerequisite: NUR 730.

760 Population Focused Care (4) Focuses on the advanced-practice nursing role in disease prevention and health promotion for populations. Emphasis on designing, implementing, and evaluating care that will eliminate health disparities. Global health issues are explored. Clinical experience will be in a population-focused care environment.
Prerequisite: NUR 730.

764 Leadership in Health Policy and Advanced Practice (4) Explores the advanced-practice nurse leadership role at organizational and systems levels. Emphasis on the inter-professional dimension of health care with use of collaborative and consultation skills. Analysis, development, and implementation of health-care policies will be explored. Clinical experience will be in a leadership environment.
Open only to DNP students.

780 Seminar: Advanced Topics in Management of Client Health/Illness Status (3) Explores current client health/illness management issues. Uses advanced levels of clinical judgment and systems thinking in evidence-based care to improve patient outcomes.
Open only to DNP students.

790 Practicum 1 (3) Practice experiences are designed to achieve specific learning objectives related to the DNP Essentials and NONPF Competencies. Experiences include in-depth work with experts from nursing as well as other disciplines and provide opportunities for meaningful engagement within practice environments. These experiences provide the context for the DNP project.
Prerequisite: NUR 792.
Open only to DNP students.

791 Practicum 2 (3) Practice experiences are designed to achieve specific learning objectives related to the DNP Essentials and NONPF Competencies. Experiences include in-depth work with experts from nursing as well as other disciplines and provide opportunities for meaningful engagement within practice environments. These experiences provide the context for the DNP project.
Prerequisite: NUR 790 and 792.
Open only to DNP students.

792 DNP Project 1 (3) The student develops the proposal for a scholarly project. The project is a significant, evidence-based intervention to improve the quality of health care and health outcomes in clinical and community settings.
Prerequisite: 15 credits in NUR 700-level courses to include NUR 730 and 740 and 742 and 744.
Open only to DNP students.

793 DNP Project 2 (3) The student implements and evaluates outcomes of the evidence-based scholarly project to improve the quality of health care and health outcomes in clinical and community settings. The project must be significant and suitable for dissemination through professional venues. Clinical experience includes project dissemination activities.
Prerequisite: NUR 790 and 792.
Open only to DNP students.

NUTRITION AND HEALTH SCIENCE

bsu.edu/physiology
Cooper Science Complex CL 325, 765-285-5961

PROGRAMS

Master of arts (MA) in nutrition and dietetics; master of science (MS) in nutrition and dietetics.

See the Science listing under the College of Sciences and Humanities, page 154, for the doctoral program in environmental science.

MASTER OF ARTS IN HEALTH SCIENCE, 30 credits

There is a college moratorium on admission to this degree.

MASTER OF SCIENCE IN HEALTH SCIENCE, 30 credits

There is a college moratorium on admission to this degree.

MASTERS IN NUTRITION AND DIETETICS, 36 credits

Graduate Students in the Department of Nutrition and Health Science can earn a Master of Science or a Master of Arts in Nutrition and Dietetics. The graduate degree options are designed to provide individualization and flexibility for students with varying needs and interests, with an emphasis in Medical Nutrition Therapy. The graduate program includes and ACEND-accredited dietetic internship. With the exception of candidates who are currently a registered dietician nutritionist (RD/RDN), only candidates cleared by the Graduate School and accepted into the Dietetic Internship Program are accepted into the Nutrition and Dietetics Graduate Program. All students apply initially to the MA: Nutrition and Dietetics program; thesis students will be changed into the MS tract once their thesis topic is approved by the Graduate School.

Admission requirements
Prior to being considered for admission to the Department of Nutrition and Health Science, all applicants must apply to, meet the admission requirements of, and be cleared by the Ball State University Graduate School. Students who begin the program in summer or fall must apply by March 1; students who begin the graduate program in spring must apply by October 1 of the preceding year. All applicants must have an overall undergraduate GPA of 3.0 or higher on a 4.0 scale.

Applicants must provide either: 1) an original, signed Verification of Completion Statement from the Didactic Program in Dietetics director of an ACEND-accredited program or 2) proof of current registration with the Commission on Dietetic Registration, the credentialing body of the Academy of Nutrition and Dietetics. All previous coursework is subject to the Dietetic Internship Coursework Recency Policy (5 years).

For candidates pursuing the Registered Dietitian Nutritionist (RD/RDN) credential, once clear by the Graduate School, the Dietetic Internship application materials will be used as the graduate program application materials. There are two national matches each year, with approximate deadlines the second week of February and the fourth week of September.

Candidates who currently hold Registered Dietitian Nutritionist (RD/RDN) status are encouraged to apply. These candidates must submit a letter of intent, a resume, and two letters of recommendation, preferably using the Graduate School's online system, directly to the Department of Nutrition and Health Science Graduate Program Director.

Dietetic Internship
The dietetic internship at Ball State University is a 32-week, full-time program. Prior to beginning the internship, students must complete a minimum of 9 graduate credits, including NUTR 642 Nutrition Assessment. Students are placed in one of two internship classes that run from January through August or May through December of the year following the student's acceptance into the program. Dietetic students accepted into the internship program will have the opportunity to complete the requirements of the dietetic internship and at least 18 credits toward the completion of the master's degree. The dietetic internship is currently granted accreditation by the Accreditation Council for Education in Nutrition and Dietetics (ACEND), 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606-6995, 312-899-0040.

Master of Arts in Nutrition and Dietetics, 36 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
36 credits from			
Research component, 6 credits from			
EDPS	641	Intro Statistical Methods (3)	
	or		
	642	Analysis of Variance (3)	
	or		
HSC	683	Principles of Epidemiology (3)	
	or		
	687	Stat Thry and Meth in Hlth Sci (3)	3
NUTR	697	Research Methods Nut Dietetics (3)	3
			6 crs
Nutrition core, 15 credits from			
NUTR	642	Nutrition Assessment	3
	647	Carbs, Proteins, and Lipids	3
	648	Vitamins and Minerals	3
6 credits from 600-level NUTR courses			6
			15 crs
15 credits from			
Electives inside or outside the Department of Nutrition and Health Science (may include dietetic internship NUTR 680, 681, 682)			15
			36 crs

Master of Science In Nutrition And Dietetics, 36 Credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
36 credits from			
Research component, 12 credits from			

EDPS	641	Intro Statistical Methods (3)	
	or		
	642	Analysis of Variance (3)	
	or		
HSC	683	Principles of Epidemiology (3)	
	or		
	687	Stat Thry & Meth in Hlth Sci (3)	3
NUTR	697	Research Methods Nut Dietetics	3
THES	698	Thesis (1-6)	6
			12 crs

Nutrition Core, 15 credits from			
NUTR	695	Ind Study Nutrition Dietetics	3
	647	Carbs, Proteins, and Lipids	3
	648	Vitamins and Minerals	3
6 credits from 600-level NUTR courses			6
			15 crs

9 credits from Electives inside or outside the Department of Nutrition and Health Science (may include dietetic internship NUTR 680, 681, 682)	9
	36 crs

CERTIFICATE PROGRAM

Certificate in Public Health Education,
14 credits

There is a college moratorium on admission to this degree.

COGNATE AREA FOR DOCTORAL DEGREE PROGRAMS

Health Science Cognate
This 15-credit or 24-credit concentration of courses in health science and related academic disciplines is offered to qualified doctoral students who want a high level of competency in advanced content and program planning, implementation, and evaluation pertaining to health promotion and disease prevention.

HEALTH SCIENCE (HSC)

550 Elementary School Health Programs (3) School's role in promoting health and preventing disease among preschool and elementary school children. Focus on the school health program (instruction, services, and environment), community resources, and health problems common to school children. No regularly scheduled laboratory.
Prerequisite: HSC 160.
Not open to students who have credit in HSC 350.

562 Health Promotion in the Worksite (3) Explores the major components of planning, implementing, and evaluation of health promotion programs at the worksite.
Not open to students who have credit in HSC 462.

563 Current Issues in Administration and Coordination of Health and Physical Education (3) Addresses new and emerging issues in education, school health and physical education. Specific processes and issues associated with best practices in needs assessment, planning, implementing, evaluating school-based programs; coordination of school health/PE policies and programs in accordance with national and state guidelines; and controversial issues associated with health and wellness will be addressed.
Prerequisite: HSC 290 and 295 or permission of the department chairperson.
Not open to students who have credit in HSC 363.

564 Health Education in the Clinical Setting (3) Theories of client education and application of the educational process to individuals and groups in a variety of health-care settings. Emphasizes the multidisciplinary team concept in planning, implementing, and evaluating client education. Application of knowledge of growth and development in meeting learning needs of clients from a variety of ages and intellectual levels.
Not open to students who have credit in HSC 464.

567 Drug Dependence and Abuse (3) The medical, psychological, sociological, and legal dimensions of drug use in the United States. Examines the incidence and prevalence of drug abuse along with the roles played by the school and community in dealing with this health problem.
Not open to students who have credit in HSC 367.

568 Consumer Health Issues (3) Health services and consumer protection organizations. Analysis of fraudulent health practices and nostrums, available health care systems, and health products.
Not open to students who have credit in HSC 368.

569 Health and Aging (3) Dynamics of later life and the aging process with specific emphasis on health. The physiological and behavioral dimensions of the aging process.
Not open to students who have credit in HSC 365.

571 Death and Dying (3) The relationship between death and health with emphasis on physiological, psychological, legal, and medical aspects of death in contemporary America. Roles of individual, family, school, community, and various professionals. Problems in meaning of death, care of the dying, death education, and attitudes toward death.
Prerequisite: HSC 160 or permission of the department chairperson.

572 Women and Health (3) General overview of issues related to women and health: health needs of working women, special nutritional concerns, the gynecological exam, reproductive anatomy and physiology, fertility and infertility, breast problems, wife abuse, and rape.

Not open to students who have credit in HSC 372.

581 Stress Management (3) Aids in understanding the physiological, psychological, and sociological aspects of stress. Students will increase their awareness of the effects of stress, identify personal stress triggers, and develop strategies to minimizing stress throughout their daily lives.

Not open to students who have credit in HSC 381.

582 Environmental Health (3) Physical environment and its relationship to disease causation. Review of environmental health problems and their solutions. Areas of study include air and water pollution, food sanitation, disposal of human excreta and waste, radiation and occupational health problems, and risk.

585 Community Health Methods (4) Provides the skills necessary to become effective community health educators including policy development, advocacy, coalition building, grant writing, cultural competency, fund raising, and community health assessment.

Not open to students who have credit in HSC 388.

589 Public Health Entomology (3) A survey of diseases caused or transmitted by insects and other arthropods. Emphasizes the recognition of medically important arthropods and their biology and control. A weekly three-hour laboratory provides an opportunity to collect and study live and preserved arthropod specimens.

Not open to students who have credit in HSC 389.

595 Methods, Materials, and Curriculum for Teaching Health Education (3) Application of the roles of the health teacher in a school setting. Functions considered include curriculum development including planning for instruction, instructional strategies, assessment; strategies for engaging diverse learners; and acting as a resource person for school health.

Prerequisite: HSC 290, 295, and 563; or by permission of the department chairperson; completion of decision point 2.

Not open to students who have credit in HSC 395.

598 Workshop in Health Science (1-6) Critical contemporary issues in health science. May include consultants, guest lecturers, field trips, and group activities.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned.

669 Paid Health Science Practicum (3-6) A paid work and learning experience in an approved health agency, facility, educational institution, professional organization, or private business for a time commensurate with the credits to be earned. Assignments depend upon students' interests and the resources of participating organizations.

Prerequisite: permission of the department coordinator of practicums and internships.

A total of 6 credits may be earned.

670 Health Science Research Techniques (3) An introduction to the study and practical application of research design as it applies to the health sciences. Emphasizes the necessary skills and competencies required to develop an acceptable research proposal.

671 Research Seminar (2) Review, analysis, and discussion of the literature related to selected topics of current interest in health science. Includes public presentation of research proposal.

Prerequisite: HSC 670.

675 Internship in Health Science (3-6) Assignment to an approved health agency or educational institution for a period of time commensurate with the credits to be earned. The student will make periodic and final reports to an academic advisor and to the administrator of the participating agency.

Prerequisite: permission of the department coordinator of practicums and internships.

A total of 6 credits may be earned.

683 Principles of Epidemiology (3) Introduction to the epidemiological perspective on health and disease. Emphasizes the principles and methods used to describe and evaluate the patterns of contemporary health problems in communities and population subgroups. Methods and research designs used in the investigation of the etiological causes of disease are presented.

686 Health Promotion Program Planning and Evaluation (4) Advanced study of program development, implementation, and evaluation. Includes an in-depth examination of the theories, models, and techniques/methods associated with these processes.

687 Statistical Theory and Methods in Health Science (3) Designed for the application of statistics in health science. Focuses on statistical reasoning and techniques required for the analysis and interpretation of data in health science research.

695 Seminar in Health Science (3-9) Selected literature on current scientific research. Extensive reading in scientific journals. Seminar members report at stated intervals on assigned problems in health science or health science teaching.

A total of 9 credits may be earned.

697 Special Studies in Health Science (1-3) Problems of special interest in health science or in health science teaching. Individual work under the direction of a staff member may involve one or more of the following: experimental work, attendance in undergraduate classes, wide reading, and development of special techniques or skills in scientific investigation.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

NUTRITION (NUTR)

540 Human Nutrition (3) Addresses the principles of nutrition, life cycle nutrition, and the relationship of diet to health and disease.

Not open to students who have credit in NUTR 340, 445, or equivalent.

642 Nutrition Assessment (3) Techniques needed to evaluate nutritional status and plan appropriate nutrition intervention. Includes assessment of dietary intake, body composition, nutrient requirements, and laboratory indices of nutritional status. Development of appropriate nutrition therapies will be addressed.

Prerequisite: permission of the Dietetic Internship Director.

Open only to Dietetic Internship students.

643 Energy Balance, Obesity, and Weight Control (3) In-depth study of the components of energy balance, theories regarding the etiology of obesity, and the impact of obesity and dieting on health. Includes evaluation of current weight control techniques and identification of the best methods for maintaining optimal body weight.

Open only to NUTD majors.

644 Nutrition for Exercise and Sport (3) Examination and integration of the principles of nutrition and energy metabolism as they apply to athletes and active individuals. Dietary recommendations for athletes participating in various sports will be reviewed. Current research in sports nutrition will be discussed.

Prerequisite: NUTR 340.

645 Nutrition and Food Policy (3) Explores the relationships between agricultural practices, diet patterns, food procurement and distribution, nutrition policy formation and implications at the local, state, federal, and international levels with a focus on how food and nutrition policies effects health.

647 Carbohydrates, Proteins, and Lipids (3) Advanced study of carbohydrates, proteins, and lipids in humans. Includes macronutrient metabolism and the relationship of these dietary components to health and disease.

Open only to NUTD majors.

648 Vitamins and Minerals (3) Advanced study of vitamins and minerals in humans including micronutrient metabolism and the relationship of these dietary components to health and disease.

Open only to NUTD majors.

650 Maternal and Infant Nutrition (3) Nutrition during pregnancy, lactation, and infancy. Includes nutrient needs, growth and development, and common complications. Emphasizes reading in current professional publications.

Open only to NUTD majors.

651 Pediatric Nutrition (3) Principles of pediatric nutrition (2 years of age through adolescence). Nutritional needs of children in normal and therapeutic nutrition will be investigated. Current research in pediatric nutrition will be discussed.

Open only to NUTD majors.

652 Geriatric Nutrition (3) Nutritional needs of older adults in consideration of physiological and social changes and research in the field. Review recent literature, evaluate nutrition status of elderly persons in selected situations, and study and evaluate nutrition programs designed for older adults.

Open only to NUTD majors.

660 Advanced Healthcare Administration (3) Identification and application of advanced healthcare, food service, dietary management and marketing concepts: development of leadership skills required of dieticians and upper level managers.

Open only to NUTD majors.

663 Renal Nutrition (3) Examination of the unique physiology of patients with chronic kidney disease and how this unique physiology influences nutrition metabolism. Current nutrition guidelines and research in renal nutrition will be discussed.

Open only to NUTD majors.

680 Supervised Practices in Food Systems Management (3) Application of management principles involved in the acquisition, production, quality control, distribution, and service of quality food in an acute care environment; development of a philosophy of excellence in administrative leadership through supervision of foodservice personnel (360 clock hours).

Prerequisite: permission of the Dietetic Internship Director.

Open only to Dietetic Internship students.

681 Supervised Practice in Nutrition Therapy (3) Application of the healthcare team approach of dietary management to human pathophysiologic status through assessing, planning, documenting, and counseling individuals and educating groups in an acute care environment (520 clock hours).

Prerequisite: permission of the Dietetic Internship Director.

Open only to Dietetic Internship students.

682 Supervised Practice in Community Nutrition/Business/Entrepreneur (3) Application of concepts and methodologies of nutrition and health practices as related to the family and people in the community; provision of education programs for specific populations and the public through community agencies and related business and private organizations (320 clock hours).

Prerequisite: permission of the Dietetic Internship Director.

Open only to Dietetic Internship students.

683 Advanced Practice in Dietetics (3) Advanced directed study in an approved area of board-certified or specialty certification as recognized by the American Dietetic Association. Areas of specialized practice could include sports nutrition, pediatrics, nutrition support, weight management, oncology, geriatrics, or diabetes.

Prerequisite: current registered dietitian status.

Open only to NUTD majors.

695 Independent Study in Nutrition and Dietetics (1-6) Investigation and exploration of a topic in nutrition and dietetics not offered as a class. Requires extensive reading and development of research skills. The student must work with faculty who has expertise in the area of study.

Prerequisite: EDPS 641 or EDPS 642 or HSC 683 or HSC 687 or permission of the department chairperson.

A total of 6 credits may be earned.

Open only to NUTD majors.

696 Seminar in Foods and Nutrition (3) Student presentations and discussions of trends and issues related to food and nutrition. Emphasizes in-depth knowledge of current research findings and policy issues. Basic knowledge of food and nutrition required.

Prerequisite: permission of the department chairperson.

A total of 9 credits may be earned, but no more than 6 in any one semester or term.

Open only to NUTD majors.

697 Research Methods in Nutrition and Dietetics (3) Introduces nutrition and dietetics students to the research process as informed consumers and future investigators. Topics include the research process; health research; study designs appropriate for medical research; research protocols; sampling; questionnaire development; surveys and interviews; and evaluation of research statistics. Includes scientific writing, strategies for conducting literature searches, research ethics, and elements of a research proposal.

Prerequisite: EDPS 641 or EDPS 642 or HSC 683 or HSC 687 or permission of the department chairperson.

Open only to NUTD students or by permission.

SOCIAL WORK

bsu.edu/socwk
North Quadrangle 243, 765-285-1016

MASTER OF SOCIAL WORK (MSW), 36-57 credits

Programs
Students who have an undergraduate degree other than the BSW will need to apply for the two-year MSW program, which requires at least four semesters for a two-year completion.

Students who have a BSW degree and are applying within five years of earning their BSW degree are welcome to apply for the Advanced Standing MSW Program, which requires at least three semesters for a one-year completion.

Admission requirements
Applicants must apply to both the Graduate School and the Department of Social Work. Separate application forms are required by the Graduate School and the department. Applicants are screened according to departmental criteria after they have been admitted by the Graduate School. Social Work does not give credit for life experience.
Application deadlines for the programs are as follows:

-
- The full-time advanced standing program starts every summer semester and the application deadline is February 1.
- The full-time two-year program starts every fall semester and the application deadline is March 1.

Degree requirements
Students must receive a *B* or better in pre-practicum and practicum classes.

Master of Social Work (MSW) Programs
The MSW is offered through the following options:

Advanced Standing Program, 36 credits
This program is designed for exceptional BSW students who have graduated from a CSWE-accredited BSW program. A limited number of students are accepted into this program.

Students in advanced standing can complete the program in one calendar year.

Admission requirements

- Bachelor's degree in social work from a CSWE-accredited program completed within the past five years.
- 3.0 GPA overall and 3.0 GPA in social work.
- Final undergraduate field evaluation.
- Three letters of reference, at least one of which is from a faculty member, and one from a former field instructor.
- Application to the department, as well as to the Graduate School.

Advanced Standing 1-Year Program

Bridge classes for advanced standing program will be taken in the summer semester before beginning the fall semester.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
SOCW	510	Rural Soc Wk	3
	610	Adv Stand Sem	3

Advanced Standing Program (Fall and Spring Semesters)

SOCW	600	Adv Gen Rural Pract 1	3
	601	Adv Gen Rural Pract 2	3
	620	Adv Soc Welf Pol and Progs	3
	640	Soc Wk Pract Eval and Anlys	3
	641	Soc Wk Prog Eval and Anlys	3
	650	Diff Assess Ment Hlth and Adct	3
	660	Soc Wk Field Pract 2	3
	661	Soc Wk Field Pract 3	3
6 credits from			
SOCW	670	Soc Wk Leadshp and Admin (3)	
	671	Soc Wk Pract Oldr Adlts Fam (3)	
	672	Soc Wk Pract Men Hlth and Adct (3)	
	673	Soc Wk Pract in Child Welf (3)	
	674	Soc Wk Pract in Hlth Setngs (3)	6
			36 crs

Two-Year Program, 57 credits

The two-year MSW program is designed for students who have chosen to pursue a graduate social work degree and are prepared to matriculate on a full-time basis.

Admission requirements:

- Bachelor's degree.
- 3.0 GPA (or if undergraduate GPA is below 3.0, GRE General Exam score is required). NOTE: GRE is not required for those students who have completed a graduate degree with a GPA greater than or equal to 3.0.
- Documentation of 30 hours paid or volunteer experience in human services.
- Three letters of reference, at least one of which is from a faculty member, and one from a human service supervisor (the third can be from either).
- Prerequisite courses in social science statistics, human biology, and at least three areas of social sciences, with at least one additional social science course at the 300 or 400 level.
- Application to the department, as well as to the Graduate School.

Two-Year Program

Year 1 (Fall and Spring Semesters)

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
SOCW	500	Soc Wk Pract 1	3
	501	Soc Wk Pract 2	3
	510	Rural Soc Wk	3
	520	Soc Welf Pol and Progs	3
	530	Mic Perspect of HBSE 1	3
	531	Mac Perspect of HBSE 2	3
	540	Res Meth and Desgn	3
	550	Divsty, Opprsn, and Privlge	3
	560	Soc Wk Field Prac 1	3

Year 2 (Fall and Spring Semesters)

SOCW	600	Adv Gen Rural Pract 1	3
	601	Adv Gen Rural Pract 2	3
	620	Adv Soc Welf Pol and Progs	3
	640	Soc Wk Pract Eval and Anlys	3
	641	Soc Wk Prog Eval and Anlys	3
	650	Diff Assess Ment Hlth and Adct	3
	660	Soc Wk Field Pract 2	3
	661	Soc Wk Field Pract 3	3
6 credits from			
SOCW	670	Soc Wk Leadshp and Admin (3)	
	671	Soc Wk Pract Oldr Adlts Fam (3)	
	672	Soc Wk Pract Men Hlth and Adct (3)	
	673	Soc Wk Pract in Child Welf (3)	
	674	Soc Wk Pract in Hlth Setngs (3)	6
			57 crs

SOCIAL WORK (SOCW)

500 Social Work Practice 1 (3) Provides the foundation for social work practice with individuals, families, and groups. It emphasizes basic knowledge, values, critical thinking and practice skills for ethical and effective social work practice.

Parallel: SOCW 510 and 520 and 530.

Open only to students accepted into the two-year Masters in Social Work program.

501 Social Work Practice 2 (3) Builds students' knowledge and experience in assessing, engaging, planning, and executing projects in collaboration with organizations and communities. Facilitates learning and application focusing on

several theories of organizational and community change, leadership, and management styles.

Prerequisite: SOCW 500 and 510 and 520 and 530 with a grade of *B* or better, or permission of the department chairperson.

Parallel: SOCW 531 and 540 and 550 and 560.

Open only to students accepted into the two-year Masters in Social Work program.

510 Rural Social Work (3) Provides students with information about rural communities and exploration of ways in which social work practitioners can serve these communities more effectively.

Parallel: SOCW 500 or 520 or 530 or 610.

Open only to students admitted into the Masters in Social Work program.

520 Social Welfare Policy and Programs (3) A social work foundation course which provides an overview of current social welfare policy and programs within a historical and analytic framework. Students will examine the connections between current policy and programs, their historical development and their impact on vulnerable and marginalized

populations.

Parallel: SOCW 500 and 510 and 530.

Open only to students accepted into the two-year Masters in Social Work program.

530 Micro Perspectives of Human Behavior in the Social Environment 1 (3) Provides the theoretical and knowledge base for social work practice applying a multidimensional framework in the assessment of the ongoing interaction between people and their environments over the life course.

Parallel: SOCW 500 and 510 and 520.

Open only to students accepted into the two-year Masters in Social Work program.

531 Macro Perspectives of Human Behavior in the Social Environment 2 (3) Second course of a two-course sequence that focuses on the interaction between an individual's development and the functioning of groups, organizations, and communities. The goal is to acquire a knowledge base in the generalist social work perspective as it relates to individuals, groups, communities, and organizations.

Prerequisite: SOCW 500 and 510 and 520 and 530 with a grade of *B* or better, or permission of the department chairperson.

Parallel: SOCW 501 and 540 and 550 and 560.

Open only to students accepted into the two-year Masters in Social Work program.

540 Research Methodology and Design (3) Introduces students to the scientific method as a form of knowledge development. Content in this course aims to help students understand how research is used to address social problems and evaluate social work practice and programs. Sample topics to be included are the role of concepts and theory, hypothesis formulation, operationalization, research design, data collection, and report writing.

Prerequisite: SOCW 500 and 510 and 520 and 530 with a grade of *B* or better, or permission of the department chairperson.

Parallel: SOCW 501 and 531 and 550 and 560.

Open only to students accepted into the two-year Masters in Social Work program.

550 Diversity, Oppression, and Privilege (3) This foundation-level course examines institutionalized oppression and its implications for social work practice at the individual, organizational , and community level. Content emphasizes the relationships among power, oppression, and privilege and the consequences of social and economic inequality.

Prerequisite: SOCW 500 and 510 and 520 and 530 with a grade of *B* or better, or permission of the department chairperson.

Parallel: SOCW 501 and 531 and 540 and 560.

Open only to students accepted into the two-year Masters in Social Work program.

560 Social Work Field Practice 1 (3) Offers an educationally focused and professionally supervised practicum placement in an area social service agency at an assigned practicum site. Students take the courses over fall and spring semester, spending approximately 22 hours per week at the site each semester.

Prerequisite: SOCW 500 and 510 and 520 and 530 with a grade of *B* or better, or permission of department chairperson.

Parallel: SOCW 501 and 531 and 540 and 550.

Open only to students accepted into the two-year Masters in Social Work program.

570 Selected Aspects of Social Work Practice (3 or 6) Exploration of social work practice with selected client populations and types of practice with emphasis on individualized study, reporting, and group discussion. Study will focus on social work practice and social service delivery within the identified field.

A total of 6 credits may be earned.

Not open to students who have credit in SOCW 370.

575 Social Welfare Policy with the Elderly (3) The course is concerned with the major social welfare policies that affect the elderly. Focus will be on problems of the elderly and social welfare policies and programs directed at the reduction of such problems.

Prerequisite: SOC 431, 531.

600 Advanced Generalist Rural Practice 1 (3) Provides students with practice models compatible with an ecological systems perspective and with skills for working with individuals, families, and groups in rural communities.

Prerequisite: SOCW 560 or 610 with a grade of *B* or better, or permission of the department chairperson.

Parallel: SOCW 640 and 650 and 660.

Open only to students admitted into the Masters in Social Work program.

601 Advanced Generalist Rural Practice 2 (3) Provides students with practice models compatible with an ecological systems perspective and with skills for working with organizations and communities in rural communities.

Prerequisite: SOCW 660 with a grade of *B* or better, or permission of the department chairperson.

Parallel: SOCW 620 and 641 and 661.

Open only to students admitted into the Masters in Social Work program.

610 Advanced Standing Seminar (3) Serves as a bridge course for students entering into the advanced standing program for the graduate social work degree. Students will review fundamental social work principles to prepare themselves for advanced level graduate social work courses.

Prerequisite: admission into the advanced standing program, or permission of the department chairperson.

Parallel: SOCW 510.

Open only to students admitted into the advanced standing Masters in Social Work program.

620 Advanced Social Welfare Policy and Programs (3) An advanced social work course which will provide students with advanced knowledge of public policies and advocacy for social change in their area of interest. Emerging issues and the impact of current events on populations of interest will be examined. Students will learn the process of creating and changing policy at the agency, community, and legislative level and the effect of interest and advocacy groups.

Prerequisite: SOCW 660 with a grade of *B* or better or permission of the department chairperson.

Parallel: SOCW 601 and 641 and 661.

Open only to students admitted into the Masters in Social Work program.

640 Social Work Practice, Evaluation and Analysis (3) Social work practice evaluation and analysis introduces students to the process of evaluating a social work intervention using the single-subject design research method. Data will be analyzed using statistical software appropriate for single-subject designs.

Prerequisite: SOCW 560 and 610 with a grade of *B* or better, or permission of the department chairperson.

Parallel: SOCW 600 and 650 and 660.

Open only to students admitted into the Masters in Social Work program.

641 Social Work Program, Evaluation and Analysis (3) Social work program evaluation and analysis introduces students to the design, implementation, and analyses of formative and summative evaluations of social work interventions at the programmatic level. Special attention is placed on evaluating the extent to which social programs address issues of social justice, ethics, diversity, and empowerment across diverse populations and settings. A research paper will be completed to fulfill the Graduate School requirement for a research plan (Ball State Graduate Catalog).

Prerequisite: SOCW 660 with a grade of *B* or better, or permission of the department chairperson.

Parallel: SOCW 601 and 620 and 661.

Open only to students admitted into the Masters in Social Work program.

650 Differential Assessment in Mental Health and Addictions (3) Teaches social workers to identify major mental disorders, substance use, and abuse disorders and provides an introduction to social work practice approaches used in the treatment of these disorders.

Prerequisite: SOCW 560 or 610 with a grade of *B* or better, or permission of the department chairperson.

Parallel: SOCW 600 and 640 and 660.

Open only to students admitted into the masters in Social Work program.

660 Social Work Field Practicum 2 (3) Offers an educationally focused and professionally supervised practicum placement in an area social service agency at an assigned practicum site. Students take the courses over fall and spring semester, spending approximately 22 hours per week at the site each semester.

Prerequisite: SOCW 560 or 610 with a grade of *B* or better, or permission of the department chairperson.

Parallel: SOCW 600 and 640 and 650.

Open only to students admitted into the Masters in Social Work program.

661 Social Work Field Practicum 3 (3) Offers an educationally focused and professionally supervised practicum placement in an area social service agency at an assigned practicum site. Students take the courses over fall and spring semesters, spending approximately 22 hours per week at the site each semester.

Prerequisite: SOCW 660 with a grade of *B* or better, or permission of the department chairperson.

Parallel: SOCW 601 and 620 and 641.

Open only to students admitted into the Masters in Social Work program.

670 Social Work Leadership and Administration (3) Examines leadership and the organizational context of social work practice. Focus will be on organizational adaptability and leadership roles at all levels in health and human services organizations. Leadership issues in program evaluation, grant writing, administrative functions, supervision, conflict resolution, inter-organizational relations, and organizational development will be addressed. Topics will be adapted to the specific needs of students with respect to their areas of study with vulnerable populations.

Prerequisite: SOCW 560 or 610 with a grade of *B* or better, or permission of the department chairperson.

Parallel: SOCW 600 or 601 or 620 or 640 or 641 or 650 or 660 or 661.

Open only to students admitted into the Masters in Social Work program.

671 Social Work Practice with Older Adults and Families (3) Focuses on practice with older adults and their families. It examines the physical, psychological and social aspects of

aging and the impact of associated changes on elders and their families. Focuses on building and maintaining support systems which sustain and enhance the functioning and well-being of older adults as well as understanding the service delivery system within which they function.

Prerequisite: SOCW 560 or 610 with a grade of *B* or better, or permission of the department chairperson.

Parallel: SOCW 600 or 601 or 620 or 640 or 641 or 650 or 660 or 661.

Open only to students admitted into the Masters in Social Work program.

672 Social Work Practice in Mental Health and Addictions (3) This advanced social work course prepares students with skills and knowledge to work with individuals and families with mental illness and/or substance disorders. Understanding service delivery systems and evidence-based interventions are emphasized while working with rural populations. Risk assessment tools, intervention models, diagnoses and case planning, program and policy developments, and practices of oppression are examined.

Prerequisite: SOCW 560 or 610 with a grade of *B* or better, or permission of the department chairperson.

Parallel: SOCW 600 or 601 or 620 or 640 or 641 or 650 or 660 or 661.

Open only to students admitted into the Masters in Social Work program.

673 Social Work Practice in Child Welfare (3) This advanced social work course prepares students with skills and knowledge to work with abused and neglected children and families. Understanding service delivery systems and evidence-based interventions are emphasized while working with rural populations. Risk assessment tools, court systems, laws and policies, case planning and racial disparity are examined.

Prerequisite: SOCW 560 or 610 with a grade of *B* or better, or permission of the department chairperson.

Parallel: SOCW 600 or 601 or 620 or 640 or 641 or 650 or 660 or 661.

Open only to students admitted into the Masters in Social Work program.

674 Social Work Practice in Health Care Settings (3) Explores the central contribution of social work to comprehensive health care; social work interventions to assess and ameliorate the psychological effects of illness and disability are included along with emerging roles for social work in prevention and health maintenance.

Prerequisite: SOCW 560 or 610 with a grade of *B* or better, or permission of the department chairperson.

Parallel: SOCW 600 or 601 or 620 or 640 or 641 or 650 or 660 or 661.

Open only to students admitted into the Masters in Social Work program.

SPEECH PATHOLOGY AND AUDIOLOGY

bsu.edu/spaa
Arts and Communications Building 104, 765-285-8161

PROGRAMS

Master of arts (MA) in speech-language pathology and doctor of audiology (AuD)

Admission requirements

Applicants must meet the admission requirements of both the Graduate School and the program in the Department of Speech Pathology and Audiology and must submit transcripts of grades from completed bachelor's degree programs (including all schools attended at the undergraduate or graduate level), three letters of recommendation, and Graduate Record Examination (GRE) scores. Applicants to the doctor of audiology degree program must also submit a statement of purpose and complete an interview.

MASTER OF ARTS IN SPEECH-LANGUAGE PATHOLOGY, 56 credits

Program is accredited by the Council on Academic Accreditation (CAA) in Audiology and Speech-Language Pathology. The master's degree is a basic requirement for employment as a certified and licensed speech-language pathologist. Graduate study in speech-language pathology includes the academic and practicum requirements needed for Indiana School Services Personnel certification, as well as Indiana state licensure and the Certificate of Clinical Competence (CCC) awarded by the American Speech-Language-Hearing Association (ASLHA). To qualify for the state licensure or the CCC, students must pass a national examination and demonstrate adequate clinical skills during a Clinical Fellowship Year (CFY) under supervision by a certified speech-language pathologist.

Admission requirements

- Students must be admitted to both the department and to the Graduate School to enroll as a degree student.
- Minimum grade-point average (GPA) of 3.0. The department receives more qualified applicants than it can accept; meeting or exceeding this average does not guarantee admission.
- Prefer a combined score of 900 on the verbal and quantitative sections of the GRE.
- Three letters of reference (on department forms).
- Transcripts of all previous graduate and undergraduate course work.

- Completed graduate school application.

Degree requirements
The master's program in speech-language pathology has a strong clinical orientation. Extensive practicum work with close supervision is required and is considered to be a critical component of the program.

For students with backgrounds in speech and hearing (usually bachelor's degrees), the program consists of a minimum of 56 credits, including courses in which clinical practicum experience is acquired. For students with an undergraduate major in speech and hearing, the program usually takes six consecutive semesters to complete.

The program requires sufficient clinical practicum hours to meet the ASLHA clinical practicum requirements. A comprehensive examination is also required.

Students with no background in speech and hearing but who have bachelor's degrees must take undergraduate background classes before the regular graduate program can begin. The length of such programs will vary, but they typically take nine consecutive semesters.

Course requirements include the following:

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
SPAA	601	Intro to Research in SPAA	3
	610	Child Language: Birth to Five	3
	611	Child Lang: Schl Age to Adol	3
	620	Diagnostic Clinical Practicum (1-2)	2
	621	Speech Sounds Disorders 2	3
	622	Fluency	2
	624	Diagnostics	3
	625	Voice Disorders	4
	628	Advanced SLP Practicum (2-10)	6
	629	Professional Issues in SPAA	3
	631	AAC	3
	632	Neurogenics 1	3
	633	Neurogenics 2	3
	640	Dysphagia	3
	642	Audiology for SLP	2
	690	Seminar in SLP (1-6)	4
	693	Medical Internship SLP (3-6)	3
	695	School Internship SLP (3-6)	3
			56 crs

Approved graduate courses in other departments may be substituted for SPAA 690.

DOCTOR OF AUDIOLOGY (AuD), 100 credits

The doctor of audiology degree is a post-baccalaureate degree designed to prepare students for the professional practice of audiology. The program is accredited by the Council of Academic Accreditation in Audiology and Speech-Language Pathology (CAA) and meets requirements for Indiana state licensure. The typical program is four calendar years. The first three years include academic study and intense supervised clinical practicum both on and off campus. The final year consists of a 12-month externship at an approved audiologic facility.

Admission requirements
Applicants must meet the admission standards of the Graduate School and the department's AuD admissions committee. The committee's decision is based on several factors, including the applicant's undergraduate transcripts, Graduate Record Examination (GRE) scores, written recommendations, a written statement of purpose, and an interview. Admission to the program is competitive, and meeting admission requirements does not ensure admission. Preference is given to applicants with undergraduate GPA of 3.2 or higher (on a 4.0 scale) and GRE scores of 500 or higher in the verbal and quantitative sections. Per Graduate School requirements, students admitted to the program are required to maintain a 3.2 GPA or higher throughout their AuD program to remain in good academic standing. Applicants admitted to the program may be required to take undergraduate courses to acquire needed background knowledge if any areas of deficiency in undergraduate preparation are identified. Often, any needed deficiency courses can be taken during the AuD program without extending the length of the program; however, credit for these deficiency courses does not apply toward the AuD degree requirements.

Degree requirements
Degree requirements include a total of 100 credits (73 academic credits, 18 clinical practicum credits, and 9 externship credits). Students must accumulate a minimum of 800 practicum hours and complete a 12-month audiologic externship during their final year of study. Students must pass comprehensive examinations and successfully pass a national audiology examination during their last year of on-campus study, prior to externship placement.

Academic and clinical course requirements include:

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
SPAA	562	Neuroanat Spch, Lng, and Hr	3
	601	Intro to Research in SPAA	3
	648	Hearing Anatomy, Phys and Dis	4
	650	Pediatric Audiology	3
	651	Auditory Problems: Adults	3
	652	Psychoacoustics	3
	653	Bal Funct and Assessment	3
	654	Evoked Potential Testing	3
	655	Diagnostic Audiology	3
	656	Speech Perception and HA	4
	657	Advanced Diagnostic Audiology	3
	658	Private Practice Audiology	2
	659	Industrial Audiology	2
	660	Otoacoustic Emissions	3
	661	Cochlear Implants	2
	662	Pharmacology for Audiologists	2
	663	Audiology Counseling	1
	664	Hist and Prof Issues AuD	2
	680	Genetics of Comm Disorders	2

	749	Audiology Practicum (1-6)	18
	766	Hearing Aids 2	3
	770	Clinical Rounds Audiology (1)	3
	771	Clinical Projects Audiology (2 or 3)	2
	793	Audiology Externship (3)	9
SNLN	551	American Sign Language 1	3
Electives			11
			100 crs

SPEECH PATHOLOGY AND AUDIOLOGY (SPAA)

500 Survey of Speech-Language Pathology and Audiology (2) Introduction to speech-language pathology and audiology and a survey of communication disorders. Particularly helpful for persons thinking about careers in communication disorders or in related fields (teaching, nursing, gerontology, etc.).
Not open to students who have credit in SPAA 100.

518 Organic Speech and Language Disorders (3) An overview of speech and language disorders resulting from organic problems. Areas covered include cerebral palsy, aphasia, cleft palate, dysphagia, vocal abuse, head trauma, and laryngectomy.
Prerequisite: SPAA 161; permission of the department chairperson.
Not open to students who have credit in SPAA 418.

519 Speech Pathology and Audiology Practicum (1-4) Students engage in observation and preprofessional participation with clients with various speech, language, and hearing disorders.
Prerequisite: SPAA 210, 311.
A total of 4 credits may be earned.
Not open to students who have 4 credits in SPAA 419.

542 Audiology for Deaf Education (3) Overview of audiology and aural rehabilitation for deaf-education majors.
Prerequisite: SPAA 101; SPCE 240 or 540.
Not open to students who have credit in SPAA 342.
Open only to deaf-education majors or by permission of the department chairperson.

543 Introduction to Audiology (3) Overview of the anatomy and physiology of hearing, hearing disorders, hearing assessment, and hearing screening.
Prerequisite: SPAA 161, 260 or 560.
Not open to students who have credit in SPAA 343.

544 Aural Rehabilitation (3) Overview of aural rehabilitation. Practical implications of various types of hearing losses and appropriate rehabilitative procedures. Amplification, auditory training, speechreading, educational and vocational considerations, and psychosocial implications of hearing loss.
Prerequisite: SPAA 210, 270, 343; or permission of the department chairperson.
Not open to students who have credit in SPAA 344.

545 Clinical Audiology: Orientation and Visitation (2) Orientation to the practice of clinical audiology in various settings and work environments.
Prerequisite: permission of the department chairperson.
Not open to students who have credit in SPAA 345.
Open only to AuD students.

560 Speech Acoustics (3) Introduction to the physical nature of speech and its relationship to speech production and perception.
Prerequisite: SPAA 101, 161.
Not open to students who have credit in SPAA 260.

562 Neuroanatomy and Neurophysiology of Speech, Language, and Hearing (3) Overview of neuroanatomy and neurophysiology with a concentration on neurological mechanisms related to speech, language, and hearing.
Prerequisite: SPAA 161.
Not open to students who have credit in SPAA 361.
Open only to AuD students.

569 Child Language Disorders 1 (3) Introduction to the nature, cause, and treatment of language disorders in children.
Prerequisite: SPAA 270 or 570.
Not open to students who have credit in SPAA 371.
Open only to AuD students.

570 Language Development (3) Overview of language and language development. Consideration of phonology, morphology, syntax, and semantics. Theories of language acquisition. Cultural diversity as related to language.
Not open to students who have credit in SPAA 270.

601 Introduction to Research in Speech Pathology and Audiology (3) Orientation to research in speech-language pathology and audiology. Develops the abilities to read, evaluate, apply, and conduct research. Includes research writing style, critical reading, literature searches, research design, basic statistics, and computer applications.
Prerequisite: permission of the department chairperson.

610 Child Language: Birth to Five (3) Emphasis on profiling the language and communication characteristics of various populations (e.g., neonates, autism spectrum disorders, specific language impairment) of young children seen in SLP. Contemporary assessment and intervention practices are reviewed, pertinent to evaluating the efficacy of communication treatment through participation and quality of life outcomes.
Open only to SPAA graduate students.

611 Child Language: School Age to Adolescent (3) Emphasizes communicative competency at the narrative and conversational levels of children with Language-Learning-Disabilities (LLD). Applied clinical service delivery models (e.g., curriculum-based instructions) are reviewed, pertinent to promoting oral language through literacy-based assessments and interventions. Various reading disorders (e.g., dyslexia) are discussed when attributed to language impairments.

Open only to SPAA graduate students.

620 Diagnostic Clinical Practicum (1-2) Supervised clinical practice in assessment strategies, collecting clinical data, client interviewing, counseling, preparation of reports, and referral procedures.

A total of 4 credits may be earned, but no more than 2 in any one semester or term.

Open only to SPAA grad students.

621 Speech Sounds Disorders 2 (3) Advanced study of pediatric articulation and phonologic disorders. Survey of modern approaches to phonological analysis and intervention techniques emphasizing critical review of the professional literature in its historic context. Overview of single subject designs and accountability procedures.

Open only to SPAA graduate students.

622 Fluency (2) Nature, symptoms, development, diagnosis, and treatment of dysfluency. Overview of evidence based practices related to assessment and treatment of dysfluency disorders. Overview of relevant evidence related to theoretical constructs underlying the concepts of fluency and dysfluency.

Open only to SPAA graduate students.

624 Diagnosis and Appraisal 2 (3) Emphasis on the evaluation of communication disorders across the life span with diverse populations. Psychometric properties of norm-referenced and criterion-referenced tests are reviewed in relationship to assessment practices in SLP. Alternative assessment models are introduced, which provide functional and meaningful data for the diagnosis and treatment of communication disorders.

Open only to SPAA graduate students.

625 Voice and Resonance Disorders (4) Assessment and therapy strategies for voice and resonance disorders including functional, organic, neurologic, larynegectomy, velopharyngeal insufficiency, and cleft lip and palate are addressed. Description and treatment strategies involving criterion-referenced, instrumented assessments, and introduction to videostroboscopy are included.

Open only to SPAA graduate students.

628 Advanced Clinical Practicum (2) Students diagnose and treat children and adults with speech and/or language disorders. Ordinarily a total of 6 credits is earned during three enrollments.

A total of 10 credits may be earned, but no more than 2 in any one semester or term.

Open only to SPAA graduate students.

629 Professional Issues in Speech-Language Pathology (3) Overview of professional issues facing clinicians. Examines ethical, multicultural, and service delivery issues in a variety of work settings with clients across the lifespan. Also reviews certification, licensure, and health care and education legislation and regulation. Employment and internship opportunities and issues are discussed.

Open only to SPAA graduate students.

631 Augmentative/Alternative Communication and the Nonvocal Individual (3) Needs assessment and communication evaluation considerations; selection and development of appropriate and effective augmentative/alternative communication systems for nonvocal people including communication boards, electronic instrumentation, etc. Program development for individual needs and abilities of clients.

632 Neurogenic Disorders 1 (3) Advanced study of the central nervous system and its relationship to the causes, assessment and management of aphasia, right hemisphere dysfunction, and associated motor speech disorders.

Open only to SPAA graduate students.

633 Neurogenic Disorders 2 (3) Advanced study of the nature, causes, assessment, and management of dementia and traumatic brain injuries. Includes the study of normal aging and cognitive functions.

Open only to SPAA graduate students.

640 Dysphagia (3) Introduction to dysphagia with emphasis on knowledge needed to evaluate and treat adults with swallowing disorders. Current trends and issues will be studied. Normal and disordered swallowing across lifespan examined. Clinical and ethical decision making will be discussed.

Open only to SPAA graduate students.

642 Audiology for Speech-Language Pathologists (2) Overview of audiology oriented towards the needs of speech-language pathologists. Hearing screening and follow-up. Audiogram interpretation. Hearing aids and FM systems. Cochlear implants. Central auditory processing problems: symptoms and management.

Open only to SPAA graduate students.

648 Hearing Anatomy, Physiology, and Disorders (4) Graduate-level study of the anatomy and physiology of the hearing mechanism and of conductive, sensorineural, and central hearing disorders.

649 Clinical Orientation and Practicum in Audiology (2-10) Orientation to clinical practicum in audiology. Practicum experience in a variety of diagnostic and habilitative procedures.

Prerequisite: SPAA 343, 344, and concurrent or prior enrollment in SPAA 655; permission of the department chairperson.

A total of 10 credits may be earned.

650 Pediatric Audiology (3) Topics specific to the nature and management of auditory problems in children. Development of the auditory system. Genetics of hearing loss. Syndromes associated with hearing loss. Educational audiology.

651 Auditory Problems and Management in Adults (3) Topics specific to the nature and management of auditory problems in adults. Tinnitus, cerumen management, assistive devices, adult and aural rehabilitation and hearing aid orientation, self-assessment scales, consumer groups and advocacy.

652 Psychoacoustics, Instrumentation and Calibration (3) Psychoacoustic methods and research, with clinical applications in audiology. Calibration of audiological equipment.

653 Balance Function and Assessment (3) Anatomy and physiology of balance. Assessment of balance function through electronystagmography, evoked potentials, and other available measures. Diagnosis and treatment of balance disorders as related to the audiology scope of practice.

Prerequisite: SPAA 161, 343; permission of the department chairperson.

654 Evoked Potential Testing (3) Nature, use, administration, and interpretation of evoked potentials. Relationship of evoked potentials to other diagnostic procedures.

Prerequisite: SPAA 161, 343, 648; permission of the department chairperson.

655 Diagnostic Audiology (3) Standard audiological testing and interpretation. Masking. Speech audiometry. Functional disorders: symptoms and diagnostic procedures. Immittance testing and interpretation.

656 Speech Perception and Hearing Aids (4) Hearing loss and speech perception as related to amplification. Overview of hearing aids.

Prerequisite: SPAA 655.

657 Advanced Diagnostic Audiology (3) Site-of-lesion tests other than immittance, evoked potentials, and electronystagmography. Central auditory processing disorders: nature, diagnosis, and management.

Prerequisite: SPAA 655.

658 Private Practice and Related Professional Issues (2) Consideration of issues related to private practice audiology. Includes information on how the history of audiology and hearing aid dispensing has affected the profession. Other professional issues, such as certification and licensing, will be discussed.

659 Industrial Audiology and Noise-Induced Hearing Loss (2) Audiologic practice in industrial settings, noise-induced hearing loss, and industrial sound surveys.

Open only to students enrolled in the AuD program.

660 Otoacoustic Emissions (3) Nature, use, administration, and interpretation of otoacoustic emissions. Relationships of otoacoustic emissions to other diagnostic procedures.

Prerequisite: SPAA 648 or permission of the department chairperson.

661 Cochlear Implants (2) Cochlear implants, including candidacy, devices, speech perception and production, aural rehabilitation, and educational implications. Includes brainstem implants.

Prerequisite: SPAA 648, 650, 654, 656, 657, or permission of the department chairperson.

662 Pharmacology for Audiologists (2) Pharmacology as related to the practice of audiology, including ototoxic agents and interdrug reactions.

Prerequisite: SPAA 648, 655.

663 Counseling Issues in Audiologic Practice (1) Counseling issues related to the practice of audiology.

Prerequisite: SPAA 655.

664 History and Issues of the Profession of Audiology (2) History of the profession of audiology. Past, present, and future issues facing the profession.

680 Genetics of Communication Disorders (2) Current issues in the genetics of communication disorders. Introduction to cytogenetics, mutation and chromosomal aberrations, traditional and nontraditional inheritance, development, pedigree analysis, genetic testing, genetic counseling, ethical considerations, and the latest on clinical characteristics and molecular genetics of syndromic and non-syndromic communication disorders.

Open only to audiology or speech language pathology graduate students.

690 Seminar in Speech-Language Pathology (1-6) Seminars will be offered on selected topics in speech-language pathology. Topics to be covered will be identified in advance for each seminar offered.

Prerequisite: permission of the department chairperson.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

691 Seminar in Audiology (1-6) Offered on selected topics in audiology. Topics to be covered will be identified in advance for each offering.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned.

692 Directed Study in Speech-Language Pathology and Audiology (1-4) Individual directed study in speech-language pathology and audiology.

Prerequisite: permission of the department chairperson.

A total of 9 credits may be earned, but no more than 4 in any one semester or term.

693 Internship in Speech Pathology or Audiology (3-6) On-the-job experience in such places as hospitals, rehabilitation centers, private practices, nursing homes, community speech and hearing centers, etc.

Prerequisite: permission of the department chairperson.
A total of 9 credits may be earned, but no more than 6 in any one semester or term.

695 School Internship in Speech-Language Pathology or Audiology (3-6) On-the-job experience in a school setting.
Prerequisite: permission of the department chairperson.
A total of 9 credits may be earned, but no more than 6 in any one semester or term.

749 Audiology Practicum (1-6) Supervised clinical practicum in audiology on and off campus. Experience in a variety of diagnostic and rehabilitative procedures.
Prerequisite or parallel: SPAA 343, 655; permission of the department chairperson.
A total of 30 credits may be earned, but no more than 6 in any one semester or term.
Open only to AuD students.

766 Hearing Aids 2 (3) Advanced course on hearing aids, including middle ear implants.
Prerequisite: SPAA 656.

770 Grand Rounds in Audiology (1) An in-depth review and analysis of a variety of clinical cases and topics related to the professional practice of audiology.
A total of 3 credits may be earned, but no more than 1 in any one semester or term.
Open only to students enrolled in the AuD program.

771 Audiology Doctoral Project (2 or 3) Audiology doctoral project on approved topic.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.
Open only to students enrolled in the AuD program.

793 Audiology Externship (3) Full-time, 12-month externship in an approved audiologic facility under the joint supervision of the university audiology faculty and the externship site professional staff. Externship may be completed at one or more sites. Taken for three consecutive semesters.
Prerequisite: permission of the department chairperson.
A total of 15 credits may be earned, but no more than 3 in any one semester or term.
Open only to students enrolled in the AuD program.

COLLEGE OF SCIENCES AND HUMANITIES

bsu.edu/sh
North Quadrangle Building 193, 765-285-1042
Dean of the College: Maureen McCarthy
Associate Deans: Kevin Smith and Clare Chatot

INTERDEPARTMENTAL PROGRAMS

SCIENCE

MASTER OF ARTS IN SCIENCE EDUCATION, 30-36 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Common core, 3 credits			
SCI	699	Res Meth in Sci Ed	3
Complete one concentration:			
Concentration 1: High school, 27 credits			
Approved science education courses			6
SCI	690	Workshop in Science Education (1-12)	0-9
		and/or	
Approved course work in one or more of the following content areas: biology, chemistry, earth/space science (geology and/or astronomy), environmental science, or physics			9-18
RES	697	Research Paper (1-3)	
		or	
CRPR	698	Creative Project (3 or 6)	3
			30 crs
Concentration 2: Elementary/middle school, 27 credits			
Approved science education courses			6
SCI	690	Workshop in Science Education (1-12)	0-9
		and/or	
Approved course work in at least three of the following content areas: biology, chemistry, earth/space science (geology and/or astronomy), environmental science, or physics			9-18
RES	697	Research Paper (1-3)	
		or	
CRPR	698	Creative Project (3 or 6)	3
			30 crs

The student will conduct science education research and write a research paper (RES 697) or do a creative project (CRPR 698) on a science education topic. The research paper or creative project earns a total of 3 credits.

Concentration 3: Initial licensure in secondary education in a science or mathematics discipline, 33 credits

Admission requirements
Applicants must be seeking initial licensure; have an undergraduate major in an appropriate mathematics or science discipline approved by the department(s) of the licensure areas(s); and, be a member of a teaching fellow cohort.

Approved courses in science education or mathematics education			6
Approved course work in one or more of the following content pedagogy areas: biology, chemistry, mathematics, or physics			9
Approved course work in each of the following areas: educational foundations, multicultural education, educational psychology, educational reading, secondary education			12
EDSE	560	Student Tchng: Sec Schl (3-7)	6
			36 crs
			30-36 crs

DOCTORAL PROGRAMS

DOCTOR OF EDUCATION (EdD) IN SCIENCE EDUCATION, 90 credits

This degree prepares graduates to assume positions as science education specialists in a variety of settings. Concentration 1 is for individuals who will work at the university level as K-12 science teacher preparation experts. Concentration 2 is for individuals who will work as science content faculty in 2 or 4-year colleges and universities where high priority is

placed on teaching. The major consists of course work in science content, science education, and research methodologies. A dissertation is written in either science or science education in the student's major science field. A teaching internship, a required part of the program for both concentrations, allows candidates to acquire experience in the techniques of conventional as well as technology-oriented systems instruction. The program requires a minimum of 90 credits of approved graduate work beyond the bachelor's degree. Science fields include: biology, chemistry, geological sciences, natural resources and environmental management, and physics and astronomy.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*

Concentration 1: For Graduate and Undergraduate Teacher Preparation Institutions Science Education Faculty

Science Content (2 or more fields)			30
Science Education			
SCI	690	Workshop in Science Education (1-12)	
	692	Top in Hist and Nature of Sci (3)	
	695	Adv Teach Meth in Sci (3-6)	
	696	Curr Iss in Sci Ed (3-6)	
	790	Intern in Sci Ed (1-4)	18
Research Methodologies			
EDPS	641	Intro Statistical Methods	3
EDST	650	Intro to Qual Res	3
ID	705	Research Colloquium (1-3)	2
SCI	699	Res Meth in Sci Ed	3
6 credits from			
EDPS	640	Research Methods (3)	
	642	Analysis of Variance (3)	
	741	Applied Regression Analysis (3)	
	742	Multivariate Statistics (3)	
	743	Factor Analysis (3)	
EDST	660	Ethno Res in Ed (3)	
	735	Seminar in Educational Studies (3)	6
			17 crs
Education			
EDCU	601	Princ and Proc of Curr Dev	3
EDFO	631	Philosophy of Education	3
	641	History of American Education	3
6 credits from			
EDCU	610	Elem Schl Curriculum (3)	
	or		
	620	Se School Curriculum (3)	
	or		
	630	Jr Hi and Mid School Curr (3)	
EDFO	621	Education and Ethics (3)	
EDPS	600	Adv Educational Psych (3)	
	606	Learn Achievement Motivation (3)	
	628	Adolescent Development (3)	
PSYS	616	Perception and Cognition (3)	
	618	Advanced Cognitive Processes (3)	6
			15 crs
Dissertation/Record of Study			
DISS	799	Doctoral Dissertation (1-24)	10
			90 crs

Concentration 2: For College (Community College/Junior College/Small Liberal Arts College) Science Faculty

Science Content			
(at least 24 credits in one field)			36
Science Education			
SCI	690	Workshop in Science Education (1-12)	
	692	Top in Hist and Nature of Sci (3)	
	695	Adv Teach Meth in Sci (3-6)	
	696	Curr Iss in Sci Ed (3-6)	
	790	Intern in Sci Ed (1-4)	15
Research Methodologies			
ID	705	Research Colloquium (1-3)	2
SCI	699	Res Meth in Sci Ed	3
9 credits from			
BIO	548	Biometry (3)	
CHEM	500	Chemical Communications (1)	
	and		
	696	Chemistry Research Methods (2)	
EDPS	641	Intro Statistical Methods (3)	
	642	Analysis of Variance (3)	
	742	Multivariate Statistics (3)	
	743	Factor Analysis (3)	
EDST	660	Ethno Res in Ed (3)	
	735	Seminar in Educational Studies (3)	
GEOL	685	Geology Research Methods (3)	
NREM	572	Applied Research Methods (3)	
PHYC	681	Res and Meth of Physics Res (3)	9
			14 crs
Education			
EDHI	609	Prpng for Prof: Tch Hi Ed	3
	611	Tchng and Curr Issues in Hi Ed	3
9 credits from			
EDAC	634	The Adult as a Learner (3)	
	635	Strategies for Teaching Adults (3)	

	638	Prog Planning in Comm Ad Ed (3)	
EDFO	631	Philosophy of Education (3)	
	641	History of American Education (3)	
EDHI	601	Thyrs Coll Stud Dev: Hi Ed App (3)	
	602	The American College Student (3)	
EDPS	600	Adv Educational Psych (3)	
	606	Learn Achievement Motivation (3)	
	629	Adult Development (3)	9
			15 crs

Dissertation/Record of Study

DISS	799	Doctoral Dissertation (1-24)	10
			90 crs

DOCTOR OF PHILOSOPHY (PhD) IN ENVIRONMENTAL SCIENCE, 90 credits

This degree prepares graduates for careers in post-secondary education, where research is among the professional expectations, and for careers in scientific research in the public and private sectors. Unique to this degree is its interdisciplinary focus. Each student's program originates in a major discipline, is complemented by course work from other scientific disciplines, and culminates in a dissertation that draws from more than one discipline. Each student will participate in an interdisciplinary research seminar every semester in residence and will present his/her research at several meetings of the seminar. Students develop the skills necessary to pursue complex questions in environmental science that require an interdisciplinary approach. Applicants must meet the admission requirements of the Graduate School.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Environmental science core, 21 credits			
BIO	656	Ecosystem Ecology	3
	657	Multiv Analy and Envir Data	3
CHEM	626	Advanced Analytical Chemistry	3
	627	Analy Chem in Env Sci	3
GEOL	660	Seminar in Hydrogeology	3
	670	Seminar in Envir Geochemistry	3
ID	705	Research Colloquium (1-3)	3
			21 crs
DISS	799	Doctoral Dissertation (1-24)	10
SCI	790	Intern in Sci Ed (1-4)	3
Directed electives			26
Approved graduate transfer credit			30
			90 crs

SCIENCE (SCI)

501 Electron and Confocal Microscopy (3) Introduction to the techniques and theory of electron and confocal microscopy. Emphasizes basic procedures employed in specimen preparation, production of micrographs and operation of the transmission, scanning, and confocal microscopes.

690 Workshop in Science Education (1-12) Practical experience with teaching science at a specific level (early childhood, elementary, middle, secondary, or higher education) and/or specific topic (e.g., chemistry or geology). May be repeated for a different level and/or topic.

Prerequisite: teaching experience or certification; or permission of the instructor.

A total of 24 credits may be earned, but no more than 12 in any one semester or term.

692 Topics in the History and Nature of Science (3) Examination of the historical development of science from a wide variety of perspectives. Roles of scientists, society, culture, and gender in the creation and validation of scientific knowledge. Implications of the Nature of Science for science teaching and learning.

695 Advanced Teaching Methods in Science (3-6) Recent developments in science teaching at a specific level (early childhood, elementary, middle, secondary, or higher education) and/or specific topic (e.g., biology or physics). May be repeated for a different level and/or topic.

Prerequisite: teaching experience or certification; or permission of the instructor.

A total of 6 credits may be earned.

696 Current Issues in Science Education (3-6) Current research and theory of teaching science at a specific level (early childhood, elementary, middle, secondary, or higher education) and/or specific science topic (e.g., chemistry or geology). May be repeated for a different level and/or topic.

Prerequisite: permission of the instructor.

A total of 6 credits may be earned.

699 Research Methodology in Science Education (3) Identification of research problems in science and science education. Introduction to types of research, research design, and grant-writing. Review of literature pertinent to a special topic of student interest. Development of a research proposal.

Prerequisite: permission of the department chairperson.

790 Internship in Science Education (1-4) Supervised experience in instruction of science or science education courses.

Prerequisite: permission of the department chairperson.

A total of 4 credits may be earned.

SOCIAL STUDIES

bsu.edu/history
Director of Social Studies Education: Sarah Drake Brown

MASTER OF ARTS IN SOCIAL SCIENCE, 30 credits

There is a college moratorium on admission to this degree.

ANTHROPOLOGY

bsu.edu/anthropology
Burkhardt Building 315, 765-285-1575

PROGRAMS

Master of arts (MA) in anthropology

Admission requirements
Applicants must meet the admission requirements of the Graduate School, meet a cumulative undergraduate minimum GPA of 2.75 on a 4.0 scale, and have the approval of the departmental graduate committee. The graduate committee bases its decisions on the applicant's undergraduate transcripts; Graduate Record Examination (GRE) scores; written recommendations; and a 300-500 word narrative detailing relevant background, reasons for wishing to undertake graduate study in this department, and the relationship of such study to long-term goals and interests in anthropology. Applicants whose undergraduate majors are not anthropology or closely related subjects may be required to complete undergraduate courses to acquire background knowledge. Credit for these courses does not apply to degree requirements. It is suggested that students wishing to focus on archaeology participate in a summer field school or have equivalent experience before beginning studies.

MASTER OF ARTS IN ANTHROPOLOGY, 32-38 credits

Degree requirements
The minimum requirement for the MA in anthropology is 32 graduate credits. In keeping with the principle that students should have a broad knowledge of anthropology, core courses covering the three major subdisciplines, archaeology, biological anthropology, and cultural anthropology are required; this requirement can be waived only by the graduate committee. In order for students to acquire an understanding of anthropology as a profession and a background in anthropological thought, ANTH 600: Graduate Studies Seminar and a course emphasizing method and/or theory are also required. At least 9 credits of electives must be in student's focus area (archaeology, biological, or cultural) excluding ANTH 540, 690, and 696. Only 3 credits from ANTH 545 and 550 will count towards these electives. ANTH 532 is required for students interested in Midwest archaeology. A required 6-credit thesis or 6-credit internship (non-thesis concentration) permits students to specialize and acquire skills in research methods and techniques. A public thesis defense presentation is required. The completed thesis document is subject to approval by the committee following a public oral defense.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Thesis concentration, 32 credits			
ANTH	600	Graduate Studies Seminar (1)	2
	601	Scope of Cultural Anthropology	3
	603	Scope of Archaeology	3
	605	Scope of Bio Anth	3
THES	698	Thesis (1-6)	6
Method and/or theory course approved by graduate committee			3
ANTH courses in research focus area			9
ANTH or other electives approved by graduate advisor			3
			32 crs
Non-thesis concentration, 38 credits			
ANTH	600	Graduate Studies Seminar (1)	2
	601	Scope of Cultural Anthropology	3
	603	Scope of Archaeology	3
	605	Scope of Bio Anth	3
	696	Intern in Anth (3-6)	6
Method and/or theory approved by graduate committee			3
ANTH courses in research focus area			9
ANTH or other electives approved by graduate advisor			9

38 crs

MINOR IN ANTHROPOLOGY, 9 credits

Requires a minimum of 9 credits of approved anthropology courses. Students wishing to pursue a minor should contact the department chairperson before taking any anthropology courses.

CERTIFICATE PROGRAM

Certificate in Interpretive Ethnography, 15 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
ANTH	601	Scope of Cultural Anthropology	3
3 credits from			
ANTH	550	Ethnographic Field School (3-12)	
	559	Ethnographic Methods (3)	
	695	Res Meths in Anth (3)	3
9 credits from			
ANTH	550	Ethnographic Field School (3)	
COMM	605	Qual Research in Comm (3)	
EDEL	676	Research in Elementary Educ (3)	
EDST	650	Intro to Qual Res (3)	
	660	Ethno Res in Ed (3)	
PSYS	595	Special Topics in Psychology (3)	
RELS	503	Reading and Special Study (3)	
SOC	681	Survey Research Methods (3)	
	683	Qualitative Research Methods (3)	9
			15 crs

ANTHROPOLOGY (ANTH)

501 History of Method and Theory in Anthropology (3) Surveys the major ideas and issues of anthropology over time. Includes methods and theories from archaeology, physical anthropology, linguistics, and cultural anthropology. For students without a strong undergraduate background in anthropology.

Not open to students who have credit in ANTH 301.

505 Topics in Biological Anthropology (3) Covers a variety of advanced current and special topics in biological anthropology, depending on students' interests and capacities. May be repeated for different topics.

Prerequisite: an introductory biological anthropology course or permission of the instructor.

A total of 9 credits may be earned, but no more than 3 in any one semester or term.

506 The Anthropology of Physical Growth and Development (3) Children's physical growth and development, its regulation, variation, and assessment in different times and places.

Prerequisite: an introductory physical anthropology course.

Not open to students who have credit in ANTH 406.

507 Applied Anthropology (3) Investigates the problems and work that engage the attention of anthropologists outside the university setting. Examination of new skills needed to supplement those traditionally taught in anthropology.

Not open to students who have credit in ANTH 307.

509 Digital Anthropology (3) Includes a survey of anthropological theory and methods related to digital anthropology. Students will learn a historical overview of digital anthropology. Focuses on 1) virtual worlds, online games, and social networking sites; 2) ethnographic approaches, including questions of theory and method; and 3) theorizing indexical relationships between the virtual and actual. Students will collectively explore and identify other facets of digital anthropology and of doing ethnographic work digitally.

512 Ecological Dimensions of Culture (3) Explores the system of relationships between any human population and its environment, focusing on cultural behavior. Uses studies from ancient to modern times and models and theories from ecology and anthropology; considers both applied and theoretical perspectives.

Prerequisite: an introductory cultural anthropology course or permission of the instructor.

Not open to students who have credit in ANTH 312.

516 Human Osteology (3) Laboratory and lecture dealing with the human skeleton including identification of whole and fragmentary bones and the assessment of the age, stature, sex, and other traits of a skeleton as applied to paleodemography, paleopathology, and forensic problems.

Prerequisite: permission of the instructor.

Not open to students who have credit in ANTH 416.

517 Forensic Anthropology (3) Includes a survey of the anthropological methods and techniques used to recover and identify human skeletal remains in criminal and disaster investigations. Concepts and methods from other disciplines including anatomy, botany, and entomology are discussed. Topics will include skeletal identification, time since death, causes of death, pathology, and quantitative analysis.

521 Social Organization (3) Provides a systematic cross-cultural analysis of human organizations from kinship-based societies to modern bureaucracies. Using an evolutionary approach, provides both theoretical perspectives and applied understanding.

Prerequisite: ANTH 101, 111; or permission of the instructor.

Not open to students who have credit in ANTH 321.

525 Evolutionary Adaptation and Human Diversity (3) Human biological variation in the contemporary world:

examination of its distribution, inheritance, development, and adaptiveness.

Prerequisite: an introductory biological anthropology course or permission of the instructor.

Not open to students who have credit in ANTH 405.

527 Culture and Medicine (3) Focuses on conceptions of health and illness from a cross-cultural perspective.

Not open to students who have credit in ANTH 427.

529 Laboratory Methods in Material Culture (3) Addresses artifacts as reflections of culture. Focuses on ethnoarchaeology and experimental archaeology, as well as the integration of research design, recovery, identification, and laboratory analysis of artifacts from archaeological sites.

Prerequisite: ANTH 103 or 204 of permission of the instructor.

Not open to students who have credit in ANTH 429.

530 Topics in Native North American Cultures (3) Topics in Native American cultures or study of Native American cultures of a particular region. May be repeated for different topics.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

Not open to students who have credit in an undergraduate course covering the same topic.

531 Native Americans of North America (3) Survey of cultures of North American Native Americans emphasizing their economic, socio-political, and religious institutions.

Not open to students who have credit in ANTH 331.

532 Native Americans of the Great Lakes (3) In-depth study of selected Native American cultures indigenous to the Great Lakes region from the time of European contact to the contemporary period. Required for students with a research focus in Midwestern archaeology.

Not open to students who have credit in ANTH 332.

534 Midwestern Archaeology (3) Prehistoric cultural developments in the Midwest traced through the Paleoindian, Archaic, Woodland, and Mississippian periods and focused on the nature and questions of archaeological research in the region.

Prerequisite: ANTH 103 (or equivalent), graduate standing, or permission of the instructor.

Not open to students who have credit in ANTH 434.

537 Contemporary Problems of the Native Americans (3) Detailed study of current issues facing Native Americans. Particular issues facing tribes in specific regions and general issues of a pan-Native American nature will be covered.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

Not open to students who have credit in the corresponding undergraduate course in the same region.

540 Anthropological Field Trip (3-6) Exposes students to lifeways of groups outside mainstream society whose lives and communities are significantly shaped by the policies of the larger society. Can be used for trips in various subfields of anthropology when appropriate.

Prerequisite: permission of the instructor.

A total of 6 credits may be earned. No credits will count towards the research focus area.

541 Anthropology of Gender (3) Examines how gender, culture, and power intersect in different places around the globe. Course topics include the politics of reproduction, globalization and migration, violence, popular culture, and intersectionality.

Not open to students who have credit in ANTH 441.

543 Historical Archaeology of Eastern United States (3) Explores primary historical processes and archaeologically significant trends in material culture that have shaped modern life since AD 1500.

Not open to students who have credit in ANTH 343.

545 Archaeological Field School (3-6) Provides the practical application of archaeological methods, techniques, and strategies in a field setting. Participation in a supervised investigation of a formal archaeological problem at an actual archaeological site or at an experimental site. Only three (3) credits will count towards the research focus area electives.

Prerequisite: permission of the instructor.

A total of 6 credits may be earned.

550 Ethnographic Field School (3-12) An intensive immersion in the methods of field research in cultural anthropology. Emphasizes problem formulation, observation, interviewing, writing, and interpretation of field data. Field schools are intended to provide specific skills that result in an ethnographic report. Only three (3) credits will count towards the research focus area electives.

Prerequisite: permission of the instructor.

A total of 12 credits may be earned.

551 Witchcraft, Magic, and Religion (3) Anthropological study of humankind's age-old concern with life, death, sickness, and the unknown. Discusses human attempts to control life through supernatural beings, prayer, sacrifice, and techniques of magic and witchcraft.

Not open to students who have credit in ANTH 451.

552 Anthropology of Technology (3) Reviews the anthropological literature on technology, focusing on cultural and comparative aspects of technology. This subfield's theoretical base and research methods will also be assessed.

Not open to students who have credit in ANTH 452.

555 Primatology (3) Comparative survey of nonhuman primates, their biology and behavior.

Prerequisite: permission of the instructor.

Not open to students who have credit in ANTH 455.

557 Applied Archaeology (3) Special problems of contract, conservation, and public archaeology, including laws and guidelines, relations with governmental and private agencies, research design and proposals, field and laboratory methods, and curation.

Not open to students who have credit in ANTH 457.

559 Ethnographic Methods (3) Develops the ability to conduct and comprehend ethnographic research. Includes research design, data collection, analysis, reporting, basic statistics, and computer use. Emphasizes both quantitative and qualitative techniques for basic and applied research.

Prerequisite: 15 credits of ANTH courses or permission of the instructor.

Not open to students who have credit in ANTH 459.

560 Special Topics in Cultural Anthropology (3-6) Detailed analysis of a special problem in cultural anthropology such as culture and global warming, anthropology and architecture, urban anthropology, or anthropology and food. May be repeated for different topics.

A total of 6 credits may be earned.

Not open to students who have credit in an undergraduate course covering the same topic.

561 Special Topics in Archaeology (3-6) Detailed analysis of a special problem in archaeology such as lithic analysis or science in archaeology. May be repeated for different topics.

A total of 6 credits may be earned.

Not open to students who have credit in an undergraduate course covering the same topic.

562 Special Topics in Biological Anthropology (3-6) Detailed analysis of a special problem in biological anthropology such as paleopathology or reproduction and culture. May be repeated for different topics.

A total of *6* credits may be earned.

Not open to students who have credit in an undergraduate course covering the same topic.

563 Theory and Method in Historical Archaeology (3) Presents a detailed summary of theory and methods used by historical archaeologists, including social theory, historical methods, and archaeological analysis methods.

Not open to students who have credit in ANTH 463.

564 European Prehistory (3) Prehistory of Europe from the Paleolithic through the Iron Age emphasizing the regions north and west of the classical world.

Not open to students who have credit in ANTH 364.

570 Topics in Regional Ethnography (3) Considers the culture of a selected geographic area not covered by regular courses. May be repeated for different areas.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

Not open to students who have credit in an undergraduate course on the same geographic area.

571 Ethnohistory (3) Methods and theories of ethnohistory introduced by emphasizing how culture and history intersect with race, ethnicity, gender, class, and sexuality; a research-intensive class.

Not open to students who have credit in ANTH 471.

577 Topics in Museum Operations (3) Introduces various aspects of museum operations, such as organization, financing, curation, exhibits, public interpretation, and conservation of collections. Emphasizes ethnographic and archaeological collections. May be repeated for different topics.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

Not open to students who have credit in ANTH 377.

580 Topics in Archaeology (3) Surveys archaeology of a selected region (e.g., Southwest) or focuses on a specialized area. May be repeated for different topics.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

581 Culture, Economy, and Development (3) Concerned with a culturally embedded view of allocation, conversion, production, distribution, and consumption of resources. Emphasizes economic development in third- and fourth-world countries both from theoretical and applied perspectives.

Not open to students who have credit in ANTH 481.

582 Native Americans of the American Southwest (3) Surveys prehistoric, historic, and contemporary cultures of selected Southwest Native American groups. Emphasizes culture-specific solutions to problems perceived in their relationship to their natural and social environments.

Not open to students who have credit in ANTH 482.

590 Topics in Cultural Change (3) Surveys from various perspectives the major concepts and processes of culture change, including globalization and its effects on cultures and individuals.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

Not open to students who have credit in ANTH 460.

600 Graduate Studies Seminar (1) Introduction to the nature, purpose, and practice of scholarly inquiry in academic and applied environments. Includes exposure to major literature and research resources in the field, familiarization with professional culture and faculty resources, individual program design, and thesis planning.

A total of 2 credits may be earned, but no more than 1 in any one semester or term.

601 Scope of Cultural Anthropology (3) Overview of theory in cultural anthropology and its application to various conditions of recent and contemporary human society and culture.

Prerequisite: undergraduate anthropology major or minor, admission to anthropology graduate program or permission of the instructor.

603 Scope of Archaeology (3) Overview of current archaeological research foci and interpretive frameworks in their historical context. Considers the relationship of archaeology to the other subdisciplines of anthropology and broader anthropological concerns.

Prerequisite: undergraduate anthropology major or minor, admission to anthropology graduate program or permission of the instructor.

605 Scope of Biological Anthropology (3) Survey of the basic methods and theories of biological anthropology.

Prerequisite: undergraduate anthropology major or minor, admission to anthropology graduate program or permission of the instructor.

690 Independent Study in Anthropology (1-3) Topics to be chosen and investigated in consultation with the instructor with special competence in the subject involved.

Prerequisite: permission of the department chairperson.

A total of 3 credits may be earned. No credits will count towards the research focus area electives.

695 Research Methods in Anthropology (3) An opportunity to use research techniques appropriate to one or more subfields of anthropology in developing a research model, gathering and analyzing data, and organizing the material in a research paper or report.

696 Internship in Anthropology (3-6) On-the-job experience practicing anthropology for a period of five to ten weeks with an institution or agency.

A total of 6 credits may be earned. No credits will count towards the research focus area electives.

BIOLOGY

bsu.edu/biology
Cooper Science Complex CL 121, 765-285-8820

PROGRAMS

Master of arts (MA) in biology; master of science (MS) in biology; master of arts (MA) in physiology; master of science (MS) in physiology; doctor of education (EdD) in science education and doctor of philosophy (PhD) in environmental science. A graduate minor in biology is also offered at the master's level. A biotechnology certificate is also available.

See the Science listing under the College of Sciences and Humanities, page 154, for the doctoral program in environmental science.

MASTERS IN BIOLOGY, 30 credits

Admission requirements

Applicants must meet the admission requirements of the Graduate School and submit scores from the Graduate Record Exam (GRE). Students should have good backgrounds in the life sciences, chemistry, mathematics, and physics and baccalaureate degrees with majors or minors in biology or the equivalent. Exceptions may be made by petition to the department. Students entering without adequate background are expected to make up the deficiencies during their first year.

Master of Arts in Biology, 30 credits

Designed to strengthen the student's background in biological sciences and related disciplines through course work at the graduate level; there is no research thesis requirement. Prepares students for jobs in biomedical laboratories, natural resource management agencies, scientific supply firms, environmental consulting firms, and scientific publishing firms, as well as for further education.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Approved courses from BIO, BIOT, BOT, SCI, and ZOOL			
CRPR	698	Creative Project (3 or 6)	
	or		
RES	697	Research Paper (1-3)	
	or		
BIOT	596	Res Des and Pres (2)	
	and		
BIOT	590	Intro Recomb DNA and RNA (3)	
	or		
SCI	699	Res Meth in Sci Ed (3)	16-30
Minors and electives			0-14

30 crs

Minors are optional, but if taken must include at least 8 credits of courses approved by a designated advisor from the minor area and the biology department.

Master of Science in Biology, 30 credits

Includes both graduate course work and extensive research experience culminating in a research thesis. It is designed to prepare students for further study at the doctoral level, but graduates may also find employment in research-oriented activities of government agencies or private business firms.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Major requirements			
BIO	629	Seminar in Biology (1-2)	
THES	698	Thesis (6)	
Approved courses from BIO, BOT, SCI, ZOOL			16-30
Minors and electives			0-14
			30 crs

Minors are optional, but if taken must include at least 8 credits of courses approved by a designated advisor from the minor area and the biology department.

MASTERS IN PHYSIOLOGY, 30-31 credits

These programs are designed for students seeking in-depth coverage of physiological principles pertaining to the human organism, endocrinology, renal function, cardiovascular dynamics, and pathophysiology.

Admission requirements
Applicants must meet the admission requirements of the Graduate School and must also have a bachelor's degree from an accredited college or university with an academic major or minor in biology, the life sciences, or equivalent science fields. For students applying for graduate teaching assistantships, a GPA of at least 3.0 on a scale of 4.0 is required.

Master of Arts in Physiology, 30-31 credits

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
CHEM	563	Principles of Biochemistry 1	3
	564	Principles of Biochemistry 2	3
PHYS	585	Res Tech in Phys	3
3 credits from			
PHYS	511	Endocrinology (3)	
	513	Renal Physiology (3)	3
3 credits from			
PHYS	514	Cardiovascular Physiology (3)	
	520	Neuroscience (3)	3
3-4 credits from			
ANAT	525	Human Embryology and Histology (4)	
PHYS	590	Advanced Topics in Physiology (1-3)	3-4
ANAT or PHYS electives (excluding PHYS 640) (at least 3 credits must be in physiology)			9
General electives			3
			30-31 crs

Master of Science in Physiology, 30-31 credits

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
CHEM	563	Principles of Biochemistry 1	3
	564	Principles of Biochemistry 2	3
PHYS	585	Res Tech in Phys	3
THES	698	Thesis (1-6)	6
3 credits from			
PHYS	511	Endocrinology (3)	
	513	Renal Physiology (3)	3
3 credits from			
PHYS	514	Cardiovascular Physiology (3)	
	520	Neuroscience (3)	3
3-4 credits from			
ANAT	525	Human Embryology and Histology (4)	
PHYS	590	Advanced Topics in Physiology (1-3)	3-4
PHYS or ANAT electives (excluding PHYS 640) (at least 3 credits must be in physiology)			3
General electives			3
			30-31 crs

MINOR IN BIOLOGY, 8 credits

Requires 8 or more credits of approved BIO, BOT, and ZOOL courses.

COGNATE AREA FOR DOCTORAL DEGREE PROGRAMS

Physiology Cognate
This 15-credit or 24-credit concentration of course work in physiology, anatomy, and related science disciplines is offered

to qualified doctoral students who want advanced courses in body function and structure.

BIOTECHNOLOGY CERTIFICATE, 23-29 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
BIOT	590	Intro Recomb DNA and RNA	3
	591	Theor and Apps Polym Chn React	3
	592	Protein Isolation and Analysis	3
	593	Prof Dev in Biot	1
	594	Cell Culture Techniques	2
	595	DNA Seqng and Bioinfors	2
	596	Res Des and Pres	2
Electives			
6-7 credits from			
BIO	546	Applied Microbiology (3)	
	548	Biometry (3)	
	552	Advanced Genetics (3)	
	553	Hum Genetics and Probs Hmnknd (3)	
	554	Genomes: Genomics Proteomics (3)	
	556	Cancer Biology (3)	
	557	Molecular Biology (4)	
	570	Developmental Biology (4)	
	631	Virology (4)	
	641	Medical Bacteriology (3)	6-7
1-6 credits from			
BIO	669	Internship in Biology (1-6)	
	694	Practicum in Science Education (1-6)	
	697	Research in Biology (1-3)	
RES	697	Research Paper (1-3)	1-6
			23-29 crs

ANATOMY (ANAT)

505 Human Neuroanatomy (3) A strong background in the basic structural and functional relations of the central nervous system. Emphasizes the location of nerve-cell centers and the fiber tracts entering and leaving these centers. Two two-hour laboratory periods weekly.

Prerequisite: ANAT 201 or ZOOL 330.

525 Human Embryology and Histology (4) Examines human development from germ cell formation to organ formation including microscopic structure of tissue and abnormal development.

Prerequisite: BIO 111, 112 or ANAT 201 or permission of the department chairperson.

Not open to students who have credit in ANAT 425.

601 Human Gross Anatomy (8) A strong background in basic morphologic and functional relations. Emphasizes regional anatomy. Four two-and-one-half hour laboratory periods weekly.

Prerequisite: admission to the medical education program.

606 Medical Neuroanatomy (4) Normal structural and functional organization of the human central nervous system as a background for the interpretation of its dysfunction. Assumes prior knowledge of human peripheral nervous system and effector mechanisms. Two-and-one-half hour lecture plus four hours of laboratory weekly.

Prerequisite: ANAT 601.

631 Medical Histology-Embryology (5) Normal and abnormal developmental processes related to the differentiation of tissues and organs; microscopic study of organs and tissues as background for physiological and pathological consideration.

Prerequisite: admission to the medical education program.

690 Special Studies in Anatomy (1-3) Problems of special interest in anatomy or in anatomy teaching. Individual work under the direction of a staff member may involve one or more of the following: experimental work, attendance in undergraduate classes, wide reading, and development of special techniques or skills in scientific investigation.

Prerequisite: permission of the department chairperson.

A total of 3 credits may be earned.

BIOLOGY (BIO)

501 Developments in Modern Biology (3-9) Stresses recent discoveries in biology and integrates and enhances understanding of basic principles of the discipline.

A total of 9 credits may be earned.

516 Population Ecology (3) Presents fundamental principles of population growth and regulation, including both with-species and between-species interaction. Implications for over-population, endangered species, and pest and game management are discussed. Laboratory includes both experimental studies and computer simulation exercises.

Prerequisite: BIO 216.

Not open to students who have credit in BIO 416.

519 Biogeography (3) Understanding of principles of biogeography including plant and animal distributions.

Prerequisite: BIO 111 and 112 or permission of the department chairperson.

520 Field Biology of Distant Areas (3-12) The species peculiar to selected geographic areas. Ecology, flora, and fauna. Travel may be by air. Seminars may be scheduled regularly throughout the course. Registration fee may include travel charges as well as the general fee.

Prerequisite: permission of the department chairperson.

A total of 12 credits may be earned.

540 Evolution (3) Principles, evidence, and the historical context of modern evolution theory. Some attention will be given to the origin of life and the evolution of plants and animals.

Not open to students who have credit in BIO 440.

544 Immunology (4) Examination of the basic principles of the immune system (components, responses, and regulation). This course will introduce basic concepts of immunology and discuss the role of immune function on the science and health community in a manner that facilitates an understanding of the complexity of the field and the role of the immune system in infection and disease. Emphasis will be placed on human and murine immune systems.

Prerequisite: BIO 215 or 313.

546 Applied Microbiology (3) Study of microorganisms that effect beneficial and detrimental changes in foods (including milk and milk products) and industrial fermentations.

Prerequisite: BIO 313 or permission of the department chairperson.

Not open to students who have credit in BIO 446.

548 Biometry (3) Principles and applications of statistics to biological problems. The use of parametric and nonparametric tests of significance in the analysis of data and the interpretation of experiments.

Not open to students who have credit in BIO 448.

552 Advanced Genetics (3) Bacterial and eukaryotic genetics with emphasis on recent developments in molecular genetics. Topics include alternative structures of DNA, mechanisms of DNA replication, mutagenesis, DNA rearrangements, regulation of gene expression, RNA processing, and molecular and mutagenetic analysis of the cell cycle.

Prerequisite: BIO 214; CHEM 231.

Not open to students who have credit in BIO 452.

553 Human Genetics and the Problems of Humankind (3) Current developments in human heredity. Human chromosome aberrations. DNA, the genetic code, and mutations. Consanguineous marriages and genetic defects. Mendelian principles applied to humans. Pedigrees and probability. Genetic screening and counseling. Social, ethical, and legal problems and advances in genetics.

Prerequisite: BIO 214 or permission of the instructor or department chairperson.

Not open to students who have credit in BIO 453.

554 Development and Evolution of Genomes: Genomics and Proteomics (3) Analysis of the development, expression, and evolution of genomes through the examination of genomics and proteomics. Attempts to explore the theoretical basis of developing technologies to provide models for application to current questions in biological systems from the cellular or organismal levels by treatment of the genome as a system.

Prerequisite: BIO 214, 215; or permission of the instructor.

Not open to students who have credit in BIO 454.

556 Cancer Biology (3) Examination of the biological basis of cancer, discussion of related contemporary issues, and overview of recent advances in cancer research. Emphasis on cancer progression, tumor production, etiology/epidemiology, prevention, modern therapies, and patient management.

Prerequisite: BIO 215, its equivalent, or permission of the department chairperson.

557 Molecular Biology (4) Structure and function of macromolecules in living things. Emphasizes three-dimensional structures; models for enzyme mechanisms, DNA replication; protein synthesis and membrane function; and applications of biotechnology.

Prerequisite: BIO 215 or equivalent, or permission of the department chairperson.

Not open to students who have credit in BIO 457.

560 Introduction to Methods of Biological Imaging (4) Biological imaging refers to any imaging technique used in biology. However, its use in microscopy to create images of objects or features too small to be detectable by the naked human eye is paramount. You will learn the theory, design, operation, and specimen preparation for the confocal light microscope and both the transmission and scanning electron microscopes. Basic digital image manipulation is also covered. To be successful in the course, you must demonstrate competency on all three microscopes, develop a portfolio with high quality images for each type of microscopy, and complete an individual research project. Primarily designed for students interested in doing research in biology, biochemistry, or neuroscience.

Prerequisite: permission of the instructor.

Prerequisite recommended: cell biology and introductory physics.

Not open to students who have credit in BIO 460.

570 Developmental Biology (4) Recent advances and theories in early embryogenesis and developmental biology. Major emphasis on genetic and molecular mechanisms operating during developmental phenomena. Topics include fertilization, mosaic versus regulative development, regulation of gene expression, patterning, germ line and sex determination, and neoplasia. Lecture and laboratory.

Prerequisite: BIO 215 or equivalent, or permission of the department chairperson.

Not open to students who have credit in BIO 470.

580 Limnology (3) The physical, chemical, and biological characteristics of inland waters. Laboratory time and several field trips will be devoted to exploring techniques for the evaluation of representative aquatic ecosystems.

Prerequisite: BIO 216 or permission of the department chairperson.

Not open to students who have credit in BIO 480.

582 Aquatic Microbiology (3) Microorganisms indigenous to nonpolluted and polluted aquatic ecosystems. Emphasizes nutrient cycling and the use of microorganisms as indicators of pollution. Morphology, physiology, and ecology of specific organisms. Lecture and laboratory.

Prerequisite: BIO 313.

Not open to students who have credit in BIO 482.

583 Marine Biology (3) Introduction to marine environments. Properties of seawater, hydrodynamics. Phyto-plankton and benthic plants. Primary production, nutrient cycles. Marine animals, surveys of major taxa. Adaptations for life on the bottom, open water, intertidal zones, estuaries, and abyssal regions. Problems of overexploitation and pollution.

Not open to students who have credit in BIO 483.

592 Bioethical Decision Making (3) Development of decision-making skills through the analysis and personal resolution of bioethical problems created by the application of new biological and biomedical knowledge and technologies.

Not open to students who have credit in BIO 492.

628 Readings in Biology (1-6) Directed readings for majors in biology. Individualized program of readings developed under the supervision of a faculty member.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned.

629 Seminar in Biology (1-10) Review and discussion of the literature related to selected topics of current interest in biological research.

Prerequisite: permission of the department chairperson.

A total of 2 credits may be earned toward a Master's degree and a total of 10 credits may be earned toward a doctoral degree, but no more than 1 in any one semester or term.

630 Scientific Communications (1) Emphasizes written skills needed for thesis and journal article preparation. Topics include word use, sentence construction, paragraph organization, figures, tables, statistical descriptions, and the key parts of a manuscript (introductions, methods, results, discussion). Students will also learn how to evaluate scientific writing.

Prerequisite: permission of the instructor.

631 Virology (4) An in-depth study of viruses, including animal, plant, insect, and bacteria viruses. Topics include the physical and chemical properties of viruses, virus-host interactions, and pathogenesis. In addition to the lecture component, a weekly discussion of journal articles emphasizing virology-based experimental assays will also be required.

Prerequisite: cell biology and one course in microbiology, or by permission of the instructor or department chairperson. Familiarity with immunology is preferred.

636 Immunology (4) A study of the components of the immune system and immune responses with particular emphasis on immune-related diseases. Topics include hematopoiesis, cellular interactions, immunochemistry, immunogenetics, and immune regulation and tolerance. The lab component will emphasize immunology-based assays and include journal article discussions concerning immunology topics.

Prerequisite: cell biology and one course in microbiology, or by permission of the instructor or department chairperson.

641 Medical Bacteriology (3) Study of pathogenic bacteria with emphasis on morphology and physiology. Laboratory techniques in culturing, isolating, and identifying bacteria.

Prerequisite: BIO 313; CHEM 231.

Not open to students who have credit in BIO 341.

642 Medical Microbiology (8) Microbiology for medical students with consideration of bacteria, fungi, viruses, and parasites as agents in human disease and the immunological and serological aspects of the host-parasite relationship.

Open only to medical students or by permission of the department chairperson.

653 Medical Genetics (2) Genetics for medical students: basic genetic principles, human cytogenetics, molecular genetics, genetic epidemiology; probability, population and quantitative (multifactorial) genetics; dermatoglyphics, etiology of birth defects, inborn metabolic disorders, genetic screening and counseling, genetics of mental illness and cancer, pharmacogenetics, immunogenetics, and genetic engineering.

Open only to medical students or by permission of the department chairperson.

655 Cell Biology (4) Biology of the cell, including cell morphology, bioenergetics, enzyme function, cell environment, membrane structure and function, cell metabolism, and cell differentiation and growth.

Prerequisite: CHEM 360.

Not open to students who have credit in BIO 215.

656 Ecosystem Ecology (3) Principles and application of ecosystem ecology. Provides students with an understanding of concepts in modern ecosystem ecology and with an in-depth analysis of ecosystem components, processes, and factors that control them.

Prerequisite: BIO 216 or equivalent, or permission of the instructor.

657 Multivariate Analysis of Environmental Data (3) Introduction to multivariate statistical techniques and technological tools necessary to evaluate the literature and to carry out original research in the environmental sciences.

Prerequisite: BIO 448 or 548 or equivalent, or permission of the instructor.

669 Internship in Biology (1-6) Paid, supervised field and laboratory experience in public or private agencies (or in the Department of Biology). Training involves application of biological principles in the work environment.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned.

691 Developments in Biology Education (3) Origin, content, emphasis, and objectives of recent curriculum developments

and philosophical approaches to teaching science in the secondary school. Student activities include presentation of current topics and creation of instructional materials that incorporate the most current techniques.

Prerequisite: an undergraduate major or minor in science.

694 Practicum in Science Education (1-6) Science curricula and instruction in classroom situations. Needs assessment in science education from the point of view of inservice teachers and their students. Staff consultation in implementation of improved science programs.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned.

697 Research in Biology (1-3) Independent research for biology majors at the master's or doctoral level. Students' research projects must be developed in consultation with a faculty member. As many as 6 credits may be applied toward a master's degree. As many as 12 credits may be applied to a doctoral degree. No more than 3 credits may be taken in one semester.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned for the Master's and 12 credits for the PhD, but no more than 3 in any one semester or term.

796 Research in Biology (1-6) Independent research for biology majors at the doctoral level. Students' proposed research projects must be developed in consultation with a faculty member.

Prerequisite: permission of the department chairperson.

A total of 18 credits may be earned, but no more than 6 in any one semester or term.

BIOTECHNOLOGY (BIOT)

590 Introduction to Recombinant DNA and RNA Techniques (3) Study of the fundamental methods and approaches used in biotechnology with experiences in recombinant DNA and RNA techniques. Emphasis on theory and practice of commonly used scientific techniques, experimental design, and reading and analysis of scientific literature.

Prerequisite: BIO 215 or 655.

Not open to students who have credit in BIOT 490.

591 Theory and Applications of the Polymerase Chain Reaction (3) Study of the theory of the polymerase chain reaction and its standard applications in research. Emphasis on experimental design and optimization of reactions, applications in DNA and RNA analysis, differential display, site-directed mutagenesis, and subcloning of PCR products.

Prerequisite: BIO 215 or 655.

Not open to students who have credit in BIOT 491.

592 Protein Isolation and Analysis (3) Study of the theory and application of techniques involved in protein isolation, characterization, and analysis. Emphasis on understanding principles of protein purification, laboratory experiences in protein separation, detection and analysis of structure function relationships.

Prerequisite: BIO 215 or 655.

Not open to students who have credit in BIOT 492.

593 Professional Development in Biotechnology (1) Emphasizes curriculum vita development. Provides employment counseling, discussion of job ethics and values, information on laboratory set-up, and job interview strategies.

Not open to students who have credit in BIOT 493.

594 Cell Culture Techniques (2) Study of the practice and theory of cell and tissue culture. Emphasis on the application of basic concepts and techniques to the in vitro culture of many different cell types.

Prerequisite: BIOT 590.

Not open to students who have credit in BIOT 494.

595 DNA Sequencing and Bioinformatics (2) Covers the determination of DNA nucleotide sequence and Internet/software utilization of DNA and protein databases for sequence analysis.

Prerequisite: BIOT 590.

Not open to students who have credit in BIOT 495.

596 Research Design and Presentation (2) Emphasizes improvements in oral and written communication skills, and development of an independent research proposal.

Prerequisite: BIOT 590.

Not open to students who have credit in BIOT 496.

BOTANY (BOT)

540 Taxonomy of Vascular Plants (4) Identification, use, and care of native and ornamental trees, shrubs, vines, and herbaceous plant material. The use of botanical keys, manuals, and texts in the identification of plant taxa.

Prerequisite: BIO 112 or permission of the department chairperson.

Not open to students who have credit in BOT 440.

542 Economic Botany (3) The cultivation, processing, environmental requirements, and use of plants and plant derivatives for food, drugs, dwellings, clothing, and power.

Not open to students who have credit in BOT 442.

544 Plant Propagation and Management (3) Practical experience in the different methods of plant propagation, care, and cultivation for use in the home, school, garden, and greenhouse. Diseases, pathogens, and pests of the plant.

546 Medical Mycology (3) Study of fungi with emphasis on pathogenic forms. Methods of identification of fungi will be discussed along with morphology and biochemistry of fungi.

Prerequisite: BIO 313.

Not open to students who have credit in BOT 446.

551 Plant Physiology (4) An introductory treatment of the physiological activities of green plants with emphasis on plant

growth substances, photosynthesis, and intermediate metabolism.

Prerequisite: BIO 112; CHEM 231.

Not open to students who have credit in BOT 451.

570 Dendrology (3) The identification and site characterization of woody plants with emphasis on midwestern tree species. Use of botanical features and keys in field identification. Correlation of species with site conditions, plant diseases, climatic parameters, associate species, and geographical distribution.

Prerequisite: BIO 112 or permission of the department chairperson.

Not open to students who have credit in BOT 470.

580 Plant Ecology (3) Factors affecting the distribution and abundance of plants. Patterns, structure, and development of plants at the individual, population, and community levels. Laboratory provides experience with ecological experimentation at the physiological, population, and community levels.

Prerequisite: BIO 216 or permission of the instructor.

581 Aquatic Botany (4) The collection and identification of nonvascular and vascular plants from fresh water ecosystems. Emphasizes morphology, physiology, and ecology of these plants to explain their distribution in nature. Class project and field trips may be used to demonstrate ecological relationships.

Prerequisite: BIO 112 or permission of the department chairperson.

Not open to students who have credit in BOT 481.

PHYSIOLOGY (PHYS)

511 Endocrinology (3) Endocrine functions in humans and mammals with special emphasis on mechanisms. Normal hormone regulation and pathophysiological principles. Laboratory experience with small mammal surgery and endocrine testing. One three-hour laboratory period weekly.

Prerequisite: ANAT 201; one year of general chemistry.

513 Renal Physiology (3) Detailed study of the urinary system and excretory functions. Emphasizes human physiology but includes comparative vertebrate systems. Laboratory study includes gross, microscopic anatomy, and small mammal surgery. One three-hour laboratory a week.

Prerequisite: one course each in chemistry, anatomy, and physiology; or permission of the instructor.

514 Cardiovascular Physiology (3) A study of the dynamics of the human cardiovascular system, stressing applications of basic physical principles and the operation of physiological regulatory systems. Includes seminar-style discussion of recent literature.

Prerequisite: one course in physiology.

Not open to students who have credit in PHYS 414.

515 Physiology of Aging (3) Study of how physiological systems change with age and the mechanisms that are thought to cause these changes. Disorders and diseases of aging will be covered.

Prerequisite: one course each in chemistry and physiology; or permission of the instructor.

516 Human Toxicology (3) Chemical, physical, zoological, and botanical toxicoses in human health. The implications and methodology of dealing with hazardous substances and poisons.

Prerequisite: CHEM 101 or 111, and 112; one year of biology or physiology or combination of both; or permission of the instructor.

Not open to students who have credit in PHYS 416.

520 Neuroscience (3) Introductory study of the organization and function of the nervous system. Emphasizes integration of the structure and function of the nervous system.

Prerequisite: one year of chemistry and one year of biology or physiology.

535 Pathophysiology (3) The physiological pathology of selected disease processes and dysfunctions. The pathogenesis of certain derangements with broad applicability. Underlying chemical, biological, and physical mechanisms. Laboratory experience will include demonstrations, visitations, and specimen study. One three-hour laboratory period weekly.

Prerequisite: one course each in anatomy, physiology, and chemistry.

Not open to students who have credit in PHYS 435.

585 Research Techniques in Physiology (3) Introduction to experimental design, laboratory techniques, and data analysis and interpretation in anatomy and physiology. Laboratory will include methods employing animal preparations, modern cellular/molecular techniques, and general histological procedures. Introduction to computer data acquisition and analysis.

Prerequisite: one course in physiology or permission of the instructor; CHEM 563 recommended.

590 Advanced Topics in Physiology (1-3) Involves discussion of current topics in research as well as exploring current laboratory techniques and advances in molecular and cellular aspects of physiology.

Prerequisite: permission of the department chairperson.

A total of 3 credits may be earned.

595 Current Issues in Physiology (1-3) Contemporary issues in the field of physiology. May include seminars, guest speakers, field trips, workshops, laboratory, and group activities.

Prerequisite: permission of the department chairperson.

A total of 3 credits may be earned.

640 Medical Physiology (8) Summary of human physiology for medical students. Cellular and organ-system physiology; physiological regulation. Laboratory exercises will

demonstrate general principles of physiology and introduce basic techniques and instrumentation.

Prerequisite: admission to the medical education program.

645 Emergency Medicine (2) Designed to develop an awareness of proper diagnosis and treatment during emergency medical care by professional medical personnel. Fractures; environmental emergencies; injuries to the eye, chest, and abdomen; shock; and wound care.

Prerequisite: admission to the medical education program.

690 Special Studies in Physiology (1-3) Problems of special interest in physiology or in physiology teaching. Individual work under the direction of a staff member may involve one or more of the following: experimental work, attendance in undergraduate classes, wide reading, and development of special techniques or skills in scientific investigation.

Prerequisite: permission of the department chairperson.

A total of 3 credits may be earned.

SCIENCE (SCI)

501 Electron and Confocal Microscopy (3) Introduction to the techniques and theory of electron and confocal microscopy. Emphasizes basic procedures employed in specimen preparation, production of micrographs and operation of the transmission, scanning, and confocal microscopes.

690 Workshop in Science Education (1-12) Practical experience with teaching science at a specific level, (early childhood, elementary, middle, secondary, or higher education) and/or specific topic (e.g., chemistry or geology). May be repeated for a different level and/or topic.

Prerequisite: teaching experience or certification; or permission of the instructor.

A total of 24 credits may be earned, but no more than 12 in any one semester or term.

692 Topics in the History and Nature of Science (3) Examination of the historical development of science from a wide variety of perspectives. Roles of scientists, society, culture, and gender in the creation and validation of scientific knowledge. Implications of the Nature of Science for science teaching and learning.

695 Advanced Teaching Methods in Science (3-6) Recent developments in science teaching at a specific level (early childhood, elementary, middle, secondary, or higher education) and/or specific topic (e.g., biology or physics). May be repeated for a different level and/or topic.

Prerequisite: teaching experience or certification; or permission of the instructor.

A total of 6 credits may be earned.

696 Current Issues in Science Education (3-6) Current research and theory of teaching science at a specific level (early childhood, elementary, middle, secondary, or higher education) and/or specific science topic (e.g., chemistry or geology). May be repeated for a different level and/or topic.

Prerequisite: permission of the instructor.

A total of 6 credits may be earned.

699 Research Methodology in Science Education (3) Identification of research problems in science and science education. Introduction to types of research, research design, and grant-writing. Review of literature pertinent to a special topic of student interest. Development of a research proposal.

Prerequisite: permission of the department chairperson.

790 Internship in Science Education (1-4) Supervised experience in instruction of science or science education courses.

Prerequisite: permission of the department chairperson.

A total of 4 credits may be earned.

ZOOLOGY (ZOOL)

532 Invertebrate Zoology (4) Comparative morphology, physiology, ecology, life histories, and phylogeny of invertebrate animal phyla.

Prerequisite: BIO 111, 112; or permission of the department chairperson.

Not open to students who have credit in ZOOL 432.

540 Ornithology (3) The study of birds including identification, systematics, anatomy, physiology, life histories, ecological relationships, and conservation. Fieldwork in addition to regular laboratory periods may be required.

Not open to students who have credit in ZOOL 440.

541 Entomology (3) Anatomy, physiology, taxonomy, life histories, habits, and adaptations of insects.

Prerequisite: BIO 111, 112; or permission of the department chairperson.

Not open to students who have credit in ZOOL 441.

544 Ichthyology (3) The study of fish with emphasis on identification, classification, anatomy and physiology, and ecology. Emphasizes Indiana species but includes other important species.

Prerequisite: BIO 111, 112; or permission of the department chairperson.

Not open to students who have credit in ZOOL 444.

545 Herpetology (3) Introduction to the biology of amphibians and reptiles, including their origin, anatomy, physiology, classification, behavior, and ecology. Through extensive field trips, the laboratory will emphasize identification and observation of amphibians and reptiles in their natural habitats.

Prerequisite: BIO 112.

Not open to students who have credit in ZOOL 445.

546 Mammalogy (3) The evolutionary origin, characteristics, and distribution of recent mammals. The economic

relationships of mammals. The collection and preservation of specimens. May require additional fieldwork.

Not open to students who have credit in ZOOL 446.

565 Fishery Resources Management (3) The relationship of fisheries to other natural resources; a survey of aquatic habitats and the characteristics of fish that affect their management; basic principles, practices, and techniques of management of inland waters for fish production.

Prerequisite: BIO 216 or permission of the department chairperson.

Not open to students who have credit in ZOOL 465.

583 Wildlife Biology (3) The identification, population dynamics, and geographic distribution of wildlife species with particular emphasis on those of the United States. The harvest and management of wildlife. May require additional fieldwork.

Prerequisite: BIO 216 or permission of the department chairperson.

Not open to students who have credit in ZOOL 483.

584 Aquatic Entomology (3) Immature and adult stages of aquatic insects, including collecting techniques, identification, ecological requirements, morphology, and evolutionary adaptations to lentic and lotic conditions. Emphasizes aquatic insects as indicators of environmental quality and stress.

Prerequisite: ZOOL 541 or permission of the department chairperson.

Not open to students who have credit in ZOOL 484.

670 Field Zoology (3) The field study of animals—terrestrial and aquatic, invertebrate and vertebrate, microscopic and macroscopic—with emphasis on the collection and identification of noninsect invertebrates.

682 Animal Ecology (3) The composition, development, dynamics, and geographic distribution of animal communities. The relationships between animals and the physical, chemical, and biotic elements of the environment. Includes physiological ecology and ethology. Field studies of animal communities.

CHEMISTRY

bsu.edu/chemistry
Cooper Science Complex CP 305, 765-285-8060

PROGRAMS

Master of arts (MA) in chemistry and master of science (MS) in chemistry

These programs are designed for students who hold bachelor of science or bachelor of arts degrees in chemistry, including at least one year of calculus-based physical chemistry. Students with substantial backgrounds (e.g., those who have completed at least ACS-certified bachelor's degrees or work beyond the bachelor's level) may have one or more of the core course requirements waived, but the minimum number of 30 credits required for graduation still applies. These students should discuss the possibilities with the chemistry graduate advisor.

Students with substantial chemistry backgrounds but who have undergraduate degrees in such other disciplines as biology, medical technology, premedicine, or predentistry may be admitted to the graduate program to begin some graduate course work while making up undergraduate deficiencies. However, courses taken to remove undergraduate deficiencies cannot be applied to total graduate credits. These students should discuss their situations with the chemistry graduate advisor to determine whether their backgrounds are sufficient to begin graduate work in chemistry.

See the Science listing under the College of Sciences and Humanities, page 154, for the doctoral program in environmental science.

Admission requirements

Applicants must meet the admission requirements of the Graduate School and should have satisfactory Graduate Record Examination (GRE) verbal and quantitative scores.

MASTERS IN CHEMISTRY, 30 credits

Master of Arts in Chemistry, 30 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Chemistry concentration, 30 credits			
CHEM	500	Chemical Communications	1
	563	Principles of Biochemistry 1	3
	626	Advanced Analytical Chemistry	3
	636	Advanced Organic Chemistry	3
	646	Advanced Physical Chemistry	3
	651	Advanced Inorganic Chemistry	3
	673	Seminar in Chemistry	1
Graduate chemistry courses approved by the graduate advisor			9
Research requirements			
4 credits from			
CHEM	670	Research in Chemistry (1-9)	
	696	Chemistry Research Methods (2)	
RES	697	Research Paper (1-3)	4
			30 crs

Chemical Education concentration, 30 credits

CHEM	500	Chemical Communications	1
	563	Principles of Biochemistry 1	3
	626	Advanced Analytical Chemistry	3
	636	Advanced Organic Chemistry	3
	646	Advanced Physical Chemistry	3
	651	Advanced Inorganic Chemistry	3
	673	Seminar in Chemistry	1
Graduate chemistry courses approved by the graduate advisor			9
Research requirements			
4 credits from			
CHEM	671	Research in Chemical Education (1-9)	
	696	Chemistry Research Methods (2)	
RES	697	Research Paper (1-3)	4
			30 crs

Master of Science in Chemistry, 30 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Chemistry concentration, 30 credits			
CHEM	500	Chemical Communications	1
	563	Principles of Biochemistry 1	3
	626	Advanced Analytical Chemistry	3
	636	Advanced Organic Chemistry	3
	646	Advanced Physical Chemistry	3
	651	Advanced Inorganic Chemistry	3
	673	Seminar in Chemistry	1
Research requirements			
CHEM	670	Research in Chemistry (1-9)	7
THES	698	Thesis (1-6)	6
			30 crs
Chemical Education concentration, 30 credits			
CHEM	500	Chemical Communications	1
	563	Principles of Biochemistry 1	3
	626	Advanced Analytical Chemistry	3
	636	Advanced Organic Chemistry	3
	646	Advanced Physical Chemistry	3
	651	Advanced Inorganic Chemistry	3
	673	Seminar in Chemistry	1
Research requirements			
CHEM	671	Research in Chemical Education (1-9)	7
THES	698	Thesis (1-6)	6
			30 crs

CHEMISTRY (CHEM)

500 Chemical Communications (1) Use of scientific literature, sources, and classification systems, and current and retrospective searches in the specialized branches of chemistry.

Prerequisite: 20 credits of chemistry or permission of the department chairperson.

Not open to students who have credit in CHEM 400.

510 Review of Chemistry Fundamentals (1) Introductory graduate course which reviews fundamental chemistry concepts in the areas of physical, organic, inorganic, analytical, and biochemistry, and develops critical thinking skills.

Open only to chemistry graduate students.

520 Chemical Instrumentation 1 (3) Theoretical principles and applications of selected optical spectroscopic, mass spectroscopic, electrochemical, thermal, and chromatographic methods of chemical analysis with illustrative experiments. Two hours of lecture and one three-hour laboratory period weekly.

Prerequisite: CHEM 225 and CHEM 232 or 235 or permission of the department chairperson.

Not open to students who have credit in CHEM 420.

521 Chemical Instrumentation 2 (3) Advanced treatment of selected topics in spectroscopy, electrochemistry, and chromatography. Introduction to mass spectroscopy, nuclear methods, and thermal and surface analysis. Three hours of lecture weekly.

Prerequisite: CHEM 520 or permission of the department chairperson.

525 Instrumental Methods of Analysis (3) Practical applications of modern chemical instrumentation: electrometric, chromatographic, and spectroscopic methods. For chemical/medical technologists or departmental minors. Two hours of lecture and one three-hour laboratory weekly.

Prerequisite: CHEM 225.

Not applicable to MS or MA degree programs in chemistry.

Not open to students who have credit in CHEM 325.

530 Organic Laboratory Techniques (2) Laboratory course that includes multi-step syntheses of organic compounds, their isolation, purification, and characterization using modern spectroscopic and chromatographic techniques. Six hours of laboratory weekly.

Prerequisite: CHEM 232 or equivalent.

Not open to students who have credit in CHEM 430.

540 Selected Principles of Physical Chemistry (3) Some of the well-established physical concepts that allow us to understand basic chemical phenomena at the molecular level will be explored. Topics include, but are not limited to, quantum chemistry, group theory, spectroscopy, and chemical kinetics. Understanding these fundamental physical chemistry principles will provide the basic framework for all other branches of chemistry.

Prerequisite: CHEM 232; MATH 161 or 165; PHYC 110 and 112 or 120 and 122.

Not open to students who have credit in CHEM 440 or 444.

544 Physical Chemistry 1 (4) Some of the well-established physical concepts that allow us to understand basic chemical phenomena at the molecular level will be explored. Topics include, but are not limited to, quantum chemistry, group theory, spectroscopy, and chemical kinetics. Understanding these fundamental physical chemistry principles will provide the basic framework for all other branches of chemistry.

Prerequisite: CHEM 232; MATH 166; PHYC 110 and 112 or 120 and 122.

Not open to students who have credit in CHEM 444.

545 Physical Chemistry 2 (4) Underlying physical principles that govern the properties and behavior of chemical systems will be addressed. Concepts will include the thermodynamic (classical and statistical) description of chemical processes and properties of solids, liquids, gases, and solutions. Concepts such as heat, work, enthalpy, entropy, and free energy will be taught. Understanding these physical chemistry principles will provide the basic framework for all other branches of chemistry.

Prerequisite: CHEM 232; MATH 166; PHYC 110 and 112 or 120 and 122.

Not open to students who have credit in CHEM 445.

550 Inorganic Chemistry (3) Chemistry of the elements, including the relationships of chemical properties and atomic and molecular structure, chemical bonding acid-base theories, chemical periodicity, and modern theories of coordination compounds. Three hours of lecture weekly.

Prerequisite: CHEM 232 with a minimum grade of *C*- and MATH 165.

Not open to students who have credit in CHEM 450.

560 Essentials of Biochemistry (4) Organic chemistry of carboxylic acids, amines, and their derivatives; biochemistry of proteins, carbohydrates, lipids, and nucleic acids; metabolism and the regulation of metabolic processes. For students in life sciences, dietetics, and medical technology. Three hours of lecture and one three-hour laboratory session weekly.

Prerequisite: CHEM 231 or equivalent.

Not applicable to MS or MA degree programs in chemistry.

Not open to students who have credit in CHEM 360 or 463 or 563.

563 Principles of Biochemistry 1 (3) Chemistry of proteins, enzymes, nucleic acids, carbohydrates, and lipids. For chemistry, life sciences, and premedicine majors. Three hours of lecture weekly.

Prerequisite: CHEM 232 or 235.

Not open to students who have credit in CHEM 463.

564 Principles of Biochemistry 2 (3) Continuation and extension of CHEM 563 including biological oxidations and energy transfers; metabolism of carbohydrates, lipids, proteins, and nucleic acids; and regulation of metabolic processes. Three hours of lecture weekly.

Prerequisite: CHEM 463 or 563.

Not open to students who have credit in CHEM 464.

575 Exploration of Selected Topics in Chemistry (1-3) Discussion or written reports or both in advanced special topics in or related to chemistry. Examples are topics in neurochemistry, physical organic, chemical synthesis, kinetics, spectroscopy, etc.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

626 Advanced Analytical Chemistry (3) Survey of modern analytical chemistry. Topics include sampling, wet chemical techniques, nonaqueous systems, and contemporary research and applications in chromatography, spectroscopy, and electrochemistry. Three hours of lecture weekly.

Prerequisite: CHEM 225 or equivalent.

627 Analytical Chemistry in the Environmental Sciences (3) Survey of the development and implementation of modern analytical methods, particularly as they apply to the study of environmentally relevant systems. Techniques include gas and liquid chromatography, mass spectrometry, UV-visible absorption and fluorescence spectroscopy, electrochemistry and elemental analysis techniques such as AAS and ICP.

Prerequisite: permission of the department chairperson.

636 Advanced Organic Chemistry (3) Topics include nomenclature, bonding, acids and bases, sterochemistry, structure-reactivity relationships, and mechanisms of important reactions. Introduction to synthesis, the disconnect approach, synthons, protecting groups, and functional group interconversions.

Prerequisite: CHEM 232 or 235 or equivalent.

646 Advanced Physical Chemistry (3) Survey of physical chemical principles with emphasis on practical applications. Topics include thermodynamics, reaction kinetics, and selected quantum chemical applications.

Prerequisite: CHEM 445 or equivalent.

651 Advanced Inorganic Chemistry (3) Continuation of CHEM 550. Current theories of bonding in coordination chemistry. Descriptive and theoretical treatments of the chemistry and structure of transition metal complexes, organometallic compounds, fluxional molecules, and metal clusters; the importance of metals in biological systems. Three hours of lecture weekly.

Prerequisite: CHEM 450, 440 or 444.

667 Medical Biochemistry (6) Chemistry of major cellular constituents; enzymes as the catalysts of intracellular chemical reactions with emphasis on underlying principles of physical and organic chemistry. Intermediary metabolism of carbohydrates, lipids, amino acids, and nucleotides; modern techniques employed in the study of metabolic processes;

biosynthesis and degradation of intracellular components; hormonal regulation of metabolism.

Prerequisite: admission to the medical education program.

670 Research in Chemistry (1-9) Original work at the molecular level on projects based in the current scientific literature. The projects will be directed by graduate faculty and will typically involve aspects of ongoing research.

Prerequisite: permission of the department chairperson.

A total of 9 credits may be earned.

671 Research in Chemical Education (1-9) Original work based on the current science education literature. Projects will be directed by graduate faculty and may involve conducting surveys, developing new instructional materials or methods, or evaluating the effectiveness of technology-based teaching.

Prerequisite: permission of the department chairperson.

A total of 9 credits may be earned.

673 Seminar in Chemistry (1) Critical examination and discussion of recent experimental and theoretical developments in chemistry.

Prerequisite: CHEM 400 or 500; permission of the department chairperson.

A total of 4 credits may be earned, but no more than 1 in any one semester or term.

675 Advanced Topics in Chemistry (1-9) Discussion, experimentation, or both in specialized topics for the qualified advanced student. Information concerning specific topics offered during a given semester may be obtained from the departmental office. Lecture and laboratory schedules appropriate to the topics offered.

Prerequisite: permission of the department chairperson.

A total of 9 credits may be earned.

690 Contemporary Instruction and Curricula in Chemistry (3) Designed to make the inservice chemistry teacher familiar with management of large-group instruction, development and implementation of multimedia materials in instructional schemes, use of videotape in the laboratory, and facility design for modular and other systems. Field trips to nearby schools to study facility design may be included. Two hours of lecture weekly.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

696 Chemistry Research Methods (2) Introduction to use of scientific literature, design of research experiments, specialized techniques, and writing skills endemic to the specialized fields of chemistry. Class and laboratory experience appropriate to students' specializations.

Prerequisite: CHEM 400 or 500; permission of the department chairperson.

770 Research in Chemistry (1-12) In-depth original work at the molecular level on projects based in the current scientific literature. The projects will be directed by graduate faculty and will typically involve aspects of ongoing research.

Prerequisite: permission of the department chairperson.

A total of 12 credits may be earned.

771 Research in Chemical Education (1-12) In-depth original work based on the current science education literature. Projects will be directed by graduate faculty and may involve conducting surveys, developing new instructional materials or methods, or evaluating the effectiveness of technology-based teaching.

Prerequisite: permission of the department chairperson.

A total of 12 credits may be earned.

773 Chemistry and Chemical Education Seminar (1) In-depth analyses of recent trends and developments in chemistry or chemical education. Seminar participants report on assigned topics to departmental groups.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 1 in any one semester or term.

COMPUTER SCIENCE

bsu.edu/cs
Robert P. Bell Building 455, 765-285-8641

PROGRAMS

Master of science (MS) in software engineering; the master of science (MS) degree in computer science is primarily for students with undergraduate degrees in computer science who plan to undertake further graduate study or apply computer science in a variety of fields. A minor in computer science is also offered.

See the Science listing under the College of Sciences and Humanities, page 154, for the doctoral program in environmental science.

Admission requirements
In addition to meeting the admission requirements of the Graduate School, applicants must have departmental approval for admission. Applicants must submit three letters of recommendation, a one-page statement of educational goals,

and scores from the Graduate Record Examination (GRE). Upon admission to graduate study, students without an adequate computer science background will be required to take directed undergraduate courses in which they earn an average grade of at least a *B*. No credit toward a degree will be granted for these courses.

MASTER OF SCIENCE IN COMPUTER SCIENCE, 30 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Required mathematics background courses			
MATH	161	Applied Calculus 1 (3)	
	162	Applied Calculus 2 (3)	
	217	Linear Algebra (4)	
	221	Probability and Statistics (3)	
Required computer science background courses			
CS	120	Comp Sci 1: Prog Fundamentals (4)	
	121	Computer Science 2 (4)	
	124	Discrete Structures (3)	
	224	Des and Analy of Algorithms (3)	
	230	Computer Org and Arch (3)	
	380	Theory of Computation 1 (3)	
	431	Programming Languages (3)	
Required graduate courses, 12 credits			
All students			
CS	689	Research Methods	3
	690	Software Engineering	3
Concentration 1			
CS	668	Graphs, Algo, and Apps	3
	670	Advanced Theory of Computation	3
Concentration 2			
CS	691	Soft Req and Design	3
	692	Soft Ver and Val	3
Elective graduate courses			18
			30 crs

Courses as approved by departmental graduate advisor.

MASTER OF SCIENCE IN SOFTWARE ENGINEERING, 33 credits

Background courses
Students whose undergraduate transcripts do not include courses similar to the ones listed below will be required to take all of the following courses and achieve a grade of *B* or better. These courses provide the background material that is assumed in the required and elective courses and will not count towards the total required number of course credits for the master's degree.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
CS	120	Comp Sci 1: Prog Fundamentals	4
	121	Computer Science 2	4
	124	Discrete Structures	3
	224	Des and Analy of Algorithms	3
	230	Computer Org and Arch	3
MATH	161	Applied Calculus 1	3
	181	Elementary Probability Stats (3)	
	or		
	221	Probability and Statistics (3)	3
Required courses, 18-21 credits			
CS	689	Research Methods	3
	690	Software Engineering	3
	691	Soft Req and Design	3
	692	Soft Ver and Val	3
	693	Metrics and Models	3
	695	Software Engineering Capstone (3)	
	or		
THES	698	Thesis (1-6)	3-6
			18-21 crs

Elective courses, 12-15 credits
Students without significant experience in computer networks are expected to take a graduate networking course. Students without significant experience in database work are expected to take a graduate database course. Additional graduate level courses approved by the department's director of graduate programs would count on the MS program in computer science (this set of courses would count towards either program). 12-15

33 crs

DOCTOR OF EDUCATION (EdD and PhD) WITH MAJOR IN COMPUTER SCIENCE

EdD program in science education and PhD program in environmental science with computer science as the major area is available. See the Science listing on page 154 under the College of Sciences and Humanities for details.

COGNATE IN SOFTWARE ENGINEERING, 15 or 24 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
CS	690	Software Engineering	3
	691	Soft Req and Design	3
	692	Soft Ver and Val	3
	693	Metrics and Models	3
	694	Software Architecture	3
Additional courses that would count on the MS in Computer Science or MS in Software Engineering as approved by the doctoral committee			0 or 9
			15 or 24 crs

COGNATE IN THEORY OF COMPUTING, 15 or 24 credits

This cognate is aimed at the PhD in environmental science candidate who already has the background course work in computer science that is required of all candidates entering the master of science degree program in computer science, as well as the relevant mathematical background prerequisites to the program.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
CS	668	Graphs, Algo, and Apps	3
	670	Advanced Theory of Computation	3
	678	Compiler Construction	3
			9 crs

Electives (choose two courses for the 15-credit cognate, or five courses for the 24-credit cognate.)

CS	555	Data Mining (3)	
	639	Seminar in Computer Science (3)	
	665	Applied Computational Geometry (3)	
	675	Model Checking (3)	
	699	Reading and Honors (3)	
MATH	562	Numerical Analysis 1 (3)	
	563	Numerical Analysis 2 (3)	6 or 15 crs
			15 or 24 crs

Up to 9 credits of 500-level courses permitted on the 15-credit cognate; up to 12 credits of 500-level courses permitted on the 24-credit cognate.

A total of 6 credits of CS 699 may be earned for the 24-credit cognate and a total of 6 credits of CS 699 may be earned for the 15-credit cognate.

COMPUTER SCIENCE (CS)

510 Introduction to Web Programming (3) Advanced HTML including XHTML, Cascading Style Sheets, Java Script, and Dynamic HTML. XML including DTDs and XSL. Server side programming, security issues, and encryption-based security mechanisms. A student is expected to have taken CS 121 or the equivalent of two semesters of programming.

Not open to students who have credit in CS 410, 420, or 520.

519 (576) Operating Systems (3) Investigate the functions and structure of computer operating systems, processors, and memory. Topics include process control, concurrency, scheduling, security, and file systems. Introduces topics in systems programming, including I/O programming, signals, and IPC. Before enrolling, students should have completed CS 230 or the equivalent of an undergraduate computer architecture course and CS 224 or the equivalent of two semesters of programming courses and an undergraduate algorithms course.

Not open to students who have credit in CS 376 or CS 419.

520 (597) Multitier Web Architectures (3) Topics include n-tier architectures, data access, and application logic layers, Web services, scalability, advanced XML, service-oriented architectures, object access protocols, and Web site administration and security. Projects will be used to reinforce concepts. Before enrolling, a student is expected to have taken CS 224 or the equivalent of two semesters of programming and an undergraduate algorithms course.

Not open to students who have credit in CS 397 or CS 420.

521 Foundations of Data Analytics (3) Introduction to data acquisition, transformation, manipulation, and visualization on large-scale structured and unstructured data. Discussion of basic data analytics methods and algorithms. Application of data analytics in business, web, social networks, and science domains. Students are expected to have completed introductory programming courses before enrolling.

Not open to students who have credit in CS 321 or CS 421.

527 Computer Networks (3) Covers various networks such as Internet, WiFi and Ethernet. The focus in on TCP/IP network layers and protocols such as physical layer, data link protocol, media access control, routing, transport and application, and network security.

Not open to students who have credit in CS 327 or CS 416.

531 Programming Languages (3) Study of principles of programming languages. Emphasizes language paradigms and important features, structures, characteristics, and formal syntax of modern high-level programming languages. Examples of languages in each paradigm will be studied. Before taking this course, a student is expected to have taken undergraduate courses on computer organization and architecture as well as multiple semesters of programming courses including object-oriented programming.

Not open to students who have credit in CS 335 or CS 431.

539 Current Topics Seminar (3-6) In-depth study of a topic taught in a seminar format. Topics will be posted in the department before registration.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

545 Human-Computer Interaction (3) Investigation into the principles and practice of user interface design, evaluation, and implementation. Topics include user-centered design, graphical user interface programming, evaluation methods, and software architectures. Before enrolling, a student is expected to have taken CS 224 or the equivalent of two semesters of programming and an algorithms course.

Not open to students who have credit in CS 445.

546 Database Design (3) An introduction to database requirements analysis, modeling, creation, and usage. Topics include ER model, relational model, relational algebra, SQL,

dependencies and normal forms, indexes, views, sequences, web-based client-server applications development, ETL, procedural language, database security, and NoSQL.

Not open to students who have credit in CS 346 or 418 or 546.

547 Computer, Information, and Network Security (3) Topics include encryption, decryption, protocols, viruses, network security, authentication, legal and ethical issues, and security in operating systems, databases, e-commerce, Internet, wireless. Algorithms, protocols, applications such as RSA, DES, SSL, Firewalls, Digital Signatures, and VPNs, and emerging topics will be explored. Before enrolling in this course, a student is expected to take CS 527 or a similar undergraduate networking course and CS 576 or a similar operating systems course.

Not open to students who have credit in CS 447.

555 Data Mining (3) Topics include data preprocessing, clustering analysis, data classification, mining association rules, data mining and database, complex data mining, Web mining, new applications in data mining such as intrusion detection and bio-informatics. Before enrolling, students are expected to have completed CS 224 or the equivalent of an undergraduate algorithms course.

Not open to students who have credit in CS 455.

556 Image Processing (3) Project based, dealing with basic principles of digital image processing and computer vision. Topics: digital image formats, geometric operations on digital images, filtering, histogramming, binarization of grayscale images, labeling binary images, perimeter and area determination, thinning operations, object recognition using global features, edge detection processes, and other topics as time permits. Before enrolling, students are expected to have completed CS 224 or the equivalent of an undergraduate algorithms course.

Not open to students who have credit in CS 456.

614 Web Programming (3) Technical foundations for rich, interactive Web sites and current topics in Web programming. Client and server side Web programming to enable Web 2.0 applications.

Open only to students not in computer science or software engineering programs.

616 Digital Animation (3) Introduces tools and skills needed to create digital animations. Students work with different development environments, techniques, interface designs, and audio/visual sequences.

Open only to students not in computer science or software engineering programs.

617 Introduction to Programming (3) Software development using a high-level programming language (such as C++ or Java) for a wide range of information system applications. Structured programming, data types, functions, arrays, pointers, and recursion. Applications from areas of interest.

Open only to students not in computer science or software engineering programs.

628 Wireless and Mobile Networking (3) Topics include hardware and software architectures of wireless and mobile networks, wireless communication principles, network protocols, various wireless networks such as WiFi, Bluetooth, Cellular, and sensor network. Students are expected to have taken an undergraduate level networking course.

629 Special Topics (1-6) Special topics in computer science for non-CS graduate students. Topics will be posted by the department prior to registration.

A total of 6 credits may be earned.

636 Advanced Database Systems (3) Topics include relational databases, object databases, database administration, file structures and indexing, query processing, transaction management, and emerging database technologies and applications. Design and implementation of relational databases using Oracle. Before enrolling, students should have taken CS 418 or a similar undergraduate database course.

639 Seminar in Computer Science (3-6) Readings and conferences assigned in some particular problem or group of problems in computer science.

A total of 6 credits may be earned.

665 Applied Computational Geometry (3) Topics such as algorithms for polygon triangulation, polygon partitioning and their applications, convex hulls in two and three dimensions and their applications, Voronoi diagrams and their applications, search and intersection algorithms, robot motion planning, and implementation of algorithms. Before enrolling, a student is expected to have taken an algorithms course.

668 Graphs, Algorithms, and Applications (3) Concepts of graph theory. Algorithms for graph traversal, shortest paths, connectivity, spanning trees, and matchings. Applications of graphs to computer programming, software engineering, VLSI design, networks and flows, and parallel programming. Before enrolling, a student is expected to have taken CS 224 or the equivalent of two semesters of programming courses and an undergraduate algorithms course.

670 Advanced Theory of Computation (3) Computability and decidability; introduction to the theory of computational complexity; the classes sP and NP; NP-completeness; examples of some NP-complete problems; nondeterminism and parallel computation; proving the correctness of programs. Before enrolling, a student is expected to have taken CS 380 or an undergraduate theory of computation course.

675 Model Checking (3) Overview of formal verification techniques in software engineering; system modeling with automata; temporal logics; algorithms and techniques of model checking to critical systems in industry. Before enrolling, students should have taken CS 224 or an

undergraduate algorithms course and CS 431 or an undergraduate programming languages course.

678 Compiler Construction (3) Review of context-free grammars and basic parsing concept, compiler organization, and construction of components for a compiler. Before enrolling, a student is expected to take an undergraduate theory of computation course.

689 Research Methods in Computer Science (3) Discussions on research areas in computer science, scientific methods of research, and dissemination of research. Requirements include presentations and written reports that demonstrate proficiency in presentation tools and techniques, statistical and experimental design techniques, and library and literature searches. Intended for students after their first semester of master's level study.

Prerequisite: permission of the department chairperson.

690 Software Engineering (3) Software engineering principles and concepts. The software life cycle, structured specifications, design tools and techniques, software reliability, and verifying program correctness. Intended for students after their first semester of master's level study.

Prerequisite: permission of the department chairperson.
Not open to students who have credit in CS 498.

691 Software Requirements and Design (3) Methods, tools, and notations for requirements capture, analysis, and design. Unified Modeling Language (UML), logic and algebraic specification, prototyping, use cases, domain modeling, software architecture, design patterns, refactoring, software reuse.

Prerequisite: CS 690 or 498.

692 Software Verification and Validation (3) Concepts and techniques for testing software; unit, integration, system, and regression testing; test coverage, test case generation, tools for automated testing. Verification of nonfunctional properties.

Prerequisite: CS 690 or 498.

693 Metrics and Models (3) Covers the process of software development and the evolution of large-scale software systems. It includes concepts and techniques for controlling the software process and product to ensure that development, release and maintenance of software is systematic, disciplined, and reported.

Prerequisite: CS 690.

694 Software Architecture (3) An in-depth study of software architecture throughout the software development life cycle and in the technical, project life-cycle, business and professional contexts. Various software architecture styles will be presented as well as instruction on selecting, building, evaluating, and recovering architectures. Students will apply their knowledge on a large project.

Prerequisite: CS 691.

695 Software Engineering Capstone (3) The software engineering capstone provides an opportunity for graduate students to apply their knowledge in real software development and project management. The capstone is intended to be a comprehensive use of the tools, skills, and techniques of software engineering and their application. Completion of a major project is designed to integrate knowledge and skills gained through previous study and provide experience of the constraints commonly experienced in industry.

Prerequisite: departmental permission, 24 credits of the MSSE program course work.

Open only to students in master of science in software engineering program.

699 Reading and Honors (1-6) Special advanced work not offered in other courses. Requirements include a final written report.

Prerequisite: permission of the department chairperson.
A total of 6 credits may be earned.

CRIMINAL JUSTICE AND CRIMINOLOGY

bsu.edu/cjc
North Quadrangle 278, 765-285-5979

CERTIFICATE IN CRIMINAL JUSTICE AND CRIMINOLOGY, 12 credits

Admission requirements
Admission requirements are the same as for the Master of Public Administration with a criminal justice concentration, namely a bachelor's degree from an accredited college or university. The program is open to all majors. Applicants must have an overall undergraduate grade-point average of 2.75 on a 4.0 scale. In addition, applicants should submit Graduate Record Exam (GRE) scores and two letters of recommendation.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
CJC	650	Criminal Justice Admin	3
	651	Interpersonal Relations in CJC	3
	652	Philosophical Aspects of CJC	3
	690	Independent Study in CJC (1-3)	3
			12 crs

CRIMINAL JUSTICE AND CRIMINOLOGY (CJC)

650 Criminal Justice Administration (3) An examination of the study of the principles of administration of criminal justice agencies and the development of present and future criminal justice leaders.

651 Interpersonal Relations in Criminal Justice (3) Exploration of interpersonal relationships in an agency context. Examines issues peculiar to criminal justice agencies, including cynicism, trauma, burnout, everyday stressors, authoritarian management structures and leadership styles, peer loyalty versus organizational loyalty versus public duty, and public relations.

652 Philosophical Aspects of Criminal Justice Practice (3) Provides philosophical and moral bases for the establishment and operation of justice system agencies charged with enforcement of criminal codes and preservation of social order, including an overview of fundamental philosophical issues of justice system practices.

690 Independent Study in Criminal Justice (1-3) An opportunity to study specific topics related to the criminal justice system.
Prerequisite: permission of the instructor.
A total of 3 credits may be earned.

ENGLISH

bsu.edu/english
Robert Bell Building 297, 765-285-8580

PROGRAMS

Master of arts (MA) in English (creative writing, general, literature, and rhetoric and composition), linguistics, teaching English to speakers of other languages (TESOL), and a joint program in linguistics and TESOL; doctor of philosophy (PhD) in English (with concentration areas in applied linguistics, literature, and rhetoric and composition).

Cognates are available in composition, literary theory, literature, linguistics, TESOL, and English language arts.

MASTER OF ARTS IN ENGLISH, 30-33 credits

Master of Arts in English (Creative Writing), 33 credits

Admission requirements
Applicants must meet the admission requirements of the Graduate School and have an undergraduate grade-point average (GPA) of at least 3.0. To apply, submit a statement of purpose (750-1000 words), a sample of creative writing (8-15 pp), three letters of recommendation, and Graduate Record Examination (GRE) scores. Non-native speakers of English may submit Test of English as a Foreign Language (TOEFL) scores in place of GRE scores. Non-native speakers of English must have a TOEFL score of at least 79, or an IELTS score of at least 6.5, in order to be eligible for enrollment.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Foundation, 3 credits from			
ENG	610	Read and Writ Across Genres	3
Directed electives, 6 credits from			
ENG	605	Teaching in English Studies	3
	614	Practicum in Literary Editing	3
	635	Spec Topics in Creative Writ	3
	636	Reading as Writers	3
Workshop			
Complete 12 credits (4 courses) from this menu of writing workshops. These can be repeated for credit or students can take different workshops in a variety of genres.			
ENG	611	Workshop Creative Nonfiction	3
	612	Workshop in Fiction Writing	3
	613	Workshop in Poetry Writing	3
	615	Workshop in Screenwriting	3
Literature			
Complete two graduate courses in literature			6
Electives			
Complete one approved elective			3
(Students may repeat ENG 610 as a directed elective)			
Capstone			
CRPR	698	Creative Project (3-6)	3
			33 crs

ENG 605 is to be taken as "Creative Writing" to fulfill the directed elective course requirement.

Master of Arts in English (English Studies), 32 credits

Admission requirements
Applicants must meet the admission requirements of the Graduate School and have an undergraduate grade-point average (GPA) of at least 3.0. To apply, submit a statement of purpose (750-1000 words), a sample of scholarly or critical writing (8-15 pp double-spaced), three letters of

recommendation, and Graduate Record Examination (GRE) scores. Non-native speakers of English may submit Test of English as a Foreign Language (TOEFL) scores in place of GRE scores.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core requirements			
Approved courses in English			15-29
Research requirements			
ENG	601	Research in English Studies (3)	
	or		
RES	697	Research Paper (1-3)	
	or		
THES	698	Thesis (1-6)	3-6
ENG electives (electives outside the department are subject to departmental approval)			0-14
			32 crs

Master of Arts in English (Literature), 30 credits

Admission requirements
Applicants must meet the admission requirements of the Graduate School and have an undergraduate grade-point average (GPA) of at least 3.0. To apply, submit a statement of purpose (750-1000 words), a sample of scholarly or critical writing (8-15 pp double-spaced), three letters of recommendation, and Graduate Record Examination (GRE) scores. Non-native speakers of English may submit Test of English as a Foreign Language (TOEFL) scores in place of GRE scores.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core requirements			
ENG	601	Research in English Studies	3
	607	Literary Theory	3
15-21 credits of approved graduate courses in literature including			
American literature			6
British and World literature			
Before 1660			3
After 1660			3
Approved literature electives			3-9
Research requirement			
RES	697	Research Paper (1-3)	
	or		
THES	698	Thesis (1-6)	3-6
Electives			0-3
			30 crs

Master of Arts in English (Rhetoric and Composition), 30 credits

Admission requirements
Applicants must meet the admission requirements of the Graduate School and have an undergraduate grade-point average (GPA) of at least 3.0. To apply, submit a statement of purpose (750-1000 words), a sample of scholarly or critical writing (8-15 pp double-spaced), three letters of recommendation, and Graduate Record Examination (GRE) scores. Non-native speakers of English may submit Test of English as a Foreign Language (TOEFL) scores of at least 79 (or equivalent) in place of GRE scores.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core requirements			
ENG	601	Research in English Studies	3
	605	Teaching in English Studies (3-9)	3
	694	Classical Rhetoric	3
	699	Contemporary Theories Comp	3
Digital Literacies Course			
ENG	604	Teaching with Technology (3)	
	or		
	692	Writing Technologies (3)	3
Professional Development Course			
ENG	609	Indiana Writing Project (1-9)	
	or		
	688	Writ Program Admin (3)	
	or		
	689	Writing Cntr Res and Admin (3)	
	or		
	693	Writing in the Profession (3)	3
Approved electives, 9 credits from			
ENG	604	Teaching with Technology (3)	
	or		
	692	Writing Technologies (3)	
	688	Writ Program Admin (3)	
	689	Writing Cntr Res and Admin (3)	
	690	Seminar in Composition (3-18)	
	693	Writing in the Profession (3)	
	695	Medieval and Early Mod Rhet (3)	
	696	19th Century Rhetoric (3)	
	697	Contemporary Rhetoric (3)	
ID	601	Tchng Pract in Hi Ed (3)	
Other courses as approved by advisor. Can include either ENG 688 or 689, provided the course has not already been taken to fulfill a core requirement.			9

Research requirement

RES	697	Research Paper (1-3)	3
			30 crs

ENG 690 can be taken more than once.

MASTER OF ARTS IN LINGUISTICS, 36 credits

Admission requirements
Applicants must meet the admission requirements of the Graduate School, have an undergraduate grade-point average (GPA) of at least 3.0, and have the equivalent of at least two years of college-level study of foreign language (requirement can be met during MA program). To apply, submit a statement of purpose (750-1000 words), a sample of scholarly or critical writing (8-15 pp double-spaced), three letters of recommendation, and Graduate Record Examination (GRE) scores. Non-native speakers of English may submit Test of English as a Foreign Language (TOEFL) scores of at least 79 (or equivalent) in place of GRE scores.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*

ENG 520 or the equivalent will be required but will not count towards required credits in the degree.

Major requirements

ENG	621	Meaning and Structure in Eng	3
	623	Phonetics and Phonology	3
	625	Phonology	3
	626	Morphology and Syntax	3
	627	Sociolinguistics	3

Directed electives (at least 12 credits from the following courses):

ENG	622	History of English Language (3)	
	628	Language and Culture (3)	
	629	Topics in Applied Linguistics (3)	
	630	Contrastive Analysis (3)	
	631	Historical Linguistics (3)	
	632	Discourse Analysis (3)	
	682	Topics in Eng Linguistics (3)	
	686	Topics in Linguistics (3)	12

Electives
(3 credits, an additional course from the directed electives or any of the following):

ENG	624	Found of Sec Lang Acquisition (3)	
	684	Topics in Sec Lang Acquisition (3)	
	693	Writing in the Profession (3)	3

Research requirement

ENG	601	Research in English Studies	3
	and		
RES	697	Research Paper (1-3)	
	or		
CRPR	698	Creative Project (3 or 6)	3
			36 crs

Depending on the nature of the student's research, the student may also be advised to take one or more courses in Experimental Design and Statistics in addition to other course work.

MASTER OF ARTS IN TEACHING ENGLISH TO SPEAKERS OF OTHER LANGUAGES (TESOL), 36 credits

Admission requirements
Applicants must meet the admission requirements of the Graduate School, have an undergraduate grade-point average (GPA) of at least 3.0, and have the equivalent of at least two years of college-level study of foreign language (requirement can be met during MA program). To apply, submit a statement of purpose (750-1000 words), a sample of scholarly or critical writing (8-15 pp double-spaced), three letters of recommendation, and Graduate Record Examination (GRE) scores. Non-native speakers of English may submit Test of English as a Foreign Language (TOEFL) scores of at least 79 (or equivalent) in place of GRE scores.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*

ENG 520 or the equivalent will be required but will not count towards required credits in the degree.

Major requirements

ENG	616	Intro to Theor of Lang Learn	3
	617	Methods for Teaching ELL	3
	618	Materials Dev for Teaching ELL	3
	619	Assessment in TESOL	3
	624	Found of Sec Lang Acquisition	3

Directed electives
15 credits from

ENG	605	Teaching in English Studies (3)	
	621	Meaning and Structure in Eng (3)	
	622	History of English Language (3)	
	623	Phonetics and Phonology (3)	
	625	Phonology (3)	
	626	Morphology and Syntax (3)	
	627	Sociolinguistics (3)	
	628	Language and Culture (3)	
	629	Topics in Applied Linguistics (3)	
	630	Contrastive Analysis (3)	
	631	Historical Linguistics (3)	
	632	Discourse Analysis (3)	
	682	Topics in Eng Linguistics (3)	
	684	Topics in Sec Lang Acquisition (3)	
	686	Topics in Linguistics (3)	
	693	Writing in the Profession (3)	15

Research requirements

ENG	601	Research in English Studies	3

	and		
RES	697	Research Paper (1-3)	
	or		
CRPR	698	Creative Project (3 or 6)	3
			36 crs

Depending on the nature of the student's research, the student may also be advised to take one or more courses in Experimental Design and Statistics in addition to other course work.

MASTER OF ARTS IN TEACHING ENGLISH TO SPEAKERS OF OTHER LANGUAGES (TESOL) AND LINGUISTICS, 45 credits

Admission requirements
Applicants must meet the admission requirements of the Graduate School, have an undergraduate grade-point average (GPA) of at least 3.0, and have the equivalent of at least two years of college-level study of foreign language (requirement can be met during MA program). To apply, submit a statement of purpose (750-1000 words), a sample of scholarly or critical writing (8-15 pp double-spaced), three letters of recommendation, and Graduate Record Examination (GRE) scores. Non-native speakers of English may submit Test of English as a Foreign Language (TOEFL) scores of at least 79 (or equivalent) in place of GRE scores.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*

ENG 520 or the equivalent will be required but will not count towards required credits in the degree.

Major requirements

ENG	616	Intro to Theor of Lang Learn	3
	617	Methods for Teaching ELL	3
	618	Materials Dev for Teaching ELL	3
	619	Assessment in TESOL	3
	621	Meaning and Structure in Eng	3
	623	Phonetics and Phonology	3
	624	Found of Sec Lang Acquisition	3
	625	Phonology	3
	626	Morphology and Syntax	3
	627	Sociolinguistics	3

Directed electives (at least 9 credits from the following courses):

ENG	605	Teaching in English Studies (3)
	622	History of English Language (3)
	628	Language and Culture (3)
	629	Topics in Applied Linguistics (3)
	630	Contrastive Analysis (3)
	631	Historical Linguistics (3)
	632	Discourse Analysis (3)
	682	Topics in Eng Linguistics (3)
	684	Topics in Sec Lang Acquisition (3)
	686	Topics in Linguistics (3)
	693	Writing in the Profession (3)

Research requirements			9
ENG	601	Research in English Studies	3
	and		
RES	697	Research Paper (1-3)	
	or		
CRPR	698	Creative Project (3 or 6)	3
			45 crs

Depending on the nature of the student's research, the student may also be advised to take one or more courses in Experimental Design and Statistics in addition to other course work.

DOCTOR OF PHILOSOPHY (PhD) IN ENGLISH, 90 credits

Concentration in Applied Linguistics

Admission requirements
Applicants must meet the admission requirements of the Graduate School and hold an earned master's or equivalent degree with a graduate grade-point average (GPA) of at least 3.3. To apply, submit a statement of purpose (750-1000 words), Graduate Record Examination (GRE) scores, a sample of scholarly or critical writing (15-25 pp double-spaced), and three letters of recommendation. Non-native speakers of English must also submit Test of English as a Foreign Language (TOEFL) scores of at least 81 (or equivalent).

Degree requirements
The PhD in English with a concentration in applied linguistics requires a total of 48 graduate credits and a dissertation (with 10 associated credits to be taken at Ball State). Up to 32 credits from the masters degree may be applied to the total of 90 credits for the doctoral degree. Students may elect to take one or more cognates in an appropriate department or university area. ENG 520 Introduction to Linguistics and a graduate research course are prerequisites to the program. Students who have not taken them or done equivalent work must take ENG 520 or an additional 3 credits of ENG 601, but these courses will not be included in the 48 credits of course work required for graduation. Before writing comprehensive examinations, candidates must demonstrate competence in two foreign languages, other than English, relevant to their research.

Transfer credit (up to)	32

Required core courses
Students must complete the following four courses as early as possible in the program.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
ENG	621	Meaning and Structure in Eng	3
	623	Phonetics and Phonology	3
	626	Morphology and Syntax	3

	627	Sociolinguistics	3

At the end of the first year of doctoral study, doctoral students will undergo a review to determine their fitness to continue in the program. This review will examine their academic and professional performance to this point in the doctoral program. Details regarding this review will be outlined during the fall semester each year, and the due date for review materials will be set. Students will have at least one month to prepare the materials to be turned in at some point during the spring semester. Students who are not advanced will be permitted to complete a master's degree but will not be permitted to continue in the doctoral program.

Directed electives
Students must choose at least 18 credits from the following courses. Students may be advised to take one or more courses in Experimental Design and Statistics in addition to other course work.

ENG	622	History of English Language (3)	
	624	Found of Sec Lang Acquisition (3)	
	625	Phonology (3)	
	628	Language and Culture (3)	
	629	Topics in Applied Linguistics (3)	
	630	Contrastive Analysis (3)	
	631	Historical Linguistics (3)	
	632	Discourse Analysis (3)	
	682	Topics in Eng Linguistics (3)	
	684	Topics in Sec Lang Acquisition (3)	
	686	Topics in Linguistics (3)	
	693	Writing in the Profession (3)	
	701	Independent Study (1-3)	
	729	Adv Topics in Linguistics (3)	18

Electives	15

Research requirement

DISS	799	Doctoral Dissertation (1-24)	10
ENG	601	Research in English Studies	3
			90 crs

Concentration in Literature

Admission requirements
Applicants must meet the admission requirements of the Graduate School and hold an earned master's or equivalent degree with a graduate grade-point average (GPA) of at least 3.3. To apply, submit a statement of purpose (750-1000 words), Graduate Record Examination (GRE) scores, a sample of scholarly or critical writing (15-20 pp double-spaced), and three letters of recommendation. Non-native speakers of English must also submit Test of English as a Foreign Language (TOEFL) scores of at least 81 (or equivalent).

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
ENG	601	Research in English Studies	3
	605	Teaching in English Studies (3-9)	6
	607	Literary Theory	3
	693	Writing in the Profession	3

3 credits in each of the following areas:
(must include at least 3 credits of American Literature)
Literature to 1700;
Literature 1700-1800;
Literature 1800-1900;
Literature 1900-present. 12

Two courses in Diverse Literatures; International, Ethnic American, Gender, other 6

Directed electives
At least 15 credits of electives in courses chosen in consultation with advisor. 15

Electives 24

DISS	799	Doctoral Dissertation (1-24)	18
			90 crs

ENG 605 is to be taken once as "Composition" and a second time as "Literature."

Concentration in Rhetoric and Composition

Applicants must meet the admission requirements of the Graduate School and hold an earned master's or equivalent degree with a graduate grade-point average (GPA) of at least 3.3. To apply, submit a statement of purpose (750-1000 words), Graduate Record Examination (GRE) scores, a sample of scholarly or critical writing (15-25 pp double-spaced), and three letters of recommendation. Non-native speakers of English must also submit Test of English as a Foreign Language (TOEFL) scores of at least 81 (or equivalent).

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core courses			
ENG	601	Research in English Studies	3
	604	Teaching with Technology (3)	
	or		
	692	Writing Technologies (3)	3
	688	Writ Program Admin (3)	
	or		
	689	Writing Cntr Res and Admin (3)	3
	693	Writing in the Profession	3
	694	Classical Rhetoric	3
	699	Contemporary Theories Comp	3

Students must choose either ENG 688 or 689 to fulfill a core requirement.

24 additional credits from

ENG	604	Teaching with Technology (3)	
	or		

	692	Writing Technologies (3)	
	605	Teaching in English Studies (3-9)	
	609	Indiana Writing Project (3)	
	688	Writ Program Admin (3)	
	or		
	689	Writing Cntr Res and Admin (3)	
	690	Seminar in Composition (3-18)	
	695	Medieval and Early Mod Rhet (3)	
	696	19th Century Rhetoric (3)	
	701	Independent Study (1-3)	
	702	Directed Study for Comp Exams (3-6)	
ID	601	Tchng Pract in Hi Ed (3)	
Other courses as approved by advisor.			24

Can include either ENG 688 or 689, provided the course has not already been taken to fulfill a core requirement. ENG 690 can only be taken for 3 credits per semester.

Courses from Master's degree or additional electives			32
DISS	799	Doctoral Dissertation (1-24)	16
			90 crs

For purpose of advising, enrollment in all graduate courses in the Department of English requires permission of the department.

CERTIFICATE PROGRAMS

Certificate in Teaching English to Speakers of Other Languages (TESOL), 15 credits

Admission requirements
Applicants pursuing only a certificate program will be admitted as non-degree students. A student who completes a certificate, however, can apply these credits to a degree-granting program upon receiving departmental approval. An applicant must complete an application from the Department of English and the Graduate School and provide two copies of official transcripts from the institution granting the baccalaureate degree and each institution attended for undergraduate and graduate work.

A. Standards for admission:
   - Hold an earned bachelor's degree from a college or university this is accredited by its regional accrediting institution.
   - Have an undergraduate cumulative grade-point average (GPA) of at least 3.0 on a 4.0 scale (all undergraduate course work, including work completed prior to the baccalaureate degree, is used to calculate the GPA).

B. A student who is currently enrolled in a graduate program of study leading to a degree, who wishes simultaneously to pursue this graduate certificate, must complete the appropriate application, available from the Department of English.

C. Graduate students enrolled only in certificate programs may not hold graduate assistantships.

D. Students may be enrolled full- or part-time in the certificate program.

E. Completion of a graduate certificate does not guarantee admission into a graduate degree program.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
ENG	616	Intro to Theor of Lang Learn	3
	617	Methods of Teaching ELL	3
	618	Materials Dev for Teaching ELL	3
	619	Assessment in TESOL	3
	620	Eng Linguistics for Educators	3
			15 crs

Certificate in Teaching Writing, 15 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Complete 9 credits from			
ENG	604	Teaching with Technology (3)	
	605	Teaching in English Studies (3)	
	609	Indiana Writing Project (3)	
	699	Contemporary Theories Comp (3)	
ID	601	Tchng Pract in Hi Ed (3)	9
6 credits of additional coursework from the above list and/or from the following courses:			
ENG	605	Teaching in English Studies (3)	
	610	Read and Writ Across Genres (3)	
	611	Workshop Creative Nonfiction (3)	
	612	Workshop in Fiction Writing (3)	
	613	Workshop in Poetry Writing (3)	
	615	Workshop in Screenwriting (3)	
	617	Methods for Teaching ELL (3)	
	620	Eng Linguistics for Educators (3)	
	670	Seminar in English Ed (3)	
	672	Workshop in Eng Lang Arts (3)	
	673	Eng Lang and Grammar in Schls (3)	
	674	Teach Eng LA Elem Grades (3)	
	675	Teach Writing Sec Schools (3)	
	690	Seminar in Composition (3)	
	692	Writing Technologies (3)	6
			15 crs

ENG 605 must be taken first with a "Composition" emphasis. It may subsequently be taken with either a "Literature" or "Creative Writing" emphasis.
ENG 609 may only count 3 credits toward this certificate.
ENG 605, 670, 672, and 690 are "variable topic courses"; they may count towards this certificate only when the topics covered relate to the teaching of writing.
ID 601 is only available as a course option for English teaching assistants.

ENGLISH (ENG)

520 Introduction to Linguistics (3) Basic concepts, scope, and methodology of the science of language.
Prerequisite: permission of the department chairperson.
Not open to students who have credit in ENG 320.

588 English Studies Abroad (3-6) English studies at approved study abroad sites. Credit applied to department requirements as approved by the department chairperson.
Prerequisite: permission of the department chairperson.
A total of 6 credits may be earned.

601 Research in English Studies (3) Research methods in composition, English education, language and linguistics, and/or literature.
Prerequisite: permission of the department chairperson.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.

602 English Internship (1-6) Supervised work experience appropriate for English graduate students. Assignments may be part-time or full-time, paid or unpaid, for one or more semesters in approved businesses or organizations.
Prerequisite: permission of the internship coordinator or department chairperson.
A total of 6 credits may be earned. A maximum of 3 credits may apply as elective credit toward the MA or PhD in English.

603 Independent Study (1-3) Independent study and research in composition, creative writing, English education, language and linguistics, or literature.
Prerequisite: permission of the department chairperson.
A total of 9 credits may be earned, but no more than 3 in any one semester or term.

604 Teaching with Technology (3) Theory and practice of using major technologies in the teaching of English; primary emphasis on postsecondary level. Focuses on practical activities related to planning and carrying out text-intensive teaching with technology.
Prerequisite: permission of the department chairperson.

605 Teaching in English Studies (3-9) Instruction and, where appropriate, close supervision in pedagogical theory and practice and other proficiencies and skills required for success in university teaching.
Prerequisite: permission of the department chairperson.
A total of 9 credits may be earned.

607 Literary Theory (3) Contemporary critical theory and its application to selections from the various forms of literature.
Prerequisite: permission of the department chairperson.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.

608 Seminar in Theory (3) Topics in theory. Advanced study of the work of specified theorists or in specified theoretical paradigms.
Prerequisite: permission of the department chairperson.
A total of 9 credits may be earned, but no more than 3 in any one semester or term.

609 Indiana Writing Project (1-9) Training in writing, research, and teaching according to the National Writing Project model. Taught by the Indiana Writing Project (IWP) director or codirector assisted by teacher consultants. Applies to a degree only with the department chairperson's permission. The course is not intended to substitute for certification or degree requirements.
Prerequisite: permission after application to the IWP director.
A total of 9 credits may be earned.

610 Reading and Writing Across the Genres (3) A comprehensive introduction to graduate creative writing, with study and practice of the forms and techniques of fiction, poetry, and creative nonfiction.
Prerequisite: permission of the department chairperson.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.

611 Workshop in Creative Non-Fiction (3) Instruction, practice, and criticism in a workshop format.
Prerequisite: permission of the department chairperson.
A total of 9 credits may be earned, but no more than 3 in any one semester or term.

612 Workshop in Fiction Writing (3) Instruction, practice, and criticism in a workshop format.
Prerequisite: permission of the department chairperson.
A total of 9 credits may be earned, but no more than 3 in any one semester or term.

613 Workshop in Poetry Writing (3) Instruction, practice, and criticism in a workshop format.
Prerequisite: permission of the department chairperson.
A total of 9 credits may be earned, but no more than 3 in any one semester or term.

614 Practicum in Literary Editing (3) History and philosophy of literary publishing, with practical experience in editorial work and production in print and electronic formats.
Prerequisite: permission of the department chairperson.

615 Workshop in Screenwriting (3) Instruction, practice, and criticism in screenwriting in a workshop format.
Prerequisite: permission of the department chairperson.
A total of 9 credits may be earned, but no more than 3 in any one semester or term.

616 Introduction to Theories of Language Learning (3) Psychological, sociocultural, and linguistic basis of language learning; research and theoretical perspectives related to second language teaching.

Prerequisite: permission of the department chairperson.
Prerequisite or parallel: ENG 520 or 620.

617 Methods for Teaching English Language Learners (3) Study and practice of a variety of methods in teaching English language learners in second or foreign language settings.
Prerequisite: permission of the department chairperson.
Prerequisite or parallel: ENG 520 or 620.

618 Materials Development for Teaching English Language Learners (3) Focus on the use and design of materials to meet the specific needs of language learners at various levels of proficiency in second and foreign language settings.
Prerequisite: ENG 616 or 617; permission of the department chairperson.

619 Assessment in Teaching English to Speakers of Other Languages (3) Explores different methods of assessing language performance in TESOL. Assessment of different language skills (i.e., listening, speaking, writing, reading, grammar) will be considered. Both quantitative and qualitative, formal and informal, measures will be covered.
Prerequisite: ENG 616 or 617; permission of the department chairperson.

620 English Linguistics for Educators (3) An introduction for ESL teachers to fundamentals of linguistics, with special attention to the structure and use of English and how its features compare to those of other languages frequently spoken by ESL learners. This includes sound systems, vocabulary, grammar, differences between oral and written language use, and the intersection of language and culture.
Not open to students who have credit in ENG 334.

621 Meaning and Structure in English (3) An integrated study of the syntax, semantics, and pragmatics of the English language. Introduces key concepts in syntactic, semantic, and pragmatic analysis, and focuses on aspects of English lexical and grammatical structure most problematic in the teaching of English as a second/foreign language.
Prerequisite: ENG 520; permission of the department chairperson.

622 History of the English Language (3) History of the development of the phonological, morphological, lexical, and syntactical systems of the English language from its beginnings to the present day.
Prerequisite: permission of the department chairperson.

623 Phonetics and Phonology (3) Speech sounds and the linguistic methods employed in their description, classification, and analysis as elements in language systems. Relationships among speech sounds in a language.
Prerequisite: permission of the department chairperson.

624 Foundations of Second Language Acquisition (3) Covers the foundations of second language acquisition theories and research, and introduces various issues related to second language learning and teaching.
Prerequisite: ENG 616, 617; permission of the department chairperson.

625 Phonology (3) General characteristics of speech sounds and of the systematic relationships they exhibit in natural languages. Emphasizes current research in generative phonology.
Prerequisite: ENG 623; permission of the department chairperson.

626 Morphology and Syntax (3) A detailed examination of the patterns of word and phrase building in natural languages. Emphasizes both formal and functional approaches.
Prerequisite: ENG 520; permission of the department chairperson.

627 Sociolinguistics (3) Examines the correlation of linguistic variation with geographic areas and social variables such as sex, age, socioeconomic status, and ethnicity.
Prerequisite: ENG 320 or 520; permission of the department chairperson.

628 Language and Culture (3) Examines the ways members of different cultures organize and exploit their linguistic resources. Topics include registers and forms of address, verbal art, conversational strategies, code-switching, language maintenance and death, and cross-cultural miscommunication.
Prerequisite: permission of the department chairperson.

629 Topics in Applied Linguistics (3) Intensive study of a selected topic or closely related set of topics relevant to applied linguistics. May be repeated if the topic changes.
Prerequisite: ENG 520; 9 additional credits in applied linguistics or permission of the department chairperson.
A total of 9 credits may be earned, but no more than 3 in any one semester or term.

630 Contrastive Analysis (3) Study of language universals and comparison of the structural systems of natural languages.
Prerequisite: ENG 520, 621; knowledge of a foreign language; permission of the department chairperson.

631 Historical Linguistics (3) Scientific study of the process of linguistic change. A survey of the methods and principles used in historical and comparative linguistic analysis.
Prerequisite: ENG 623, 625; permission of the department chairperson.

632 Discourse Analysis (3) A detailed examination of the principal methods of analyzing oral and written discourse.
Prerequisite: ENG 520 or 621; permission of the department chairperson.

633 Practicum in Teaching English to Speakers of Other Languages (1-6) Practical experience related to the teaching of English as a second or foreign language.
Prerequisite: permission of the department chairperson.

Parallel: ENG 616 or 617.
A total of 6 credits may be earned.

635 Special Topics in Creative Writing (3) Variable topics course in creative writing.
Prerequisite: permission of the department chairperson.
A total of 6 credits may be earned, but not more than 3 in any one semester or term.

636 Reading as Writers (3) Reading and analysis of imaginative and critical works in a selected area of creative writing with an emphasis on craft.
Prerequisite: permission of the department chairperson.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.

640 Studies in American Authors (3) Focused study of the works and lives of selected American authors.
Prerequisite: permission of the department chairperson.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.

641 Early American Literature (3) Examination of selected literary works written through 1830. Attention will also be given to cultural, political, and intellectual contexts, and to current scholarship on the period.
Prerequisite: permission of the department chairperson.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.

642 Literature of the American Renaissance (3) Examination of literary works written from 1830 to 1865. Attention will also be given to cultural, political, and intellectual contexts, and to current scholarship on the period.
Prerequisite: permission of the department chairperson.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.

643 American Realism and Naturalism (3) Examination of selected literary works from the middle of the nineteenth century into the earliest part of the twentieth century. Considers authors, their work, their philosophies of art, and current scholarship on the period.
Prerequisite: permission of the department chairperson.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.

644 Early Twentieth-Century American Literature (3) Examination of literary works and intellectual and aesthetic movements during the first half of the twentieth century. Attention will be given to cultural, political, and intellectual contexts, and to current scholarship on the period.
Prerequisite: permission of the department chairperson.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.

645 Contemporary American Literature (3) Examination of literary works from 1945 to the present.
Prerequisite: permission of the department chairperson.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.

646 Studies in American Ethnic Literature (3) Study of literary works that express the experiences and cultures of American population groups whose voices have not been adequately represented in the literary and social mainstream.
Prerequisite: permission of the department chairperson.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.

647 African American Literature (3) Examines African American literature focusing on the role of vernacular speech and music; the social status of African Americans and their relations with other racial groups; the connections between race, class, gender, and sexuality; and relevant literary criticism and theory.
Prerequisite: permission of the department chairperson.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.

650 Seminar in Literature (3) Special topics in literature. Advanced study of a time period, form, nation, and/or specific issue or problem in literary studies.
Prerequisite: permission of the department chairperson.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.

651 Studies in the Novel (3) Special topics in the novel. Advanced study of a time period, form, nation and/or specific issue or problem.
Prerequisite: permission of the department chairperson.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.

652 Studies in Poetry (3) Special topics in poetry. Advanced study of a time period, form, nation and/or specific issue or problem.
Prerequisite: permission of the department chairperson.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.

653 Studies in Drama (3) Special topics in drama. Advanced study of a time period, form, nation and/or specific issue or problem.
Prerequisite: permission of the department chairperson.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.

654 Film Studies (3) Investigation of theoretical and critical approaches to the cinematic text, which may include studies of language, form, history, reception, narrative, culture, ideological formation, technological innovation, and representation.
Prerequisite: permission of the department chairperson.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.

655 Gender Studies (3) Exploration of issues in gender theory, which may include studies of power, language, literature, culture, identity, sexuality, representation, and pedagogy, as well as interdisciplinary connections to other political and philosophical theories of race, class, gender, ethnicity, and nationality.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

656 Cultural Studies (3) Investigation of cultural studies as it relates to specific texts, social themes, and issues.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

657 Post-Colonial Studies (3) Focused study of post-colonial literature and literary theory.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

659 Workshop in Literature (3-9) Specific themes or specific units of American, British, or world literature. Stresses both the cooperative efforts of participants and faculty and the critical approaches to literature that are most useful in reading and teaching the literature.

Prerequisite: permission of the department chairperson.

A total of 9 credits may be earned.

660 Studies in British Authors (3) Focused study of the works and lives of selected British authors.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

661 Early British Studies (3) Intensive study of early British literature emphasizing language, sources, structure, and significance of the works. Aspects of early culture pertinent to the works will be considered.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

662 Renaissance and Seventeenth-Century Studies (3) Study of selected works of English literature of the Tudor, Stuart, and Commonwealth periods (1485-1660) exclusive of Shakespeare.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

663 Studies in Shakespeare (3) Study of major Shakespearean dramas and major Shakespearean criticism. Some attention given to the sonnets.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

664 Studies in English Literature of the Restoration and Eighteenth Century (3) An extensive study of British authors of the period 1660-1830.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

665 Romantic Studies (3) Examination of literary works from the Romantic period. Attention given to the cultural and intellectual contexts of the period as well as current scholarship relevant to the period.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

667 Victorian Studies (3) Examination of literature of the Victorian period. Attention given to cultural and intellectual contexts and to the current scholarship relevant to the period.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

668 Early Twentieth-Century British Literature (3) Focused study of selected works in early-twentieth-century British literature and culture.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

669 Contemporary British Literature (3) Focused study of selected works in contemporary British literature and culture.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

670 Seminar in English Education (3-9) Investigations of special topics related to the teaching of English.

Prerequisite: permission of the department chairperson.

A total of 9 credits may be earned.

671 Reading Texts in the English Classroom (3) Emphasizes current theoretical and research bases for effective reading of texts in the English classroom.

Prerequisite: permission of the department chairperson.

672 Workshop in English Language Arts (3-9) A study of the objectives, materials, and teaching techniques employed at the various levels of English language arts instruction with emphasis on application to specific classroom situations. Course content and requirements designed to meet individual needs and interest.

Prerequisite: permission of the department chairperson.

A total of 9 credits may be earned.

673 English Language and Grammar in the Schools (3) An introduction to the scientific study of the English language. The relation of contemporary language description and research to the teaching of English skills in the schools.

Prerequisite: permission of the department chairperson.

674 Teaching English Language Arts in the Elementary Grades (3) A critical review of trends and issues and their implications for the teacher in the elementary grades.

Prerequisite: permission of the department chairperson.

675 Teaching Writing in Secondary Schools (3) Advanced pedagogy, theory, research, and current issues in teaching writing, language, and visual representation, along with the use of performance assessments in the English Language Arts classroom.

Prerequisite: permission of the department chairperson.

676 Teaching Literature, Speaking and Listening in Secondary Schools (3) Advanced pedagogy, theory, research, and current issues in teaching literature, speaking, and listening in the English Language Arts classroom.

Prerequisite: permission of the department chairperson.

677 Literature for Young Children (2) Appraisal of literature for young children. Of special interest to students of early-childhood education.

Prerequisite: permission of the department chairperson.

678 Children's Literature (3) Overview of the field of children's literature and intensive study of the various genres. Includes study of theoretical issues, research, and recommended practice in teaching children's literature along with the study of a sampling of recently published children's books.

Prerequisite: permission of the department chairperson.

679 Young Adult Literature (3) Recent literature suitable for students of varying abilities in junior high/middle and secondary schools. Emphasizes the actual reading of selections with some attention given to methodology.

Prerequisite: permission of the department chairperson.
Not open to students who have credit in ENG 414.

680 History of English Education (3) A comprehensive review of the history of English education and the development of English as a school subject in the core curriculum.

Prerequisite: permission of the department chairperson.

681 Reading in English Language Arts Education (3) A critical review of significant research in English education and its implications for teaching English in the schools.

Prerequisite: permission of the department chairperson.

682 Topics in English Linguistics (3) Intensive study of a selected topic or closely related set of topics relevant to English linguistics.

Prerequisite: ENG 520; permission of the department chairperson.

A total of 9 credits may be earned, but no more than 3 in any one semester or term.

684 Topics in Second Language Acquisition (3) Intensive study of a selected topic or closely related set of topics relevant to Second Language Acquisition.

Prerequisite: ENG 520 and 616; permission of the department chairperson.

A total of 9 credits may be earned, but no more than 3 in any one semester or term.

686 Topics in Linguistics (3) Intensive descriptive, theoretical, or applied study of a selected topic or closely related set of topics relevant to linguistics and any of the world's languages.

Prerequisite: ENG 520; permission of the department chairperson.

A total of 9 credits may be earned, but no more than 3 in any one semester or term.

688 Writing Program Administration (3) A historical, theoretical, and practical overview of issues involved in writing program administration. Focus on directing first-year writing programs, but with some attention to writing centers, WAC/WID, and other types of programs. Includes readings and discussion of management, curriculum, faculty development, assessment, research, and institutional navigation.

Prerequisite: permission of the department chairperson.

689 Writing Center Research and Administration (3) Exploration of historical, theoretical, and empirical writing center scholarship. Intended to prepare graduate students for future administration positions.

Prerequisite: approval by the department chairperson.

690 Seminar in Composition (3-18) Special research problems in English composition using recognized techniques of research, extensive readings in selected texts, group discussions, and conferences.

Prerequisite: permission of the department chairperson.
A total of 18 credits may be earned.

692 Writing Technologies (3) Examination of relationships among literacy, technology, and English studies. Includes a historical approach to literacy, with major attention to how past and present technologies of literacy affect culture and education. Will explore issues and practices in laboratory sessions.

Prerequisite: permission of the department chairperson.

693 Writing in the Profession (3) Directed writing in some of the modes required in the academic profession of English studies, with a view toward producing effective, publishable prose.

Prerequisite: permission of the department chairperson.

694 Classical Rhetoric (3) A survey of the history and development of classical rhetoric in English composition. Special research problems in the explication of standard literary texts from a classical rhetorical perspective. Extensive readings in selected texts, some in translations from Latin and Greek.

Prerequisite: permission of the department chairperson.

695 Medieval and Early Modern Rhetoric (3) A survey of Western rhetorical theory and practice from the fifth into the seventeenth century. Offers insight into the vocation and impact of rhetoric in the medieval and early modern period, with emphasis on implications for literacy and education.

Prerequisite: permission of the department chairperson.

696 Nineteenth-Century Rhetoric (3) Survey of the nineteenth-century theories of composition that established the roots of contemporary teaching practices. Special research problems from a nineteenth-century rhetorical perspective using recognized techniques of research, extensive readings in selected texts, group discussions, and conferences.

Prerequisite: permission of the department chairperson.

697 Contemporary Rhetoric (3) Overview of major contemporary rhetorical theories and practice, focusing on several major rhetoricians and recent developments in the field. Special research problems using recognized techniques of research, extensive reading in selected texts, group discussions, and conferences.

Prerequisite: permission of the department chairperson.

698 Rhetoric and Poetics (3) Covers identification and theories of poetics in all genres. Includes classical schemes and tropes and contemporary theories about epistemology and figures of speech. Surveys Aristotle's poetics through contemporary criticism.

Prerequisite: permission of the department chairperson.

699 Contemporary Theories of Composition (3) Focuses on theories of writing prominent during the past hundred years, contextualizing those theories in terms of history, political movements, theoretical milieux, and educational changes. Connections made to similar shifts in perspective across the academic landscape.

Prerequisite: permission of the department chairperson.

701 Independent Study (1-3) Intensive study of a topic in literature, composition, or linguistics not ordinarily addressed in a regularly scheduled course. Intended to prepare doctoral students on a tutorial basis to research and develop an original dissertation topic.

Prerequisite: permission of the department chairperson.

A total of 9 credits may be earned, but no more than 3 in any one semester or term.

702 Directed Study for Comprehensive Exams (3-6) Intensive study aimed at preparing for comprehensive exams at the doctoral level. Course involves independent study of the exam reading list as well as guided preparation through practice exam questions to be developed with and evaluated by the exam committee chair or representative.

A total of 6 credits may be earned.

Open only to doctoral students.

729 Advanced Topics in Linguistics (3) Intensive advanced study of a selected topic or closely related set of topics relevant to linguistics and applied linguistics.

Prerequisite: permission of the department chairperson.

A total of 9 credits may be earned, but no more than 3 in any one semester or term.

GEOGRAPHY

bsu.edu/geog
Cooper Life Science Building CL 425, 765-285-1776

MASTER OF SCIENCE (MS) IN GEOGRAPHY, 30 credits

This program is designed to provide a solid background in skills such as remote sensing, GIS, and advanced cartography to be applied to various sub-disciplines of geography and allied fields. The demands for skilled work force in these fields continues to expand in industries, business, and government, both locally and nationally. The Internet has paved the way for different types of archived and present data to be available to the public and government in a timely manner. With globalization, employers are looking for people who are skilled in the above fields. An intricate combination of several factors such as growing and changing world economy, changing environment, mobility of multinational corporations, and data availability through various sources have created a major demand for remote sensing and GIS techniques. The specialized courses in remote sensing, GIS, and advanced cartography are designed for students who are interested in handling various types of spatial data.

The Department of Geography is equipped with leading software in remote sensing, GIS, and cartography. The department's experienced faculty members can accommodate the needs of students with varied interests.

Admission requirements
Applicants must meet the admission requirements of the Graduate School.

Degree requirements
Requires 30 credits, including the research requirement. Undergraduate deficiencies must be fulfilled as needed.

Specialized programs apply state-of-the-art technologies such as remote sensing, geographic information systems, and advanced cartography in various subdisciplines of geography, atmospheric science, and allied sciences. The requirements are flexible and allow students to arrange programs of study that will serve as a basis for further graduate study; as preparation for positions in industry, business, and government; or as a way to meet the immediate and changing needs of teachers and educators.

Course requirements
All students must complete 9 credits of core courses, 15 credits of directed electives, and 6 credits of Thesis (THES 698).

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core requirements, 9 credits			
GEOG	610	History of Geographic Thought	3
	615	Research Methods in Geography	3
	618	Quant Methods in Environ Geog	3
Directed electives, 15 credits from			
GEOG	540	Cartograp Visual Spatial Data (3)	
	542	Introduction to Remote Sensing (3)	
	543	Advanced Remote Sensing (3)	
	544	Adv Geog Info Systems Analysis (3)	
	545	GIS Apps Design and Develop (3)	
	546	Sem Adv Techniq Remote Sensing (3)	
	548	Geog Information System Design (3)	
	570	Political Geography (3)	
	614	Problems in Teaching Earth Sci (3-6)	
	620	Seminar in Geography (3)	
	625	GIS for Environmental Science (3)	
	630	Special Topics in Cartography (3)	
	635	Special Topics in Remote Sens (3)	
	640	Special Topics in Atmos Sci (3)	
	680	Distant Areas Field Studies (1-6)	
	690	Professional Internship (1-3)	
	695	Special Studies in Geography (1-3)	
METC	525	Physical Meteorology (3)	
	530	Weather Analysis (3)	
	531	Global Climatology (3)	
	532	Climate Chng and Modification (3)	
	534	Atmospheric Hazards (3)	
	535	Satellite, Radar, & Forecastng (3)	
	547	Thermodynamic Meteorology (3)	
	549	Synoptic Meteorology (3)	
	550	Mesoscale Meteorology (3)	
	551	Dynamic Meteorology (3)	
	590	Field Obs Severe Local Storms (6)	15
Thesis requirement			
THES	698	Thesis (1-6)	6
			30 crs

MINOR IN GIScience, 15 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core requirements, 6 credits			
GEOG	542	Introduction to Remote Sensing	3
	544	Adv Geog Info Systems Analysis	3
9 credits from			
GEOG	543	Advanced Remote Sensing (3)	
	545	GIS Apps Design and Develop (3)	
	546	Sem Adv Techniq Remote Sensing (3)	
	548	Geog Information System Design (3)	
	625	GIS for Environmental Science (3)	
	635	Special Topics in Remote Sens (3)	9
			15 crs

CERTIFICATE PROGRAMS

Certificate in Geographic Information Science (GIScience), 15 credits

Admission requirements
Applicants must meet the regular admission requirements of the Graduate School and submit a statement of interest letter to the department.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
15 credits from			
GEOG	540	Cartograp Visual Spatial Data (3)	
	542	Introduction to Remote Sensing (3)	
	543	Advanced Remote Sensing (3)	
	544	Adv Geog Info Systems Analysis (3)	
	545	GIS Apps Design and Develop (3)	
	548	Geog Information System Design (3)	
	635	Special Topics in Remote Sens (3)	
	690	Professional Internship (1-3)	
			15 crs

Certificate in Professional Meteorology and Climatology, 15 credits

Admission requirements
Applicants must meet the regular admission requirements of the Graduate School and submit a statement of interest letter to the department. Students are also expected to have had the following course prerequisite requirements: two semesters of calculus-based physics; two semesters of calculus; and one introductory meteorology or climatology course. Students that have not completed these prerequisite classes may apply for a probationary status.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
15 credits from			
METC	525	Physical Meteorology (3)	
	530	Weather Analysis (3)	
	531	Global Climatology (3)	

535 Satellite, Radar, & Forecastng (3)
547 Thermodynamic Meteorology (3)
549 Synoptic Meteorology (3)
550 Mesoscale Meteorology (3)
551 Dynamic Meteorology (3)

15 crs

GEOGRAPHY (GEOG)

540 Cartography and Visualization of Spatial Data (3) Introduction to cartographic methods for the visualization and analysis of geographic phenomena. Principles of design are stressed with particular emphasis on methods for symbolizing point, line, and area elements, and the principles and use of color in cartography. Students produce publication quality maps using an industry standard software.

Not open to students who have credit in GEOG 340.

542 Introduction to Remote Sensing (3) Principles of remote sensing and its applications on Earth resources. Topics include the physics of remote sensing, aerial photo interpretation, photogrammetry, multispectral, hyperspectral, thermal infrared remote sensing, RADAR/LIDAR, remote sensing of vegetation, water, and soils.

Not open to students who have credit in GEOG 342.

543 Advanced Remote Sensing (3) Digital image processing techniques utilized to analyze remotely-sensed data. Topics include remote sensing data collection, image pre-processing, image enhancement, image classification, post classification analysis, and multi-temporal data analysis for change detection.

Prerequisite: GEOG 542.

Not open to students who have credit in GEOG 343.

544 Advanced Geographic Information Systems Analysis (3) Examination and use of analysis techniques in Geographic Information Systems (GIS). Introduction to basic GIS programming. Diagramming GIS logic and processing flows. Exposure to widely used GIS data models.

Prerequisite: GEOG 240, 265; or permission of the instructor.

Not open to students who have credit in GEOG 344.

545 Geographic Information Systems Applications Design and Development (3) Fundamentals of geographic information system (GIS) programming. Develop and implement customized GIS applications. Exposure to widely used GIS software-programming environments.

Prerequisite: GEOG 265, 544; or permission of the instructor.

Not open to students who have credit in GEOG 445.

546 Seminar in Advanced Techniques in Remote Sensing (3) Advanced techniques applied to remotely-sensed data using state-of-the-art software. Review of current methods of computer and manual interpretation techniques. Includes active participation in classroom presentations.

Prerequisite: GEOG 542, 543; or permission of the instructor.

Not open to students who have credit in GEOG 443.

548 Geographic Information System Design (3) Principles of Geographic Information System (GIS) design. Implementation of GIS technology. Database and user-interface design. Practical experience applying advanced GIS tools to analyze spatial data. Workshop format requires student-motivated projects.

Prerequisite: GEOG 544.

Not open to students who have credit in GEOG 448.

570 Political Geography (3) Problems and issues surrounding the geographic distribution of political actions and outcomes in the context of globalization. Topics include war and peace, access to natural resources, nationalism, democratization, terrorism, and the politics of identity.

610 History of Geographic Thought (3) Focuses on the role of geography in the evolution of the physical and social sciences. Traces paradigms from the premodern period of geography through its emergence as an academic discipline to its present-day applications and theory.

614 Problems in the Teaching of Earth Science (3-6) Primarily for experienced teachers: discussion and solution of problems teachers have had in teaching the concepts of earth science, physical geography, and geology.

A total of 6 credits may be earned.

615 Research Methods in Geography (3) Examination of research-related topics relevant to first-year graduate study in geography. Focuses on use of the scientific method in solving geographic problems, although topics such as ethics, integrity, professionalism, philosophy, research project designs, and professional presentations are covered.

618 Quantitative Methods in Environmental Geography (3) A study of quantitative methods used in geographic research and environmental studies that focuses on the solution of spatial problems. Topics covered in this course include, but are not limited to, descriptive statistics, data visualization, inferential statistics, point and area pattern analysis, correlation/regression analysis, and geostatistics.

Prerequisite: MATH 221 or equivalent, or permission of the instructor.

620 Seminar in Geography (3) Small group discussion of geographic problems selected by instructional staff and depending on students' interest.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

Open only to majors in geography and related fields.

625 GIS for Environmental Science (3) Examination of techniques in Geographic Information Systems (GIS), with emphasis on data and analyses relevant to the environmental sciences. Course delivery includes both guided instruction and

applied GIS projects focused on data collection, preparation, analysis, and reporting.
Prerequisite: permission of the instruction.

630 Special Topics in Advanced Cartography (3) Advanced study exploring contemporary research in cartographic techniques and production. Topics include trends in cartographic research, academic and commercial sources of cartographic information, and the impact of information technology. Topics vary depending on the needs of the students.
Prerequisite: GEOG 340 or 540 or equivalent.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.
Open only to geography majors.

635 Special Topics in Remote Sensing (3) Research in remote sensing using advanced techniques applied to a field of study such as land use, vegetation, climatology, agriculture, or environmental problems. Research activities are accompanied by presentations on advanced remote-sensing topics.
Prerequisite: GEOG 542, 543.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.

640 Special Topics in Atmospheric Science (3) The study of a topic in atmospheric science within the expertise of the instructor. Examples include such areas as land-surface-atmosphere interactions, meso-scale meteorology, hydroclimatology, climate change, and tropical weather and climate.
Prerequisite: METC 530.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.
Open only to majors in geography and related fields.

653 Geography of Indiana (3) A geographic examination of the physical, cultural, and economic diversity of the state. Field experience with assigned projects supplements classroom activities.

680 Distant Areas Field Studies (1-6) Physical, economic, and cultural geography in areas distant from the campus. Includes seminars arranged during travel.
Prerequisite: permission of the department chairperson.
A total of 12 credits may be earned, but no more than 6 in any one semester or term.
Open only to students in geography, earth science, and allied subjects.

690 Professional Internship (1-3) Paid or unpaid supervised field and laboratory experience in public or private agencies.
A total of 3 credits may be earned.

695 Readings and Special Studies in Geography (1-3) Special assigned studies in various sub-fields of geography including readings and research projects.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.

METEOROLOGY AND CLIMATOLOGY (METC)

525 Physical Meteorology (3) Study of the physical processes of the atmosphere with a focus on solar and terrestrial radiation, clouds, and precipitation.
Prerequisite: METC 330 or METC 530 and MATH 165 and PHYC 120 or permission of the instructor.
Not open to students who have credit in METC 425.

530 Weather Analysis (3) Presentation and practice of synoptic- and meso-scale diagnostic analysis techniques, including a review of satellite and radar remote sensing systems and image interpretation. Introduction to numerical weather prediction.
Not open to students who have credit in METC 330.

531 Global Climatology (3) Introduction to the dynamics of the global climate system. Emphasizes the physical processes that force spatial variability in climate, and the feedback mechanisms associated with global teleconnections and climate change.
Prerequisite: METC 230 or permission of the instructor.
Not open to students who have credit in METC 331.

532 Climate Change and Modification (3) Study of the variability of climate over time and space, and factors involved. Focuses on past climates, modeling of future climates, and modification at local or microscale.
Prerequisite: METC 230 or permission of the instructor.
Not open to students who have credit in METC 332.

534 Atmospheric Hazards (3) Examination of the causes, consequences, and spatial distribution of hazards deriving from or impacting the atmosphere. Both the physical properties and processes of natural hazards (e.g. hurricanes, tornadoes, biochemical) and the human actions and reactions to these hazards will be emphasized at the local, regional, and global scales.
Prerequisite: METC 230.
Not open to students who have credit in METC 334.

535 Satellite, Radar, and Forecasting (3) Study of the tools used to remotely sense and analyze the atmosphere, including meteorological satellites, Doppler radar, and forecast computer models. Emphasis is on the applications of satellite, radar, and computer model products to short and medium range weather forecasting. Includes an overview of forecast techniques and a forecasting practicum.
Prerequisite: METC 330 or 530 and MATH 165 and PHYC 120.
Not open to students who have credit in METC 435.

547 Thermodynamic Meteorology (3) Application of physical gas laws such as the equation of state and hydrostatic equation to investigate adiabatic processes and parcel theory as they relate to atmospheric instability and connective development.
Prerequisite: METC 330 or 530 and MATH 165 and 166 and PHYC 120 and 122; or permission of the instructor.

Not open to students who have credit in METC 447.

549 Synoptic Meteorology (3) Investigation of synoptic- and mesobeta-scale atmospheric systems, with a focus on mathematical and physical theories of weather forecasting and application of those theories through the use of satellite, radar, and numerical weather prediction technology.

Prerequisite: METC 330 or 530 and MATH 165 and PHYC 120.

Not open to students who have credit in METC 449.

550 Mesoscale Meteorology (3) Survey of mesoscale-related phenomena of the atmosphere, including thunderstorms, tornadoes, and lake-effect snow. Includes information about forecasting the occurrence and evolution of such phenomena with tools like Skew-T diagrams and Doppler radar.

Prerequisite: METC 330 or 530.

Not open to students who have credit in METC 450.

551 Dynamic Meteorology (3) Study of the variables that explain four-dimensional atmospheric behavior with primary focus on synoptic-scale processes. Special attention is given to the governing equations and associated approximation and assumption relevant to numerical weather prediction.

Prerequisite: METC 330 or 530 and MATH 165 and 166 and PHYC 120 and 122.

Not open to students who have credit in METC 451.

590 Field Observation of Severe Local Storms (6) Multi-week field trip to the Great Plains region to forecast, observe, and document thunderstorms and related phenomena such as lightning, hail, and tornadoes. Trip is preceded by a series of lectures on storm behavior, extreme weather forecasting, and safe chasing techniques.

Prerequisite: permission of the instructor.

GEOLOGICAL SCIENCES

bsu.edu/geology
Fine Arts Building AR 117, 765-285-8270

PROGRAMS

Master of arts (MA) and master of science (MS) in geology.

See the Science listing under the College of Sciences and Humanities, page 154, for the doctoral program in environmental science.

Admission requirements

Applicants must meet the admission requirements of the Graduate School and have cumulative undergraduate grade-point averages (GPA) of at least 2.75 overall or 3.0 for their junior and senior years and Graduate Record Examination (GRE) scores of at least 470 verbal, 530 quantitative, and 520 analytical (or an acceptable combination of GPA and GRE scores). Candidates must have completed acceptable geology field courses as undergraduates or must complete a Ball State field course as part of the master's requirements.

MASTERS IN GEOLOGY, 30 credits

Master of Arts in Geology, 30 credits

Degree requirements

Requires 30 credits of graduate courses, and passing the following National Association of State Boards of Geology (ASBOG) tests: the Fundamentals of Geology Examination and the Practice of Geology Examination. Each student must register for the 1-credit Research Colloquium during each fall and spring semester of full-time graduate study.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Geology seminar requirement, 9 credits from			
GEOL	605	Seminar in Stratigraphy (3)	
	610	Seminar Sedimentary Petrology (3)	
	626	Seminar in Tectonics (3)	
	660	Seminar in Hydrogeology (3)	
	670	Seminar in Envir Geochemistry (3)	
	671	Seminar in Geomorphology (3)	9
Research methods requirement			
GEOL	685	Geology Research Methods	3
Approved graduate electives in geology, including up to three credits from GEOL 500			9
Approved major or minor in a second discipline or GEOL and/or other approved electives			9
			30 crs

Master of Science in Geology, 30 credits

Degree requirements

Requires 30 credits of graduate courses. Each student must register for the 1-credit Research Colloquium during each fall and spring semester of full-time graduate study, and write a thesis, which fulfills 6 credits of the 30-credit requirement. In a normal course of study, students are required to determine the thesis topic by the end of the second semester. The completed thesis document is subject to approval by the committee following a public oral defense.

PREFIX	NO	SHORT TITLE	CREDITS
Geology seminar requirement, 9 credits from			
GEOL	605	Seminar in Stratigraphy (3)	
	610	Seminar Sedimentary Petrology (3)	
	626	Seminar in Tectonics (3)	
	660	Seminar in Hydrogeology (3)	
	670	Seminar in Envir Geochemistry (3)	
	671	Seminar in Geomorphology (3)	9
Thesis requirement			
THES	698	Thesis (1-6)	6
Approved graduate electives in geology, including up to three credits from GEOL 500			6
Approved major or minor in a second discipline or GEOL and/or other approved electives			9
			30 crs

GEOLOGY (GEOL)

500 Research Colloquium (1) Presentations on geological science research topics by faculty, students, and visiting professional speakers. Enrolled by every departmental graduate degree candidate, each semester in residence.

A total of 8 credits may be earned, but no more than 1 in any one semester or term.

502 Global Positioning System Techniques (1) Global Positioning System (GPS) surveying and mapping techniques. Overview of satellite and system technology, examination of various GPS units available for applications, techniques using units individually or in combination for mapping and navigation, differential GPS methods, use in computer-generated maps.

Prerequisite: permission of the department chairperson.

A total of 3 credits may be earned, but no more than 1 in any one semester or term.

508 Sedimentary Geology (3) An introduction to the study of sedimentary rocks and processes. Sedimentary rock description, depositional environments, and the application of stratigraphic methods. Regularly scheduled laboratory and a field trip.

Prerequisite: GEOL 201 or permission of the department chairperson.

Not open to students who have credit in GEOL 308.

509 Micropaleontology (3) Morphology, classification, preparation techniques, and evolution of paleontologically significant microfossil groups and their biostratigraphic and paleoecologic significance. Emphasizes foraminifera, conodonts, and ostracodes. Regularly scheduled laboratory. Includes an immersion experience.

Prerequisite: GEOL 508 or permission of the department chairperson.

Not open to students who have credit in GEOL 409.

510 Igneous and Metamorphic Petrology (3) Origin and description of igneous and metamorphic rocks. Incorporates information on recent advances in the understanding of these rocks. Provides an overview of the field of petrology and a solid foundation for more advanced studies.

Prerequisite: GEOL 220 or permission of the department chairperson.

Not open to students who have credit in GEOL 310.

511 Advanced Igneous and Metamorphic Petrology (3) Processes responsible for and the rocks and minerals associated with the formation of both igneous and metamorphic rocks. Microscopic to macroscopic features associated with these processes. Regularly scheduled laboratory.

Prerequisite: GEOL 510 or permission of the department chairperson.

Not open to students who have credit in GEOL 411.

512 Sedimentary Petrology (3) A petrographic approach to the classification and genetic interpretation of sedimentary rocks. Terrigenous sandstones and carbonate rocks will be emphasized with lesser stress on mud rocks and non-carbonate chemical rocks.

Prerequisite: GEOL 201, 220, 310, or permission of the department chairperson.

Not open to students who have credit in GEOL 412.

513 Experimental Petrology (3) Students are introduced with several experimental apparatuses that are designed to simulate the behavior of Earth's materials at different P-T conditions. Students will learn various heterogeneous phase equilibria that are of interest to geologists. Students are expected to learn how to construct various phase diagrams and to apply appropriate melting systems to model the formation of solid Earth and the other terrestrial bodies.

Prerequisite: GEOL 510.

Not open to students who have credit in GEOL 413.

516 Geology of Hazards and the Environment (3) Applied geology for hazard and environmental problems. Properties and mechanics of rocks and soil; geologic materials in construction; erosion, mass wasting, subsidence, flooding, shoreline, seismic, volcanic, and other natural hazards. Dams, tunnels, mines, shoreline structures, and other special construction problems; groundwater engineering problems.

Prerequisite: an introductory course such as GEOL 101, 207, 240; NREM 211 or EMHS 352; MATH 108 or high school equivalent, or permission of the department chairperson.

Not open to students who have credit in GEOL 416.

520 Oceanography (3) Description of geological and physical characteristics of the oceans, marine processes, and related topics.

Prerequisite: GEOL 201, 207; CHEM 111, or permission of the department chairperson.

Not open to students who have credit in GEOL 420.

525 Geophysics (3) An intensive survey of the study of properties of earth materials. The focus is on the first principles that govern geophysical properties, and the techniques used to measure those properties.

Prerequisite: MATH 161 or 165, and PHYC 110, or permission of the department chairperson.

Not open to students who have credit in GEOL 425.

530 Geological Field Tour (1-6) Rocks, structure, fossils, landforms, environmental geology, economic resources, and geologic history of a specific region, investigated mainly in the field. Individual course offerings specify geographic region of focus, any on-campus class meeting component in addition to the extended field trip, and student assignments/evaluation.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

534 Applied Biostratigraphy (3) Advanced graduate course designed to provide practical experience in geologic problem solving in energy and oceanographic fields. Intended as a course which will provide research experience in biostratigraphy for masters and doctoral level students. Focused on the use of microfossils to solve correlation and paleoecological problems, primarily in the subsurface. Run as a semester length course (usually during the fall semester) and involves work in the Ball State University Biostratigraphy Laboratory.

Prerequisite: GEOL 509 or permission of the instructor.

Not open to students who have credit in GEOL 409.

535 Sequence Stratigraphy (3) Principles and practices of sequence stratigraphy. Use of surface and subsurface stratigraphic data in the reconstruction of depositional sequences and records of sea level change. Includes an immersion experience.

Prerequisite: GEOL 508 or permission of the department chairperson.

Not open to students who have credit in GEOL 435.

540 Karst Environments and Carbonate Geology (3) A study of a portion of the global carbon cycle that includes an intensive survey of karst aquifers and landscapes as well as the geology of the carbonate rocks in which the karst forms. Planned topics will include carbonate depositional environments, carbonate petrology and diagenesis, speleogenetic theories, karst hydrology and geochemistry, karst geomorphology, and environmental/engineering challenges in karst.

Prerequisite: GEOL 207, 240.

Not open to students who have credit in GEOL 440.

550 Physical Hydrology (3) Fundamental physical and chemical principles governing the occurrence and circulation of water at and near the Earth's surface. A quantitative approach is taken to mathematically describe hydrological phenomena, such as open channel flow and surface water hydraulics.

Prerequisite: GEOL 240 or permission of the instructor.

Not open to students who have credit in GEOL 350.

560 Hydrogeology (3) An intensive survey of the physical properties of groundwater flow and the classic literature of aquifer studies.

Prerequisite: GEOL 350 or 550, and MATH 161 or 165, and PHYC 110, or permission of the department chairperson.

Not open to students who have credit in GEOL 461.

562 Environmental Geology in the Field and Laboratory (3) Provides development of research projects and instruction in field and laboratory techniques used in the collection and analysis of field samples. The techniques are applied to the study of local environment research projects and may include instruction on well probes and standard "wet" chemical techniques.

Prerequisite: GEOL 207, 461 or 560.

Not open to students who have credit in GEOL 462.

570 Groundwater Geochemistry (3) Introduces the processes controlling the composition of natural waters: streams, lakes, oceans, and near-surface ground waters. Focuses on the effects of human activities, biological systems, and inorganic geochemistry processes on water chemistry.

Prerequisite: GEOL 101; CHEM 111, 112; or permission of the department chairperson.

Not open to students who have credit in GEOL 470.

571 Volcanology and Volcanic Hazards (3) Designed to give middle- and upper-level students a working knowledge of the causes and effects of the various types of volcanism ranging from quiescent Hawaiian-style volcanoes to the explosive Southwest Pacific volcanoes. In addition, looks at volcanic prediction, monitoring, and hazard response programs.

Prerequisite: GEOL 201 or permission of the department chairperson.

575 Glacial Geology (3) In-depth study of the physical nature of glaciers, their deposits, and the erosional and depositional landforms they create. Introduction to the glacial history of the north central United States. Term paper required.

Prerequisite: GEOL 240; PHYC 110 or 120; or permission of the department chairperson.

Not open to students who have credit in GEOL 475.

580 Special Studies and Field Problems (1-3) Selected detailed geologic problems studied under the guidance of a qualified instructor. Designed to provide specialized knowledge beyond the standard curriculum.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

583 Field Geology (6) A capstone experience applying field techniques to the resolution of geologic problems. Group and individual projects include accumulation and interpretation of field observations and preparation of geologic maps, cross

sections, and stratigraphic sections to answer geologic questions. Five-week summer field course in the Rocky Mountains.

Prerequisite: GEOL 201, 220, 240, 508, 590; or permission of the department chairperson.

585 Group Field Research Experience (3-6) Mentored, intensive, independent and/or collaborative research experience in a group setting, at an off-campus location.

Prerequisite: permission of the department chairperson.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

Not open to students who have credit in GEOL 485 same topic.

590 Computer Applications in the Geosciences (1) Survey of the various computer applications in the geosciences. Designed to supplement existing geoscience and computer science courses by providing opportunity to gain experience in working with BASIC and FORTRAN programs in various geoscience data collection, calculation, and graphic display applications.

A total of 3 credits may be earned, but no more than 1 in any one semester or term.

Not open to students who have credit in GEOL 290.

599X Experimental Elective Course (1-6) Experimental new specialty course in the geological sciences. Topic and mode of instruction vary by semester of offering.

A total of 9 credits may be earned, but no more than 6 in any one semester or term.

Not open to students who have credit in GEOL 499X same topic.

Open only to students with at least junior status.

600 Seminar in Geology (1-3) Review and discussion of the literature related to a selected topic of current interest in geological research. Laboratory work and field trips may be included when necessary.

A total of 9 credits may be earned, but no more than 3 in any one semester or term.

601 Seminar in Environmental Geology (1-3) Review and discussion of the literature related to a selected topic of current interest in environmental geology. Laboratory work and field trips may be included when necessary.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

605 Seminar in Stratigraphy (3) Discussion of current topics in stratigraphy. Subjects may include global correlation, the record of sea level change, and global events in earth history.

610 Seminar in Sedimentary Petrology (3) Advanced coverage of sedimentary rocks, their constituents, their environments of deposition, and the diagenetic processes that alter them after deposition. Proficiency in recognition of sedimentary constituents, in naming sedimentary rock types, and in interpretation of depositional, diagenetic, and provenance processes is expected.

Prerequisite: GEOL 412 or 512, or permission of the instructor.

626 Seminar in Tectonics (3) Origin and nature of tectonic processes affecting the crust and lithosphere. Plate dynamics and the tectonic evolution of orogens from a structural, petrologic, and geochronologic perspective.

Prerequisite: GEOL 315, 411, or 510, or permission of the instructor.

650 Seminar in Advanced Hydrology (3) Covers advanced concepts in hydrology. Focal topics will include moisture transport in atmospheric circulation, water budget calculations, surface-water and groundwater interaction, fluid dynamics of open channel flow, and chemical/isotopic tracers for reservoir fractionation.

Prerequisite: GEOL 350 or 550 or permission of the department chairperson.

660 Seminar in Advanced Hydrogeology (3) Seminar in advanced and contemporary topics in groundwater geology, such as pump and slug test analyses, analytic or numerical flow and transport computer modeling, wellhead protection policy, current groundwater resource and water quality research, and groundwater remediation.

Prerequisite: GEOL 461 or 560; permission of the department chairperson.

670 Seminar in Environmental Geochemistry (3) Seminar in advanced and contemporary topics in aqueous geochemistry such as geochemical cycling with focus on the role of sediments, soils, freshwater streams and lakes, and oceans as reservoirs for chemical compounds, including natural and manmade contaminants.

Prerequisite: GEOL 470 or 570, or permission of the department chairperson.

671 Seminar in Geomorphology (3) Review and critical discussion of key classic and recent literature in geomorphology. Student presentations and group project.

680 Geoscience Research (1-3) Participation in an active geoscience research project. Work may be in the laboratory or the field under the direction of a research mentor.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

685 Geology Research Methods (3) Introduction to the use of scientific literature, design of research, analysis of data, and writing of research/grant proposals in a focused area of the geosciences. Review of literature pertinent to a special topic of student interest.

780 Geoscience Research Development (1-6) Developing and conducting original geoscience research under the guidance of a research mentor.

Prerequisite: permission of the department chairperson.
A total of 40 credits may be earned, but no more than 6 in any on semester or term.

HISTORY

bsu.edu/history
Burkhardt Building 200, 765-285-8700

PROGRAMS

The master of arts (MA) in history may serve as a terminal degree or as prelude to an additional graduate degree. In addition, the degree may be used to professionalize the standard secondary school teaching license. The MA degree in history prepares students for a wide variety of education and career paths by offering a choice of four concentrations. The *thesis concentration* is especially useful for those who intend to pursue a doctoral degree. The *general concentration* requires no thesis, and is suited for students wishing a more broadly based education to prepare them for a number of history-related fields. The *digital history concentration* introduces students to computer-based methods of research and presentation of scholarship, which is especially useful in public history careers. The *history teaching concentration* prepares existing secondary educators to teach dual credit high school courses, or any students who wish to teach at the junior or community college level.

MASTER OF ARTS IN HISTORY, 33 credits

Admission requirements

Students must apply to and meet the admission requirements of the Graduate School. All applicants must submit a resume or curriculum vitae, original copies of all official undergraduate transcripts, a writing sample (typically their best undergraduate history paper), and a 300-500 word statement concerning goals and interests. Applicants normally should have earned at least a 3.0 grade-point average (GPA) on a scale of 4.0 in a minimum of 18 semester hours in undergraduate history courses. To qualify for a graduate assistantship in the department, applicants must take the Graduate Record Examination (GRE) general test and ordinarily have an undergraduate GPA of at least 3.0 on a scale of 4.0.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Required Core			
HIST	612	Seminar Modern Historiography	3
	613	Seminar in Historical Research	3

Directed electives

A minimum of five courses in American, European, and/or World History distributed over a minimum of two areas. Students must select from the following courses:

American History			
HIST	621	Studies in US History to 1877 (3)	
	622	Studies in US History 1877- (3)	
European History			
HIST	631	Studies Early European History (3)	
	632	Studies Modern Europe History (3)	
World History			
HIST	641	Studies in World History (3)	
American, European, and/or World History (depending upon course topic and/or student project)			
HIST	623	Special Topics US Europe Hist (3-6)	
	633	Special Tpcs Comparative Hist (3-6)	
	661	Seminar in Digital History (3)	
	670	Intro to Teaching History (3)	
	671	Seminar in History Education (3)	15
Two 500- or 600-level courses in history or, with approval, in related fields			6
			27 crs

Thesis concentration, 6 credits
Any student may choose to write a thesis. The history department strongly recommends that students who intend to continue their graduate education at the doctoral level write a thesis.

THES	698	Thesis (1-6)	6

or

General concentration, 6 credits
Students who choose not to write a thesis must complete 6 additional credits of 600-level history course work in lieu of a thesis.

600-level course work	6

or

Digital concentration, 6 credits
Students who choose the Digital History concentration must take HIST 546 (or a suitable alternative digital methods course if they took HIST 446 as undergraduates, as arranged through consultation with the Director of the MA program) and HIST 661 as a directed elective. They must also take CRPR 698 for 6 credits, or CRPR 698 for 3 credits plus 3 additional credits of 600-level work.

CRPR	698	Creative Project (6)	
	or		
	698	Creative Project (3)	
and 3 additional credits of 600-level work (3)			6

or

History Teaching concentration, 6 credits
Students who choose the History Teaching concentration must take HIST 670 and HIST 671 as directed electives. They must also takes THES 698 or CRPR 698 for 6 credits, or CRPR 698 for 3 credits plus 3 additional credits of 600-level work.

THES	698	Thesis (6)	
	or		
CRPR	698	Creative Project (6)	
	or		
	698	Creative Project (3)	
And 3 additional credits of 600-level work (3)			6
			33 crs

MA Examination

All students choose primary and complementary fields of study, defined by geographical region, chronology, and/or theme. Students must take at least three courses (9 credits) in the primary field of study, at least two of which (6 credits) must be at the 600 level. Students will complete at least two courses (6 credits) in the complementary field of study from a different geographic area. At least one of those courses (3 credits) must be at the 600 level.

The culminating experience for all students is the MA Examination, which includes two components:

1. A written examination, consisting of a portfolio of work that includes major papers produced in graduate-level classes and seminars, and an evaluative, reflective essay of 10-15 pages that shows how the process of creating this body of work has enhanced knowledge of the methods, historiography, and historical information pertaining to a student's primary and complementary fields. The student's examination committee, consisting of the student's primary and complementary field advisors and a third faculty examiner, will review the portfolio.
2. An oral examination, which consists of a one-hour oral review of the portfolio between the examination committee and the student. The oral examination will be combined with the formal defense for students completing 6-hour theses or creative projects.

The number of papers included in the portfolio, the format of the reviews, and the scheduling of the oral review is determined by the student's concentration in the History Master of Arts program, and is described in detail in the History Department's MA Handbook.

HISTORY (HIST)

500 Colonial America, 1492-1763 (3) Explores the history of colonization in North America from the late fifteenth through the mid-eighteenth centuries, focusing on the seventeenth- and eighteenth-century English/British colonial experience.
Not open to students who have credit in HIST 400.
Open only to graduate students.

501 Revolutionary America, 1763-1800 (3) Explores the history of the American Revolutionary era and the creation and development of the early United States, from 1763-1800.
Not open to students who have credit in HIST 401.
Open only to graduate students.

505 Pre-Civil War America, 1800-1848 (3) Examines key social, cultural, economic, and political developments that shaped U.S. history between 1800 and 1848.
Not open to students who have credit in HIST 405.
Open only to graduate students.

507 American Civil War and Reconstruction, 1848-1877 (3) Survey, analysis, and discussion of events, leaders, and movements, with special emphasis on causes, interpretation, and historiography of the period of national crisis and war followed by national reconstruction.
Not open to students who have credit in HIST 407.
Open only to graduate students.

509 An Age of Reform: The United States in the Gilded Age and Progressive Era (3) Examines key developments in U.S. history during the Gilded Age and Progressive Era (circa 1877-1919), with special attention to reform efforts.
Not open to students who have credit in HIST 409.
Open only to graduate students.

511 The American People in Prosperity, Depression, and War (3) Explores the history of the United States and its people from the closing days of World War I through the culmination of World War II. Particular attention is paid to the era's profound shifts in the political, economic, and cultural lives of Americans, and to the nation's changing relationships with its citizens and the world.
Not open to students who have credit in HIST 411.
Open only to graduate students.

513 Post-World War II America (3) Explores the history of the United States and its people since the end of the Second World War. Particular attention is paid to the various (and sometimes competing) visions of rights and freedoms that diverse sets of Americans expressed, internal changes to the country's politics, cultures, and economy, and external challenges in the ways the nation engaged with the wider

world.
Not open to students who have credit in HIST 413.
Open only to graduate students.

515 History of Indiana (3) Exploration, colonization, and development of the state from the earliest time to the present.
Prerequisite: 6 credits in United States history.
Not open to students who have credit in HIST 415.

516 Pre-Civil War South, 1776-1861 (3) Examines key social, cultural, economic, and political developments that shaped the American South prior to 1865, with an emphasis on 1815-1861.
Not open to students who have credit in HIST 416.
Open only to graduate students.

517 History of the New South (3) Reconstruction, industrial and agricultural progress, social life, and the new leadership after 1865.
Not open to students who have credit in HIST 417.

518 History of the American West (3) Survey of the history of the U.S. West, a region of Native North America that has been the object of Spanish, French, English, and American expansionism, and finally a distinct region with a unique relationship to the U.S. federal government. Explores the U.S. West as both a shifting geographic region, and as a frontier process involving migration, political and social expansion, and cultural change.
Not open to students who have credit in HIST 318.

520 The African American Experience in America (3) The African American experience in America from the sixteenth century to the present. Emphasizes the effect of African Americans on American culture and vice versa.
Not open to students who have credit in HIST 210.

521 Indians in United States History (3) Indian and white relations from 1492 to the present; the Indian wars, treaty making, various types of Indian and Caucasian interaction, and the development of federal and state Indian policy.
Not open to students who have credit in HIST 421.

522 Topics in the History of Popular Culture (3) Examines topics related to the growth and historical importance of popular culture, and the influence of popular culture on the study of history. As a topical course, it may cover any society, geographical area, or chronological period. Instructors will define their topics and the elements of popular culture to be studied in their individual syllabi.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.
Open only to graduate students.

523 Topics in Religious History (3) Examines selected topics in religious history, with an emphasis on comparative and thematic approaches to the historical study of religion.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.
Open only to graduate students.

524 Topics in Race, Ethnicity, and Immigration (3) Examines the history of immigration, the experiences of minority groups, and changing conceptions of race and ethnicity. Different sections of the class may examine different countries, groups, regions, and/or the interplay among them.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.
Open only to graduate students.

525 Topics in the History of the American West (3) Examines in depth a particular aspect of the history of the American West, such as the region's Native peoples, frontier colonial experiences, exploration and expansion, environmental history, global connections, comparative frontiers, religious history, legacy of violence, the development of the mythic West, and public memory and commemoration in the West.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.
Open only to graduate students.

526 Topics in African History (3) Survey and investigation of a particular topic or problem in African history with emphasis on issues, specialties, and materials not covered in other courses.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.
Open only to graduate students.

527 Topics in Asian History (3) Survey and investigation of a particular topic, problem, or issue in Asian history, with emphasis on topics, specialties, and materials not covered in other courses. Exact content will be announced before each offering.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.
Open only to graduate students.

530 United States Diplomatic History to 1914 (3) History of United States diplomacy from the late colonial period to the eve of World War I.
Not open to students who have credit in HIST 430.

532 United States Diplomatic History Since 1914 (3) The foreign relations of the United States since the outbreak of World War I.
Not open to students who have credit in HIST 432.

538 Colloquium on United States Urban History (3) The literature of American urban history, presented topically rather than chronologically. Students will select readings from a list compiled especially for the course and tailored to the exact number of students. They will then discuss their own special assignments each week so that greater exposure and interchange will be possible.

541 Comparative Slavery (3) Explores the types of bondage, unfree labor systems, and slavery and the slave trade throughout African history as well as in a number of geographical regions for comparison. Includes Africa, the Mediterranean, the Caribbean, and Central and South America.

Prerequisite: permission of the department chairperson.

Not open to students who have credit in HIST 441.

546 History in the Digital Age (3) Prepares students to employ and understand a wide variety of current and emerging digital technologies used in history and the humanities. Students will study the development of the relationship between the discipline of history and computing tools over time through a combination of theoretical and hands-on activities that explore the key ideas and events leading to the recent digital turn in the humanities. No digital experience is assumed.

Not open to students who have credit in HIST 446.

549 American Culture Field Studies (3) American culture, its art, economic life, educational systems, geography, history, industry, languages, music, and society. Students will travel through designated areas in North America. Before the trip, considerable reading in various fields pertinent to the course will be required. At the conclusion, papers will be required.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

Not open to students who have credit in HIST 449.

554 The Era of World War I, 1870-1918 (3) The background, immediate causes, and course of the First World War with special attention to nationalism, the alliance system, imperialism, militarism, and conflicts of interest and aspirations.

Not open to students who have credit in HIST 454.

555 The Era of World War II, 1918-1945 (3) The origins, immediate causes, and the course of the Second World War with stress on the peace settlement of 1919, revisionism, diplomatic conflicts, and the foundations of the postwar world.

Not open to students who have credit in HIST 455.

556 Europe Since 1945 (3) An examination of the major political, diplomatic, military, economic, and social developments that have shaped European history since the end of World War II.

Not open to students who have credit in HIST 456.

Open only to graduate students.

560 Selected Topics in American Military History (3) A selected topics course covering American Military History.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

Not open to students who have credit in HIST 360.

Open only to graduate students.

561 Development of Greek Civilization (3) Greek political, social, and intellectual development in the Hellenic and Hellenistic periods. Emphasizes the rise and fall of Greek democracy and Greek contributions to the civilizations and cultures of the West.

Not open to students who have credit in HIST 461.

562 Development of Roman Civilization (3) Political, social, and intellectual development of Rome from the beginning of the republic to approximately A.D. 500. Emphasizes development of Roman characteristics during the republic, effects of Greek ideas and imperial expansion, and Roman contributions to Western civilization.

Not open to students who have credit in HIST 462.

564 Development of Byzantine Civilization (3) Political, socioeconomic, and intellectual development of the Byzantine Empire from its origins to 1453. Emphasizes Byzantine religious and cultural contributions and relations with Western Europe, the Slavic peoples, and the Muslim world.

Not open to students who have credit in HIST 464.

565 Medieval Ideas and Institutions (3) Selected problems concerning the social and cultural bases of medieval civilization. Emphasizes six major institutions and themes—feudalism, chivalry, manorialism, the medieval city, the church, and the medieval university.

567 The Renaissance and Reformation, 1300-1600 (3) Specialized study of the crises, changes, and cultural achievements of Europe in an age of transition and intellectual upheaval. Individual investigations combined with a colloquium approach.

569 World Civilizations—Field Studies (3) World civilizations—their history, art, economic life, educational systems, geography, industry, languages, music, and society—through varied travel programs. Advance reading and a summary paper are required to complement each year's travel program.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

Not open to students who have credit in HIST 469.

571 France Since 1789 (3) An examination of the major political, diplomatic, military, economic, and social developments that have shaped French history since the French Revolution of 1789.

Not open to students who have credit in HIST 471.

Open only to graduate students.

575 Britain, 1485-1714 (3) A survey of the political, social, and economic history of England in the Tudor and Stuart periods. Emphasizes the rise of the national state, religious conflicts, the development of the power of Parliament, and overseas exploration and colonization.

Not open to students who have credit in HIST 475.

576 Britain, 1760 to the Present (3) Examines key social, cultural, economic, and political developments in British

history from 1760 to the present.
Not open to students who have credit in HIST 476.
Open only to graduate students.

581 Modern Germany (3) Critical problems in modern German history with concentration on unification and the age of Bismarck, the First World War, cultural and intellectual ferment, Hitler and the Nazi period, and postwar West and East Germany.
Not open to students who have credit in HIST 481.

582 Research on the History of the Celtic Peoples (3) Surveys the entire chronological and geographical framework of the history of the Celtic peoples and their distinctive and persistent culture. Introduces recent scholarship and graduate-level research on a topic of the student's choice.
Not open to students who have credit in HIST 482.

583 Research in Irish History (3) Surveys the entire span of Irish history and introduces recent historiography and graduate-level research on a topic of the student's choice.
Not open to students who have credit in HIST 483.

584 Southern Africa (3) Explores the arrival of the Europeans in the southern tip of Africa from 1652 and focuses on the subsequent four centuries of colonial domination of much of the southern African continent. Also investigates Black, Indian, and Colored resistance.
Prerequisite: permission of the department chairperson.
Not open to students who have credit in HIST 484.

586 Russian Civilization Before 1917: From Kievan Rus to Imperial Russia (3) Surveys the political, social, and cultural history of Russian civilization from its origins in the ninth century under the first political organization of the East Slavic tribes, known as Kievan Rus, to the collapse of the Russian Empire in March 1917.
Not open to students who have credit in HIST 486.

587 Soviet and Post-Soviet History (3) Surveys the political, social, and cultural history of the Soviet Union within the broader context of events before and after the breakup of the USSR to the present.
Not open to students who have credit in HIST 487.

591 Topics in Middle Eastern History (3) Selected issues and problems in the Middle Eastern world since Muhammad. Topics may include the expansion of Islam, slavery in the Middle East, the economic and social history of the Ottoman empire, the Arab/Israeli dispute, and recent national and international crises.
Not open to students who have credit in HIST 491.

593 History of Pre-modern East Asia (3) Examines pre-modern East Asian politics, cultures, and social issues from earliest times to approximately 1800 through inter-regional and comparative frameworks.
Not open to students who have credit in HIST 493.
Open only to graduate students.

595 Modern China, 1600 to the Present (3) Descriptive and analytical survey with emphasis on China's changing role as a member of the world community, its response to increased Western contacts, disintegration of traditional order, revolutionary changes through the Republic of China and the People's Republic, and significant elements of contemporary Chinese society and culture.
Not open to students who have credit in HIST 495.

596 Modern Japan, 1600 to the Present (3) Descriptive and analytical survey of political and economic developments, foreign policy, and social and cultural change in modern Japan with emphasis on conditions contributing to its rapid modernization, nationalist and expansionist movements, and dynamic postwar recovery.
Not open to students who have credit in HIST 496.

597 Selected Topics in European History (3-6) Survey and investigation of a particular topic, problem, or issue in European history with emphasis on topics, specialties, and materials not covered in other courses. Exact content will be announced before each offering.
A total of 6 credits may be earned.
Open only to graduate students.

599 Selected Topics in American History (3-6) Survey and investigation of a particular topic, problem, or issue in American history with emphasis on topics, specialties, and materials not covered in other courses. Exact content will be announced before each offering.
A total of 6 credits may be earned.
Open only to graduate students.

612 Seminar in Modern Historiography (3) A survey of the major works in the historical literature of the past five centuries, including both European and American contributions, with special investigation of significant historians and movements in historical studies and writing.

613 Seminar in Historical Research (3) Designed to further investigative skills. Focuses on the knowledge of concepts and methodology used in historical research through the intensive study of a selected topic in American, European, or world history. A research paper is required.
Prerequisite: HIST 612.

621 Studies in American History to 1877 (3) Studies of selected problems in American history to 1877 with special attention to discussion of historiography and current trends in scholarship. Exact content will be announced before each offering.

622 Studies in American History Since 1877 (3) Studies of selected problems in American history since 1877 with special attention to discussion of historiography and current trends in scholarship. Exact content will be announced before each offering.

623 Special Topics in US, European, or Atlantic World History (3) Investigation of a particular topic, problem, or issue in United States history, European history, or the history of the Atlantic World, with emphasis on topics, specialties, and material not covered in other courses. Exact content will be announced before each offering.

A total of 9 credits may be earned, but no more than 3 in any one semester or term.

631 Studies in Early European History (3) Studies of selected problems in early European history with special attention to discussion of historiography and current trends in scholarship. Exact content will be announced before each offering.

632 Studies in Modern European History (3) Studies of selected problems in modern European history with special attention to discussion of historiography and current trends in scholarship. Exact content will be announced before each offering.

633 Special Topics in Comparative History (3) Investigation of topics, problems, and issues in comparative history with emphasis on topics, specialties, and material not covered in other courses and which cross traditional geographic and chronological boundaries. Special attention will be devoted to discussion of historiography and current trends in scholarship. Exact content will be announced before each offering.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

641 Studies in World History (3) Studies of selected problems in world history with special attention to discussion of historiography and current trends in scholarship. Exact content will be announced before each offering.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

650 Special Studies (1-6) Directed study of special problems by individuals or groups of students. Ordinarily not available until students have earned 12 graduate credits in history.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned with permission of the department chairperson.

661 Seminar in Digital History (3) Explores the current and potential impact of digital media on the theory and practice of history. Students will examine significant digital history scholarship and study how digital tools and resources are enabling both new methods for analysis in traditional print scholarship and possibilities for new forms of scholarship. The seminar will culminate in the creation of an advanced digital research module on a topic in American, European, or world history.

670 Introduction to Teaching History (3) This course explores the purposes of history teaching, learning, and assessment; foundational research in history education; and the recent research and teaching emphasis on disciplinary literacy.

Open only to graduate students.

671 Seminar in History Education (3) This course prepares students to analyze and critique research pertaining to the teaching and learning of history, consider how curriculum materials and designs impact both students and teachers, examine signature pedagogies in history, and engage in research.

Prerequisite: HIST 670

Open only to graduate students.

SOCIAL STUDIES (SS)

650 Independent Study in Social Science Education (1-6) Directed study of special problems or research in social science education by individuals or groups of students. Topics to be investigated will be chosen after consultation with an instructor with special competence in the topic involved.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned.

691 Teaching Social Studies Skills in Secondary Schools (3) Preparation for teaching social studies skills to meet individual and group needs. Emphasizes skills related to problem solving, critical thinking, reading and interpreting materials, using pictorial representations, and finding and using information.

692 Teaching Social Studies Skills in Junior High/Middle Schools (3) Preparation for teaching social studies skills to meet individual and group needs. Emphasizes skills related to problem solving, critical thinking, reading and interpreting materials, using pictorial representations, and finding and using information.

MATHEMATICAL SCIENCES

bsu.edu/math
Robert Bell Building 465, 765-285-8640

PROGRAMS

Master of arts (MA) in actuarial science, in mathematics, in mathematics education, post-secondary foundational mathematics teaching, and in statistics; master of science (MS) in mathematics and in statistics.

See the Science listing under the College of Sciences and Humanities, page 154, for the doctoral program in environmental science.

MASTER OF ARTS IN ACTUARIAL SCIENCE, 30-33 credits

The master's program in actuarial science provides training for careers that involve analyzing and solving financial, business, and social problems related to economic risk. The program includes course work that prepares students for the professional examinations given by the Society of Actuaries and the Casualty Actuarial Society. Students taking THES 698 are expected to make an oral presentation on their thesis topic, at the discretion of the committee.

Admission requirement
Applicants must meet the regular admission requirements of the Graduate School. It is also expected that students will have had three semesters of calculus, a course in linear algebra, at least one semester of probability and one semester of statistics.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Financial Mathematics, 3-4 credits			
MATH	551	Mathematics of Finance (4)	3-4
(Program advisor will approve 3-4 credit substitution in financial mathematics for students who have passed Exam FM.)			
MATH	552	Life Contingencies 1	4
	553	Life Contingencies 2	4
Probability, 3-4 credits			
MATH	620	Probability and Random Vars (4)	3-4
(Program advisor will approve 600-level 3-4 credit substitution in probability/statistics for students who have passed Exam P.)			
MATH	557	Actuarial Models 1	4
	559	Models in Financial Economics	3
	692	Actuarial Science Exit Survey	0
3-8 credits from			
FIN	500	Corporation Finance (3)	
MATH	528	Regression Time Series Models (3)	
	554	Mathematics of Investments (3)	
	558	Actuarial Models 2 (3)	
	621	Theory of Statistics (4)	
	624	Intro to Statistical Learning (3)	
	626	Stochastic Processes (3)	
	627	General Linear Model Applicat (3)	
	628	Comput Methods in Statistics (3)	
	655	Topics in Actuarial Science (1-4)	
	658	Risk Theory (3)	
RMI	570	Risk Management and Insurance (3)	3-8
More credits from this list will be required if courses are waived due to undergraduate or actuarial exam credit.			
Research component, 3-6 credits from			
MATH	659	Research in Actuarial Science (3)	
THES	698	Thesis (1-6)	3-6
			30-33 crs

MASTERS IN MATHEMATICS, 30-32 credits

The masters degree in mathematics provides students with a broad graduate-level mathematical background suitable for community college teaching, for pursing a PhD degree in the mathematical sciences, or for seeking employment in business, industry, or government. Students pursuing the master of science degree will be required to write a 6-credit thesis. Students taking THES 698 are expected to make an oral presentation on their thesis topic, at the discretion of the committee.

Admission requirements
Applicants must meet the regular admission requirements of the Graduate School and have an undergraduate major in mathematics or an equivalent background as determined by the Department of Mathematical Sciences.

Master of Arts in Mathematics, 30-32 credits

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Algebra, 6 credits			
MATH	511	Abstract Algebra 1	3
	512	Abstract Algebra 2	3
(If the undergraduate equivalent is not complete. Otherwise course substitutions in algebra will be made in conjunction with the program advisor.)			
Analysis, 6-7 credits from			
MATH	571	Real Analysis 1 (4)	
	572	Real Analysis 2 (3)	6-7
(If the undergraduate equivalent is not complete. Otherwise 3-credit course substitutions in analysis will be made in conjunction with the program advisor.)			
MATH	645	Topology 1	3
	675	Measure Thry and Integration 1	3
	677	Complex Variables 1	3
3-7 credits from			
MATH	515	Coding and Communication (3)	
	516	Theory of Numbers (3)	

	541	Geometry and Topology (3)	
	545	Differential Geometry (3)	
	556	Intro Operations Research (3)	
	562	Numerical Analysis 1 (3)	
	563	Numerical Analysis 2 (3)	
	573	Boundary Value Problems (3)	
	575	Topics Partial Dif Equations (3)	
	620	Probability and Random Vars (4)	
	626	Stochastic Processes (3)	
	646	Topology 2 (3)	
	676	Measure Thry and Integration 2 (3)	
	678	Complex Variables 2 (3)	3-7

Research component, 3-6 credits from

MATH	689	Research Methods Math Stats (3)	
	694	Research Methods Math Educat (3)	
THES	698	Thesis (1-6)	3-6

30-32 crs

Master of Science in Mathematics, 30-32 credits

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*

Algebra, 6 credits

MATH	511	Abstract Algebra 1	3
	512	Abstract Algebra 2	3

(If the undergraduate equivalent is not complete. Otherwise course substitutions in algebra will be made in conjunction with the program advisor.)

Analysis, 6-7 credits from

MATH	571	Real Analysis 1 (4)	
	572	Real Analysis 2 (3)	6-7

(If the undergraduate equivalent is not complete. Otherwise 3-credit course substitutions in analysis will be made in conjunction with the program advisor.)

MATH	645	Topology 1	3
	675	Measure Thry and Integration 1	3
	677	Complex Variables 1	3

3-4 credits from

MATH	515	Coding and Communication (3)	
	516	Theory of Numbers (3)	
	541	Geometry and Topology (3)	
	545	Differential Geometry (3)	
	556	Intro Operations Research (3)	
	562	Numerical Analysis 1 (3)	
	563	Numerical Analysis 2 (3)	
	573	Boundary Value Problems (3)	
	575	Topics Partial Dif Equations (3)	
	620	Probability and Random Vars (4)	
	626	Stochastic Processes (3)	
	646	Topology 2 (3)	
	676	Measure Thry and Integration 2 (3)	
	678	Complex Variables 2 (3)	3-4
THES	698	Thesis (1-6)	6

30-32 crs

MASTER OF ARTS IN MATHEMATICS EDUCATION, 30-36 credits

The master of arts in mathematics education provides opportunities for elementary, middle school, and high school teachers to examine various issues related to the teaching and learning of mathematics while continuing to develop their own mathematical content knowledge.

Concentration 1: Elementary and middle school mathematics, 30 credits

Admission requirements

Applicants must meet the regular admission requirements of the Graduate School; hold a current elementary, middle special education teaching license; and have at least one year of elementary or middle school teaching experience.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*

Content knowledge for teaching mathematics, 12 credits from

Choose four courses from

MATH	514	Alg Res Elm Mid Fnd Math Teach (3)	
	517	Num Concpts and Num Thry Teach (3)	
	518	Rat Num Prop El Mid Fnd Tch (3)	
	542	Geo Meas Ele Mid Fnd Math Tch (3)	
	623	Prob Data Analy Stat Reasoning (3)	12

Research and pedagogical knowledge for teaching mathematics, 12 credits

MATH	690	Curriculum Instruct Math Ed	3
	693	Teaching Math Prob Solving	3
	694	Research Methods Math Educat	3
	696	Action Research Math Education	3

Electives in content or pedagogical knowledge for teaching mathematics, 6 credits (as approved by advisor) from

MATH	514	Alg Res Elm Mid Fnd Math Teach (3)	
	517	Num Concpts and Num Thry Teach (3)	
	518	Rat Num Prop El Mid Fnd Tch (3)	
	542	Geo Meas Ele Mid Fnd Math Tch (3)	
	623	Prob Data Analy Stat Reasoning (3)	
	631	Technology Mathematics Teach (3)	
	632	Assessment Math Education (3)	
	641	Topics in Geometry (3)	
	680	Special Studies Teaching Math (3)	
	695	Math Learners and Learning (3)	
	697	Math Teacher Leadership 1 (3)	6

30 crs

Concentration 2: Secondary mathematics, 30-32 credits

Admission requirements
Applicants must meet the regular admission requirements of the Graduate School; have an undergraduate major in mathematics or an equivalent background as determined by the Department of Mathematical Sciences; hold a current secondary mathematics teaching license; and have at least one year of secondary mathematics teaching experience.

Degree requirements

Content knowledge for teaching mathematics, 12 credits

MATH	511	Abstract Algebra 1	3
	570	Intermediate Analysis	3
	623	Prob Data Analy Stat Reasoning	3
	641	Topics in Geometry	3

Electives in content knowledge for teaching mathematics, 3-8 credits (as approved by advisor) from the following

MATH	512	Abstract Algebra 2 (3)	
	516	Theory of Numbers (3)	
	517	Num Concpts and Num Thry Teach (3)	
	560	History of Mathematics (3)	
	620	Probability and Random Vars (4)	
	621	Theory of Statistics (4)	
	645	Topology 1 (3)	
	677	Complex Variables 1 (3)	3-8

Research and pedagogical knowledge for teaching mathematics, 12 credits

MATH	690	Curriculum Instruct Math Ed	3
	693	Teaching Math Prob Solving	3
	694	Research Methods Math Educat	3
	696	Action Research Math Education	3

Electives in pedagogical knowledge for teaching mathematics, 0-3 credits (as approved by advisor) from

MATH	631	Technology Mathematics Teach (3)	
	632	Assessment Math Education (3)	
	695	Math Learners and Learning (3)	
	697	Math Teacher Leadership 1 (3)	0-3

30-32 crs

Concentration 3: Elementary/middle school mathematics specialist, 36 credits

Admission requirements
Applicants must meet the regular admission requirements of the Graduate School; hold a current middle school mathematics or elementary teaching license; and have at least three years of middle school mathematics or elementary teaching experience.

Content knowledge for teaching mathematics, 15 credits

MATH	514	Alg Res Elm Mid Fnd Math Teach	3
	517	Num Concpts and Num Thry Teach	3
	518	Rat Num Prop El Mid Fnd Tch	3
	542	Geo Meas Ele Mid Fnd Math Tch	3
	623	Prob Data Analy Stat Reasoning	3

Pedagogical knowledge for teaching mathematics, 12 credits

MATH	632	Assessment Math Education	3
	690	Curriculum Instruct Math Ed	3
	693	Teaching Math Prob Solving	3
	695	Math Learners and Learning	3

Research, 3 credits

MATH	694	Research Methods Math Educat	3

Leadership knowledge and skills, 6 credits

MATH	697	Math Teacher Leadership 1	3
	698	Math Teacher Leadership 2	3

36 crs

MASTER OF ARTS IN POST-SECONDARY FOUNDATIONAL MATHEMATICS TEACHING, 30 credits

Admission requirements
Applicants must meet the regular admission requirements of the Graduate School. Applicants also must meet one of the following criteria: 1) have a current teaching license and at least one year of teaching experience; 2) be currently teaching at a community college; 3) have permission of the department chairperson.
This program is offered on-line only.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*

Content knowledge for teaching mathematics, 18 credits

MATH	514	Alg Res Elm Mid Fnd Math Teach	3
	517	Num Concpts and Num Thry Teach	3
	518	Rat Num Prop El Mid Fnd Tch	3
	519	Quantitative Reason Teachers	3
	542	Geo Meas Ele Mid Fnd Math Tch	3
	623	Prob Data Analy Stat Reasoning	3

Research and pedagogical knowledge for teaching mathematics, 9 credits

MATH	631	Technology Mathematics Teach	3
	693	Teaching Math Prob Solving	3
	694	Research Methods Math Educat	3

Pedagogical knowledge for teaching adults, 3 credits from

EDAC	634	The Adult as a Learner (3)	
	635	Strategies for Teaching Adults (3)	3

30 crs

MASTERS IN STATISTICS, 32 credits

The master's program in statistics provides students with the background suitable for employment as a statistician in business, industry, or government. The degree also provides suitable preparation for pursuing a PhD degree in statistics. Students pursuing the master of science degree will be required to complete a 6-credit thesis. Students taking THES 698 are expected to make an oral presentation on their thesis topic, at the discretion of the committee.

Master of Arts in Statistics, 32 credits

The master's program in statistics provides students with the background suitable for employment as a statistician in business, industry, or government. The degree also provides suitable preparation for pursuing a PhD degree in statistics. Students pursuing the masters of science degree will be required to complete a 6-credit thesis.

Admission requirements
Applicants must meet the regular admission requirements of the Graduate School. It is also expected that students will have had three semesters of calculus, a course in linear algebra, and at least one semester of probability and statistics.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
MATH	528	Regression Time Series Models	3
	620	Probability and Random Vars	4
	621	Theory of Statistics	4
	624	Intro to Statistical Learning	3
	627	General Linear Model Applicat	3
	628	Comput Methods in Statistics	3
	689	Research Methods Math Stats	3
9 credits from			
MATH	522	Theory Sampling and Surveys (3)	
	523	Environmental Statistics (3)	
	529	Analysis Variance Exp Design (3)	
	626	Stochastic Processes (3)	
	675	Measure Thry and Integration 1 (3)	9
			32 crs

Master of Science in Statistics, 32 credits

The master's program in statistics provides students with the background suitable for employment as a statistician in business, industry, or government. The degree also provides suitable preparation for pursuing a PhD degree in statistics. Students pursuing the masters of science degree will be required to complete a 6-credit thesis.

Admission requirements
Applicants must meet the regular admission requirements of the Graduate School. It is also expected that students will have had three semesters of calculus, a course in linear algebra, and at least one semester of probability and statistics.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
MATH	528	Regression Time Series Models	3
	620	Probability and Random Vars	4
	621	Theory of Statistics	4
	624	Intro to Statistical Learning	3
	627	General Linear Model Applicat	3
	628	Comput Methods in Statistics	3
THES	698	Thesis (1-6)	6
6 credits from			
MATH	522	Theory Sampling and Surveys (3)	
	523	Environmental Statistics (3)	
	529	Analysis Variance Exp Design (3)	
	626	Stochastic Processes (3)	
	675	Measure Thry and Integration 1 (3)	6
			32 crs

CERTIFICATE PROGRAMS

Certificate in Elementary Mathematics Teacher Leadership, 15 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
MATH	690	Curriculum Instruct Math Ed	3
	693	Teaching Math Prob Solving	3
	697	Math Teacher Leadership 1	3
6 credits from			
MATH	514	Alg Res Elm Mid Fnd Math Teach (3)	
	517	Num Concpts and Num Thry Teach (3)	
	518	Rat Num Prop El Mid Fnd Tch (3)	
	542	Geo Meas Ele Mid Fnd Math Tch (3)	
	623	Prob Data Analy Stat Reasoning (3)	6
			15 crs

Students need to achieve a grade-point average of 3.0 to receive their certificate, and no grade lower than *C* will count. Transfer credit is not accepted.

Certificate in Middle School Mathematics Education, 15 credits

Provides students with both breadth and depth of mathematical expertise in middle school education. Students will engage in significant mathematical problem solving as they also learn to teach mathematics through problem solving, thereby giving them depth. Students also will expand their foundational knowledge by taking several mathematics content classes that cover the breadth of middle school mathematics.

Admission requirements
Applicants must meet the regular admission requirements of the Graduate School. Applicants must also have a current elementary, middle school, or special education teaching license and at least one year of teaching experience.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
MATH	693	Teaching Math Prob Solving	3
12 credits from			
MATH	514	Alg Res Elm Mid Fnd Math Teach (3)	
	517	Num Concpts and Num Thry Teach (3)	
	518	Rat Num Prop El Mid Fnd Tch (3)	
	542	Geo Meas Ele Mid Fnd Math Tch (3)	
	623	Prob Data Analy Stat Reasoning (3)	12
			15 crs

Students need to achieve a grade-point average of 3.0 to receive their certificate, and no grade lower than *C* will count. Transfer credit is not accepted.

Certificate in Post-secondary Foundational Mathematics Teaching, 15 credits

Admission requirements
Applicants must meet the regular admission requirements of the Graduate School. Applicants also must meet one of the following criteria: 1) have a current teaching license and at least one year of teaching experience. 2) be currently teaching at a community college. 3) have permission of the department chairperson.

This certificate is offered on-line only.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
MATH	514	Alg Res Elm Mid Fnd Math Teach	3
	519	Quantitative Reason Teachers	3
	631	Technology Mathematics Teach	3
	693	Teaching Math Prob Solving	3
3 credits from			
MATH	517	Num Concpts and Num Thry Teach (3)	
	518	Rat Num Prop El Mid Fnd Tch (3)	
	542	Geo Meas Ele Mid Fnd Math Tch (3)	
	623	Prob Data Analy Stat Reasoning (3)	3
			15 crs

Certificate in Statistical Modeling, 12 credits

The Certificate in Statistical Modeling provides students with the statistical modeling expertise that is part of the Master's in Statistics. All 12 credits of this certificate can be applied to the MA/MS in Statistics programs.

Admission requirements
Applicants must meet the regular admission requirements of the Graduate School. It is also expected that students will have had three semesters of calculus, one semester of linear algebra, one semester of probability, and one semester of statistics.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
MATH	528	Regression Time Series Models	3
	529	Analysis Variance Exp Design	3
	627	General Linear Model Applicat	3
	628	Comput Methods in Statistics	3
			12 crs

MIDDLE SCHOOL/JUNIOR HIGH MATHEMATICS LICENSE (GRADUATE LEVEL), 37-38 credits
Admission requirements

Open only to candidates who currently hold an elementary, middle school, or special education license. Middle school/junior high licensure in mathematics will be granted when the following criteria are met:

- completion of the following mathematics content courses with a 3.0 minimum GPA, with grade of *C*- or better in 100- and 200-level mathematics content courses and grade of *C* or better in 500- and 600-level mathematics content courses;
- completion of the following professional education courses with a 3.0 minimum GPA, with grade of *C* or better in all professional education courses;
- passing score on the exam for Middle School Mathematics; and
- Decision Point Requirements.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Mathematics content			
MATH	161	Applied Calculus 1 (3)	
	or		
	165	Calculus 1 (4)	3-4
	201	Num Oper Alg Reas Elem Teach	4
	202	Data Geo Meas Elem Teach	3
	514	Alg Res Elm Mid Fnd Math Teach	3
	517	Num Concpts and Num Thry Teach	3
	542	Geo Meas Ele Mid Fnd Math Tch	3
	623	Prob Data Analy Stat Reasoning	3
	631	Technology Mathematics Teach	3
Professional education			
EDJH	512	Inst Strtgs Apprchs JH and MS	3
	690	Pract JH and MS Ed (1-9)	6
MATH	690	Curriculum Instruct Math Ed	3
			37-38 crs

MATHEMATICAL SCIENCES (MATH)

511 Abstract Algebra 1 (3) The theory of groups, including subgroups, cyclic groups, normal subgroups, cosets, Lagrange's Theorem, quotient structures, homomorphism, automorphisms, group actions, Sylow's Theorems, structure of finite abelian groups, generators, and relations.

Prerequisite recommended: MATH 311.

Not open to students who have credit in MATH 411.

512 Abstract Algebra 2 (3) An introduction to the theory of rings, including integral domains, division rings, and fields. Quotient fields of integral domains. Homomorphisms, ideals, and quotient structures. Factorization in commutative rings. Polynomial rings and field extensions. Aspects of Galois theory.

Prerequisite: MATH 411 or 511, or permission of the department chairperson.

Not open to students who have credit in MATH 412.

514 Algebraic Reasoning for Elementary, Middle School, and Foundational Mathematics Teachers (3) Algebra as the study of patterns, as a symbolic language, as a tool for problem solving, as the study of functions, as generalized arithmetic, and as a way of modeling physical situations.

Prerequisite: at least one year of teaching experience or permission of the department chairperson.

515 Mathematics of Coding and Communication (3) Exploration of applications of number theory, group theory and linear algebra to areas such as cryptography and error-correcting codes; applications of graph theory to resource allocation and route planning; other possible topics selected by the instructor.

Prerequisite recommended: MATH 215, 217.

Not open to students who have credit in MATH 415.

516 Theory of Numbers (3) Topics include the division algorithm; positional notation; divisibility; primes; congruences; divisibility criteria; the sigma, divisor, and phi functions; Diophantine equations; linear, polynomial, and simultaneous congruences; theorems of Fermat, Euler, Lagrange, and Wilson; quadratic reciprocity.

Prerequisite recommended: MATH 215.

Not open to students who have credit in MATH 416.

517 Number Concepts and Number Theory for Teachers (3) Number development, number systems, properties and characteristics of classes of numbers, number sense, number theory, operations and their relationships, and algorithms.

Prerequisite: at least one year of teaching experience or permission of the department chairperson.

518 Rational Numbers and Proportionality for Elementary, Middle School, and Foundational Math Teachers (3) An in-depth study of rational number concepts and operations and the development of proportional reasoning. Also, issues related to teaching.

Prerequisite: at least one year of teaching experience or permission of the department chairperson.

519 Quantitative Reasoning for Teachers (3) Interpreting and using quantitative information in authentic contexts involving number, algebra, measurement, data analysis, and chance; representing quantitative information with mathematical models, and using quantitative information to analyze and construct written arguments. Includes explorations of pedagogical issues and design of teaching materials for the development of quantitative literacy.

522 Theory of Sampling and Surveys (3) Survey designs; simple random, stratified, cluster, and systematic sampling; ratio estimates; regression estimates; cost and variance functions.

Prerequisite: MATH 321 or the equivalent.

Not open to students who have credit in MATH 422.

523 Environmental Statistics (3) Aims to provide an introduction to the types of statistical analyses used in environmental studies. Topics include collecting environmental data with special emphasis on inaccessible and sensitive data, population size estimation, sampling in the wild such as quadrat, recapture, transect and adaptive sampling, composite sampling, ranked set sampling, examining environmental effects by regression-type models, statistical verifiability of environmental standards and regulations, time series, longitudinal, spatial, and temporal methods for the environmental processes.

Prerequisite: MATH 320 or permission of the department chairperson.

528 Regression and Time Series Models (3) Addresses regression topics that include simple and multiple linear regression, polynomial regression, regression diagnostics, and forecasting. Also introduces time series topics that include exponential smoothing, auto-regressive, integrated, moving average (ARIMA) models, and forecasting.

Prerequisite: MATH 321 or the equivalent.

Not open to students who have credit in MATH 428.

529 Analysis of Variance in Experimental Design Models (3) Multivariate normal distribution; quadratic forms; linear models; simple random, randomized block, Latin squares, factorial, split-plot, balanced incomplete block designs; analysis of covariance; confounding; and multiple comparison tests.

Prerequisite: MATH 321 or equivalent.

Not open to students who have credit in MATH 429.

541 Geometry and Topology (3) Introduction to geometric topology, including piecewise linear structures, Euler's formula, surfaces and solids, knots, graphs, and other topics.

Prerequisite recommended: MATH 217, 267.

Not open to students who have credit in MATH 441.

542 Geometry and Measurement for Elementary, Middle School, and Foundational Mathematics Teachers (3) Students will develop visualization skills; identify two- and

three-dimensional shapes and know their properties; connect geometry to other mathematical topics; research historical topics relevant to elementary and middle school geometry.

Prerequisite: at least one year of teaching experience or permission of the department chairperson.

545 Differential Geometry (3) Fundamentals of differential geometry, as an extensive study of curves and surfaces in 3-space. Includes the use of computer visualization and emphasizes the importance of differential geometry in areas like relativity theory and modern physics.

Prerequisite recommended: MATH 217, 267.

Not open to students who have credit in MATH 445.

551 Mathematics of Finance (4) Mathematical theory of compound interest, force of interest, annuities, equations of value, yield rates, amortization, sinking funds, bonds, market derivatives, depreciation, and current topics in finance.

Prerequisite recommended: MATH 166.

Not open to students who have credit in MATH 351.

552 Mathematics of Life Contingencies 1 (4) Survival distributions, life tables; the mathematics of life insurance, life annuities, net premiums, and net premium reserves.

Prerequisite: MATH 321.

Prerequisite or parallel: MATH 551.

Not open to students who have credit in MATH 452.

553 Mathematics of Life Contingencies 2 (4) Mathematics of expense loaded premiums and reserves, asset shares, multiple life functions, multiple decrement models, discrete time Markov Chain models, and simulation.

Prerequisite: MATH 552.

Not open to students who have credit in MATH 453.

554 Mathematics of Investments (3) Mathematical analysis and actuarial principles of investments and asset management.

Prerequisite: MATH 320 or 620, 351 or 551; or permission of the department chairperson.

Not open to students who have credit in MATH 454.

555 Topics in Actuarial Science (2) Selected topics in actuarial science with emphasis on individualized study for the actuarial exams given by the Society of Actuaries and the Casualty Actuarial Society.

Prerequisite: permission of the department chairperson.

556 Introduction to Operations Research (3) Topics include linear programming models, the simplex method, duality theory, transportation and assignment problems, network optimization models.

Prerequisite recommended: MATH 162 or 166; 217.

Not open to students who have credit in MATH 456.

557 Actuarial Models 1 (4) Loss and frequency distributions, limited expected value, effects of inflation, parametric and non-parametric models, identification procedures for insurance company data, bootstrapping, Bayesian analysis, compound frequency, methods for censored and truncated data, classical and Bayesian credibility models, experience rating.

Prerequisite: MATH 321 or 620.

Not open to students who have credit in MATH 457.

558 Actuarial Models 2 (3) Basic functions related to actuarial models, common parametric models, maximum likelihood estimation for censored or truncated data, nonparametric estimation, hypothesis testing, models with co-variables, simulation, and other topics as time permits.

Prerequisite: MATH 321, 557; one year of mathematical probability and statistics.

Not open to students who have credit in MATH 458.

559 Models in Financial Economics (3) Mathematical and economic analysis of financial instruments and the management of financial and investment risk.

Prerequisite: MATH 320 or 620 and 351 or 551; or permission of the department chairperson.

Not open to students who have credit in MATH 459.

560 History of Mathematics (3) The development of mathematics from pre-history to the seventeenth century. Topics may include number concepts and numeration, algebra, geometry, trigonometry, analytic geometry, and calculus.

Prerequisite recommended: MATH 161 or 165.

Not open to students who have credit in MATH 460.

562 Numerical Analysis 1 (3) Topics include error analysis, locating roots of equations, interpolation, numerical differentiation and integration, spline functions, smoothing of data. Includes programming of numerical algorithms.

Prerequisite recommended: MATH 162 or 166; MATH 259 or CS 120.

Not open to students who have credit in MATH 362.

563 Numerical Analysis 2 (3) Topics include direct and iterative methods for solving systems of linear equations, eigenvalue problems; minimization of functions and linear programming. Includes programming of numerical algorithms.

Prerequisite: MATH 362 or 562.

Prerequisite recommended: MATH 217.

Not open to students who have credit in MATH 363.

568 Unpaid Professional Experience in Mathematical Sciences (1-8) Supervised unpaid work and learning experience as a practicing mathematician, statistician, or actuarial scientist. Practical problem-solving experience will be gained through an internship, practicum, or other such situation.

Prerequisite: permission of the department chairperson.

A total of 8 credits may be earned.

A total of 8 credits may be earned in MATH 568 and 569 combined. No more than 3 credits can be counted as electives toward a departmental major or minor.

569 Paid Professional Experience in Mathematical Sciences (1-8) Supervised paid work and learning experience as a practicing mathematician, statistician, or actuarial

scientist. Practical problem-solving experience will be gained through an internship, practicum, or other such situation.

Prerequisite: permission of the department chairperson.

A total of 8 credits may be earned.

A total of 8 credits may be earned in MATH 568 and 569 combined. No more than 3 credits can be counted as electives toward a departmental major or minor.

570 Intermediate Analysis (3) Introduction to basic concepts of analysis: the real numbers, sequences, continuous functions, the derivative, and the Riemann integral.

Prerequisite recommended: MATH 166 and 215.

Not open to students who have credit in MATH 470.

571 Real Analysis 1 (4) Real and complex number systems: ordered sets, least upper bound property, fields, Archimedean property; Basic topology: cardinality, metric spaces, completeness, compactness, connectedness; Numerical sequences and series: convergence tests, upper-lower limits; Continuity: continuous functions, uniform continuity, Intermediate and Extreme Value Theorems; Differentiation: derivative, Mean Value Theorem, l'Hospital's Rule, Taylor's Theorem.

Prerequisite recommended: MATH 215 and 267.

Not open to students who have credit in MATH 471.

572 Real Analysis 2 (3) The Reimann-Stieltjes integral and Fundamental Theorem of Calculus. Sequences and series of functions. Differential calculus of functions of several variables. Inverse and implicit function theorems. Extremum problems. Lebesgue integration and comparison with the Riemann integral.

Prerequisite: MATH 471 or 571.

Not open to students who have credit in MATH 472.

573 Boundary Value Problems (3) Fourier Series and integrals, heat and wave equations in one dimension, Laplace equation in two dimensions, problems in higher dimensions, and numerical methods of solving boundary value problems.

Prerequisite: MATH 374.

Not open to students who have credit in MATH 473.

575 Topics in Partial Differential Equations (3) Classical solution techniques for linear PDEs. Topics include first- and second-order equations, method of characteristics, special functions, orthogonal polynomials, transforms, Green's functions, and fundamental solutions. A computer algebra system is utilized.

Prerequisite: MATH 374 or permission of the department chairperson.

Prerequisite recommended: MATH 267.

Not open to students who have credit in MATH 475.

599 Special Studies in Mathematics (1-8) Individual work under the direction of a staff member of the department will involve assigned reading and reports and may involve class attendance in related courses.

Prerequisite: permission of the department chairperson.

A total of 8 credits may be earned.

601 Workshop in Mathematics Education (1-12) A one- or two-week workshop addressing specific topics in mathematics education.

A total of 12 credits may be earned.

619 Special Studies in Geometry, Algebra, or Topology (1-8) Individual work under the direction of a faculty member of the department; will involve assigned reading and reports and may involve class attendance in related courses.

Prerequisite: permission of the department chairperson.

A total of 8 credits may be earned. MATH 619, 669, and 679, singly or in combination, may be taken for a total of no more than 8 credits.

620 Probability and Random Variables (4) Probability set functions, random variables, density and distribution functions, mathematical expectations, marginal and conditional distributions, sampling distributions, and limiting distributions. The mathematical rigor requires a strong background in calculus.

Prerequisite recommended: MATH 166 and 215.

621 Theory of Statistics (4) Topics from sampling and statistics, estimation theory and tests of hypothesis. Special emphasis on order statistics, quantiles and their applications, classical and Bayesian estimation, sufficiency, completeness, uniqueness, likelihood-based approaches, hypothesis testing based on Neyman-Pearson approach, goodness-of-fit, nonparametric tests, correlation and regression, bootstrapping.

Prerequisite: MATH 620 or permission of the department chairperson.

623 Probability, Data Analysis and Statistical Reasoning (3) Students will select and use appropriate statistical methods to analyze data, develop, and evaluate inferences and predictions that are based on data, and understand and apply the basic concepts of probability.

Prerequisite: at least one year of teaching experience or permission of the department chairperson.

624 Introduction to Statistical Learning (3) Supervised learning: classification, linear discriminant analysis, quadratic discriminant analysis, multiple discriminant analysis, model selection regularization, bootstrap methods. Unsupervised learning: principal component analysis, canonical correlation, clustering methods.

Prerequisite: MATH 620 or permission of the department chairperson.

626 Stochastic Processes (3) Stochastic processes, discrete and continuous time Markov processes, queuing theory, renewal theory.

Prerequisite: MATH 620 or permission of the department chairperson.

627 Generalized Linear Models with Applications (3) Methods needed to analyze non-normal data. Topics include exponential family of distributions, an overview of generalized linear models. Models for continuous, discrete,

and count data.
Prerequisite: MATH 621 or permission of the department chairperson.

628 Computational Methods in Statistics (3) Random variable generation, Monte Carlo methods and numerical integration, Bayesian inference and Markov chain Monte Carlo, Metropolis-Hastings and Gibbs Sampling, basics of numerical optimization such as Newton's method, constrained optimization, Expectation-Maximization algorithms.
Prerequisite: MATH 620 or permission of the department chairperson.

631 Technology for Mathematics Teachers (3) Modeling, computational, and communication tools used in teaching mathematics.
Prerequisite: at least one year of teaching experience or permission of the department chairperson.

632 Assessment in Mathematics Education (3) Issues related to assessment in mathematics education and the relationship of assessment to curriculum and instruction. Examination of various types of assessments administered in mathematics classrooms, as well as large-scale local, national, and international assessments.
Prerequisite: at least one year of teaching experience or permission of the department chairperson.

641 Topics in Geometry (3) A survey of topics in contemporary geometry from various perspectives, including conjecture and exploration, formal analysis, and application beyond geometry.
Prerequisite: at least one year of teaching experience or permission of the department chairperson.

645 Topology 1 (3) Introduction to point-set topology. Topics include set-theoretic preliminaries, topological spaces, continuous functions, metric spaces, product and quotient spaces, connectedness, compactness, countability and separation axioms, Urysohn's Metrization Theorem, Tietze's Extension Theorem, and Tychonoff's Theorem.
Prerequisite: MATH 470 or 471 or 570 or 571.

646 Topology 2 (3) A second semester course in point-set topology. Stone-Cech compactification, paracompactness, metrization theorems, Ascoli's Theorem, Baire's Category Theorem, introduction to homotopy theory, Jordan Curve Theorem, Invariance of Domain, Brouwer Fixed-Point Theorem.
Prerequisite: MATH 645.

655 Topics in Actuarial Science (1-4) Focuses on advanced studies in actuarial science. Actuarial science uses knowledge from many areas including mathematics, statistics, and finance. It also continually expands its scope to include latest developments from multiple areas. The instructor will have flexibility to determine course content.
Prerequisite: permission of the department chairperson.
A total of 4 credits may be earned.

658 Risk Theory (3) Individual and collective risk theory. Probability of ruin. Probability distributions of random numbers of random variables.
Prerequisite: MATH 552.

659 Research Seminar in Actuarial Science (3) Research study in actuarial subjects of current interest in life, property/casualty, health, pension, and/or financial risk management. Literature searches on selected topics. Articles from research journals may be read and discussed. Will use actuarial skills from several courses. A paper will be required. Case studies and special projects will be completed and results presented on a team basis.
Prerequisite: MATH 557.
Prerequisite or parallel: MATH 553.

660 Topics in the History of Mathematics (3) In-depth study of selected topics in the history of mathematics.
Prerequisite: MATH 460 or 560.
Prerequisite recommended: MATH 162 or 165.

669 Special Studies in Applied Mathematics (1-8) Individual work under the direction of a faculty member of the department; will involve assigned reading and reports and may involve class attendance in related courses.
Prerequisite: permission of the department chairperson.
A total of 8 credits may be earned. MATH 619, 669, and 679, singly or in combination, may be taken for a total of no more than 8 credits.

675 Measure Theory and Integration 1 (3) The concept of measurability, simple functions, properties of measures, integration of positive as well as complex functions, sets of measure zero, Riesz representation theorem, Borel and Lebesgue measures, LP-spaces, approximation by continuous functions, elementary Hilbert space theory.
Prerequisite: MATH 472 or 572.

676 Measure Theory and Integration 2 (3) Banach spaces, Baire's theorem, Hahn-Banach theorem, complex measures, total variation, absolute continuity, Radon-Nikodym theorem, bounded linear functionals on LP, the Riesz representation theorem, differentiation of measures, the fundamental theorem of calculus, integration on product spaces, the Fubini theorem, completion of product measures, convolutions, distribution functions.
Prerequisite: MATH 675.

677 Complex Variables 1 (3) Complex number systems, differentiation and integration, functions (analytic, entire, meromorphic) of one complex variable, singularities, complex integration, Cauchy's theorem, Cauchy's integral formula, power series, Laurent series, calculus of residues.
Prerequisite: MATH 470 or 471 or 570 or 571.

678 Complex Variables 2 (3) Analytic continuation, Riemann surfaces, theorems of Weierstrass and Mittag-Leffler, solution

of two-dimensional potential problem, conformal mapping, Schwartz-Christoffel transformations and their applications.

Prerequisite: MATH 677.

679 Special Studies in Analysis (1-8) Individual work under the direction of a faculty member of the department; will involve assigned reading and reports and may involve class attendance in related courses.

Prerequisite: permission of the department chairperson.

A total of 8 credits may be earned. MATH 619, 669, and 679, singly or in combination, may be taken for a total of no more than 8 credits.

680 Special Studies in the Teaching of Mathematics (1-6) The student will work under the direction of a staff member in the Department of Mathematical Sciences. Assigned reading and reports; possible class attendance in related courses.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned.

689 Research Methods in Mathematics and Statistics (3) The scientific method in mathematical research. Location of relevant journal articles, reference books, and reviews. Development of research and problem-solving techniques. Each student will write a mathematical paper. The instructor will assist students whose work is of exceptional quality in submitting their results for publication.

690 Curriculum and Instruction in Mathematics Education (3) Focuses on the mathematics curriculum, with emphasis on current issues and trends, on teaching strategies, and standards-based teaching. Looking at mathematics curriculum from a K-12 perspective, students will work on understanding these recommendations in light of previous mathematics curriculum experiences.

Prerequisite: at least one year of teaching experience or permission of the department chairperson.

692 Actuarial Science Exit Survey (0) This 0-credit course consists of an exit survey that should be completed by all students who attain an MA in Actuarial Science from Ball State University. The survey will ask students about professional actuarial exams completed prior to graduation, actuarial internships held during their time in the program, and their employment or education plans after graduation. Offered credit/no credit only.

Prerequisite: students will either have completed all course requirements for an MA in Actuarial Science or will complete all requirements by the end of the current semester.

693 Teaching Mathematics through Problem Solving (3) Knowledge and skills for teaching and learning mathematics through problem solving using multiple representations and orchestrating mathematical discourse to promote mathematical reasoning in student-centered mathematics classrooms. Design, select/adapt, and solve worthwhile mathematical tasks to support teaching through problem solving.

Prerequisite: at least one year of teaching experience or permission of the department chairperson.

694 Research Methods in Mathematics Education (3) Research analysis and methodology in mathematics education.

Prerequisite: at least one year of teaching experience, and 18 graduate credits in mathematics or mathematics education, including MATH 690, or permission of the department chairperson.

695 Mathematics Learners and Learning (3) In-depth look at mathematics learners and learning as related to learning trajectories, cultural differences, and social learning contexts while building upon learners' existing knowledge/skills.

Prerequisite: at least one year of teaching experience or permission of the department chairperson.

696 Action Research in Mathematics Education (3) Teachers conduct an action research project in a mathematics classroom and present their findings in a written report.

Prerequisite: MATH 694 or permission of the department chairperson.

697 Mathematics Teacher Leadership 1 (3) An introduction to the development of strategies and skills for teacher leadership in mathematics education, with a focus on models for professional development of mathematics teachers.

Prerequisite: MATH 690.

698 Mathematics Teacher Leadership 2 (3) An expansion of the development of strategies and skills for teacher leadership in mathematics education, with a focus on research and collaboration with colleagues and professional communication with stakeholders.

Prerequisite: MATH 694, 697.

699 Seminar in Mathematics (1-6) For students who wish to pursue some particular problem or group of problems in mathematics. Assigned readings and conferences.

A total of 6 credits may be earned.

CENTER FOR MEDICAL EDUCATION

bsu.edu/mcme
221 N. Celia Avenue, MT 201, 765-751-5100

ANATOMY (ANAT)

601 Human Gross Anatomy (8) A strong background in basic morphologic and functional relations. Emphasizes regional anatomy. Four two-and-one-half hour laboratory periods weekly.

Prerequisite: admission to the medical education program.

606 Medical Neuroanatomy (4) Normal structural and functional organization of the human central nervous system as a background for the interpretation of its dysfunction. Assumes prior knowledge of human peripheral nervous system and effector mechanisms. Two-and-one-half hour lecture plus four hours of laboratory weekly.

Prerequisite: ANAT 601.

631 Medical Histology-Embryology (5) Normal and abnormal developmental processes related to the differentiation of tissues and organs; microscopic study of organs and tissues as background for physiological and pathological consideration.

Prerequisite: admission to the medical education program.

BIOLOGY (BIO)

642 Medical Microbiology (8) Microbiology for medical students with consideration of bacteria, fungi, viruses, and parasites as agents in human disease and the immunological and serological aspects of the host-parasite relationship.

Open only to medical students or by permission of the department chairperson.

653 Medical Genetics (2) Genetics for medical students: basic genetic principles, human cytogenetics, molecular genetics, genetic epidemiology, probability, population and quantitative (multifactorial) genetics, dermatoglyphics, etiology of birth defects, inborn metabolic disorders, genetic screening and counseling, genetics of mental illness and cancer, pharmacogenetics, immunogenetics, and genetic engineering.

Open only to medical students or by permission of the department chairperson.

CHEMISTRY (CHEM)

667 Medical Biochemistry (6) Chemistry of major cellular constituents; enzymes as the catalysts of intracellular chemical reactions with emphasis on underlying principles of physical and organic chemistry. Intermediary metabolism of carbohydrates, lipids, amino acids, and nucleotides; modern techniques employed in the study of metabolic processes; biosynthesis and degradation of intracellular components; hormonal regulation of metabolism.

Prerequisite: admission to the medical education program.

PHYSIOLOGY (PHYS)

640 Medical Physiology (8) Summary of human physiology for medical students. Cellular and organ-system physiology; physiological regulation. Laboratory exercises will demonstrate general principles of physiology and introduce basic techniques and instrumentation.

Prerequisite: admission to the medical education program.

645 Emergency Medicine (2) Designed to develop an awareness of proper diagnosis and treatment during emergency medical care by professional medical personnel. Fractures; environmental emergencies; injuries to the eye, chest, abdomen; shock; and wound care.

Prerequisite: admission to the medical education program.

MODERN LANGUAGES AND CLASSICS

bsu.edu/languages
North Quadrangle 178, 765-285-1361

CLASSICAL CULTURE (CC)

598 Reading Course (3-9) An arranged course in selected readings.

Prerequisite: permission of the department chairperson.

A total of 9 credits may be earned.

FOREIGN LANGUAGES (FL)

590 Independent Study (1-9) Topics to be chosen and investigated in consultation with a specific instructor.

A total of 9 credits may be earned.

595 Teaching Methods, Reading Strategies, and Materials for World Language (3) Current, best-practices methods in world language education focusing on integrated language and culture instruction, reading strategies, technology-enhanced language learning, standards-based planning and assessment, diverse learners, and materials development. Review of current professional literature, trends, and licensing requirements.

Prerequisite: two years of college credit or the equivalent

in a modern or classical language; identification to pursue a teaching curriculum.

Parallel: EDSE 580; EDJH 585 recommended.

596 Technology and Assessment in Foreign Language (3) Current theory and practice of technology and assessment in the foreign language classroom. Evaluation of resources, preparation of instructional materials and instruments, articulation and integration of technology and assessment into curricula and lesson plans. Audio, video, and computer-based technologies. Assessment of oral, aural, writing, reading, and culture.

Prerequisite recommended: FL 595.

Open only to education majors or minors.

599 Research Seminar (3) Introduction to research in foreign languages and literature. Survey, discussion, evaluation, and application of research techniques in literary study, methodology, bibliography, and practical criticism.

FRENCH (FR)

500 French Study Abroad (3-9) Study of advanced French language, literature, and culture in a country where French is the native language. May include seminars arranged during travel.

A total of 9 credits may be earned.

501 Advanced Conversation (3-6) Advanced practice in oral French to increase fluency and authenticity through discussion and debate.

A total of 6 credits may be earned in combination with FR 301.

502 Composition and Stylistics (3-6) Advanced practice in original composition with emphasis on style and stylistics.

A total of 6 credits may be earned in combination with FR 302 or 303.

503 Advanced Grammar (3) Advanced, in-depth study of French grammar with work in French-English translation.

534 Contemporary France (3) Present-day France and French institutions viewed in the context of French perceptions of the family, education, politics, the judicial system, the economy, and religion. Supplementary readings in current newspapers and periodicals.

Prerequisite: FR 201, 202.

Not open to students who have credit in FR 404.

538 Business French (3) Designed to make the advanced French student familiar with commercial forms and terminology used in business, banking, and industry.

Not open to students who have credit in FR 338.

550 Workshop in Contemporary Francophone Issues (3-6) For inservice teachers who want to increase their proficiency in speaking and hearing the French language and their understanding of issues in present-day France and French-speaking countries.

Prerequisite: at least one year's teaching experience.

A total of 6 credits may be earned.

598 Readings (1-9) Individualized reading or research to allow students to explore special topics with a specific instructor. Designed to meet the needs of graduate students who have special projects in French.

A total of 9 credits may be earned.

599 Bibliography and Readings (3) Major works, primary and secondary sources in French language, literature, culture, and teaching.

Prerequisite: 15 graduate credits in French and permission of the department chairperson.

GERMAN (GER)

500 German Study Abroad (3-9) Study of advanced German language, literature, and culture in a country where German is spoken as a native language. May include seminars arranged during travel.

A total of 9 credits may be earned.

501 Advanced Conversation (3-6) Advanced practice in oral German to increase fluency and authenticity in the language.

A total of 6 credits may be earned.

502 Composition and Stylistics (3-6) Advanced practice in written German with emphasis on style and stylistics.

A total of 6 credits may be earned.

550 Workshop in Contemporary German Issues (3-6) For inservice teachers who want to increase their proficiency in speaking and hearing the German language and their understanding of issues in present-day Germany and German-speaking countries.

Prerequisite: at least one year of teaching experience.

A total of 6 credits may be earned.

598 Readings (3-9) Individualized reading or research to allow students to explore special topics with a specific instructor. Designed to meet the needs of graduate students who have special projects in German.

A total of 9 credits may be earned.

GREEK (GRK)

598 Readings (3-9) Individualized readings or research to allow students to explore special topics with an individual instructor. Designed to meet the needs of graduate students who have special projects in Greek.

Prerequisite: permission of the instructor.

A total of 9 credits may be earned.

JAPANESE (JAPA)

550 Modern Japan through Japanese Language and

Literature (3) Explores Japanese language and literature as a reflection of and on Japanese society. Materials covered will include prose, poetry, theatre, etc. The time period ranges from the late Meiji period (1868-1912) to the present. Some attention will be devoted to pre-modern Japan in order to highlight the changes in language and literary ideals. Intended for high school Japanese teachers as professional development, but it is open to other graduate students as well. Taught in both Japanese and English.

Prerequisite: teaching license in Japanese or permission of the instructor.

598 Readings (3-9) Individualized readings or research to allow students to explore special topics with an individual instructor. Designed to meet the needs of graduate students who have special projects in Japanese.

Prerequisite: permission of the instructor.

A total of 9 credits may be earned.

LATIN (LAT)

501 Didactic Poetry (3) Selected readings from Lucretius, Vergil's *Georgics*, or Ovid's *Ars Amatoria*.

502 Advanced Prose Composition (3-6) A detailed grammar review, analysis of Latin prose style, composition of extended passages in Latin.

A total of 6 credits may be earned.

507 Cicero (3) Selected readings from Cicero's rhetorical and philosophical works.

508 Republican Historiography (3) Selected readings from Caesar, Sallust, Nepos.

509 Imperial Historiography (3) Selected readings from Livy, Tacitus, Suetonius.

510 Roman Drama (3) Selected readings from Plautus, Terence, or Seneca.

512 Lyric Poetry (3) Selected readings from Catullus or Horace's odes and epodes.

513 Elegiac Poetry (3) Selected readings from the elegiac poems of Tibullus, Propertius, and Ovid.

Not open to students who have credit in LAT 304.

514 Vergil: *Aeneid* (3) Selected readings.

515 Satire (3) Selected readings from Horace, Persius, Martial, Juvenal.

516 Silver Latin Epic (3) Selected readings from Ovid's *Metamorphoses*, Lucan, or Statius.

Not open to students who have credit in LAT 301.

522 Silver Latin Prose (3-6) Selected readings from Petronius, Seneca the Younger, Quintilian, Pliny the Younger, Apuleius.

A total of 6 credits may be earned.

525 Workshop for Teachers (3) For inservice teachers wishing to improve their personal proficiency and update teaching methods and techniques.

Prerequisite: at least one year of teaching experience.

598 Readings (3-9) Individualized readings or research allows students to explore special topics with a specific instructor.

A total of 9 credits may be earned.

SPANISH (SP)

500 Spanish Study Abroad (3-9) Study of advanced Spanish language, literature, and culture in a country where Spanish is the native language. May include seminars arranged during travel.

A total of 9 credits may be earned.

501 Advanced Conversation (3-6) Advanced practice in oral Spanish to increase fluency and authenticity through activities, discussion, and debate.

A total of 6 credits may be earned.

502 Composition and Stylistics (3-6) Advanced practice in original composition with emphasis on style and stylistics.

A total of 6 credits may be earned.

503 Advanced Grammar (3) Advanced, in-depth study of Spanish grammar with emphasis on analysis and creative expression in the language.

511 Spanish Literature from the Seventeenth through the Nineteenth Century (3) The history of Spanish literature from the latter part of the Golden Age through late Romanticism. Representative works and authors.

512 Latin American Literature through the Nineteenth Century (3) Major works of Spanish American literature from the chronicles to modernism.

519 Twentieth-Century Spanish Literature (3) Acquaints students with the major literary works (in all genres) reflecting changing currents in Spanish life and thought during this century. Readings will include works of the Generation of '98, the Generation of '27, and post-Civil War works.

534 Contemporary Spain (3) Present-day Spain and Spanish institutions viewed in the light of Spanish perceptions. Topics vary according to changing conditions and problems.

535 Contemporary Latin America (3) Elements of present-day problems and conditions in various countries or areas of Latin America. Topics vary according to changing conditions and problems.

Not open to students who have credit in SP 335.

537 Special Language Skills (3-9) Topics vary and will be announced. Topics may be, among others, advanced study in phonetics, composition, linguistics, Spanish-English translation, or Spanish for the professions.

A total of 9 credits may be earned.

Not open to students who have credit in SP 337.

538 Business Spanish (3) Designed to make advanced Spanish students familiar with commercial forms and terminology used in business, banking, and industry.

Not open to students who have credit in SP 338.

548 Twentieth-Century Latin American Literature (3) Main trends in Spanish American literature (in all genres) since modernism. Includes modernism, realism, post-modernism, and recent literary trends.

550 Workshop on Contemporary Issues (3-6) For inservice teachers wishing to improve their proficiency in contemporary Spanish usage.

Prerequisite: at least one year's teaching experience.

A total of 6 credits may be earned.

598 Readings (3-9) Individualized reading or research to allow students to explore special topics with a specific instructor. Designed to meet the needs of graduate students who have special projects in Spanish.

A total of 9 credits may be earned.

599 Bibliography and Readings (3) Major works, primary and secondary sources in Hispanic language, literature, culture, and teaching.

Prerequisite: 15 graduate credits in Spanish.

NATURAL RESOURCES AND ENVIRONMENTAL MANAGEMENT

bsu.edu/nrem
West Quadrangle 110, 765-285-5780

PROGRAMS

Master of arts (MA) in natural resources and environmental management and master of science (MS) in natural resources and environmental management.

See the Science listing under the College of Sciences and Humanities, page 154, for the doctoral program in environmental science.

Admission requirements

Applicants must meet the admission requirements of the Graduate School, take the Graduate Record Examination (GRE), complete the departmental application form, and provide letters of recommendation. Applicants whose undergraduate majors are not in natural resources or closely related subjects may be required to complete undergraduate courses to acquire background knowledge. Credit for these courses does not apply to graduate degree requirements.

Facilities and Special Programs

Facilities consist of teaching and research laboratories, lecture and discussion classrooms, a computer lab, a darkroom, a student reading room, and a seminar-conference room. All classrooms and laboratories are accessible to students with disabilities.

University-owned properties—the Hults Environmental Learning Center, Christy Woods, Ball State Wildlife Preserve, and Ginn-Nixon Woods—near the Ball State campus serve as field laboratories for teaching and research. The city of Muncie and surrounding areas offer first-hand study of environmental issues such as air, water, and soil quality, energy issues, land-use planning, and recreational management.

Research equipment includes state-of-the-art instrumentation for analysis of a variety of contaminants of air, water, and land.

Each summer the department sponsors field courses in which students travel to diverse locations for study. Past field courses have studied resource management in the American West, the Great Lakes states, the Appalachians, Central America, and Europe.

In addition to off-campus field courses, the department offers practicum opportunities with federal, state, and private agencies in various facets of resource management.

MASTERS IN NATURAL RESOURCES AND ENVIRONMENTAL MANAGEMENT, 30 credits

Master of Arts in Natural Resources and Environmental Management, 30 credits

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Required courses			
NREM	608	Research Methods	3
RES	697	Research Paper (1-3)	
	or		
CRPR	698	Creative Project (3 or 6)	3
Electives include other NREM courses and relevant courses from other departments to be approved by the graduate advisor			24
			30 crs

Master of Science in Natural Resources and Environmental Management, 30 credits

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Required courses			
NREM	608	Research Methods	3
THES	698	Thesis (1-6)	6
Electives include other NREM courses and relevant courses from other departments to be approved by the graduate advisor			21
			30 crs

CERTIFICATE PROGRAM

Certificate in Emergency Management and Homeland Security, 15 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EMHS	552	Science WMDs Technol Hazards	3
	589	Emergency Response WMDs	3
	550	Haz Mat Health and Safety (3)	
	or		
	669	Professional Practice (1-3)	3
6 credits from			
CS	547	Comp, Info, and Network Sec (3)	
EMHS	553	Arson Investigation (3)	
	555	International Domestic Terror (3)	
	593	Special Topics (1-6)	
GEOG	544	Adv Geog Info Systems Analysis (3)	
GEOL	516	Geol of Hazards and Env (3)	
ISOM	601	Intro Comp and Net Sec (3)	
METC	534	Atmospheric Hazards (3)	
POLS	545	National Defense Policy (3)	
	694	Terrorism and Homeland Sec (3)	
PR	660	P R Theories and Applications (3)	6
			15 crs

EMERGENCY MANAGEMENT AND HOMELAND SECURITY (EMHS)

550 Hazardous Materials Health and Safety (3) Worker health and safety principles and practices in: handling hazardous materials, waste remediation, and emergency responses to accidental chemical releases and terrorist episodes.

Not open to students who have credit in EMHS 350.

551 Introduction to Emergency Management and Homeland Security (3) Introduction to principles of emergency management and homeland security such as preparedness, response, recovery, and mitigation. Other concepts include hazards, communications, management, health issues, and tools utilized in emergency management. Discussion of relevant issues from a multi-disciplinary approach.

Not open to students who have credit in EMHS 351.

552 Science of WMDs and Technological Hazards (3) Application of scientific principles to technological hazards including biological, chemical, radiological, nuclear and explosive weapons (weapons of mass destruction). Discussion of relevant principles in biology, chemistry, physics, and other sciences. Effects of hazards on air, water, food supplies, and human health.

553 Arson Investigation (3) Examination of the principles and practices involved in arson investigation. Extensive discussion of fire science, fire dynamics, fire analysis, properties of explosives and their reactions, scientific methodology, hazardous materials, building construction, human behavior, and analytical tools in the arson investigation.

555 International Domestic Terrorism (3) Examination of international and domestic terrorist organizations, including ideologies, tactics, training, and sources of funding. Students will gain a solid understanding of key concepts of doctrine, leaders, goals, history, ideology, and definitions of terms.

Not open to students who have credit in EMHS 355.

589 WMD Awareness and Response (3) Awareness of toxicological effects and treatment of biological, chemical, radiological, nuclear, and explosive agents (WMDs). Emergency response to domestic incidents. The Incident Command System. Selection and proper use of chemically-protective clothing. Decontamination principles.

593 Special Topics (1-6) Provides an opportunity to conduct independent study of emergency management and homeland security topics of special interest to students.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned.

669 Professional Practice (1-3) Supervised experience in emergency planning and management, science of hazards, and/or cyber security. Connects academic with professional experiences.

A total of 3 credits may be earned.

NATURAL RESOURCES AND ENVIRONMENTAL MANAGEMENT (NREM)

501 Forest Planning and Stewardship (3) Introduces students to the social, economic, and ecological forces that shape U.S. private forests. Takes an in-depth look at forest landowner values, attitudes, and perceptions of forests and linkages to management decision-making strategies and behaviors. Also introduces students to the skills they will need to interact with private forest landowners (PFLs) and forest management professionals. Students will develop forest

stewardship plans based on interactions with PFLs on their property and information from forest professionals.

502 Field Study (1-6) Off-campus field studies of a specific geographic area with emphasis on resource management. Details of arrangements (including group travel plans and housing) will be provided by the instructor.
Prerequisite: permission of the department chairperson.
A total of 6 credits may be earned.
A maximum of 3 credits apply to NREM majors.

504 Sustainable Agriculture (3) Natural resource use in agricultural systems with emphasis on principles of sustainability. Includes integrated pest management, permaculture, and other production practices that conserve soil, water, and biological resources. Field trips included.
Not open to students who have credit in NREM 304.

505 Integrated Resource Management (3) Systems perspective on holistic or integrated planning and management of natural resources. Stresses data analysis and its role in the decision-making process.
Prerequisite: permission of the department chairperson.
Not open to students who have credit in NREM 405.

507 Environmental Management in Developing Countries (3) Survey of challenges facing management of urban environments and the rural-urban interface in the developing nations of Asia, Africa, Latin America, and Pacific Oceania. Features interdisciplinary approach with frequent guest speakers to discuss existing and potential management, economic, technical, and policy solutions in their regional, cultural, and historical contexts.
Not open to students who have credit in NREM 307.

509 Human Dimensions of Global Change (3) Systematic exploration of major topics of human and environmental change from local to global scales, including population, energy, agriculture, industry, technology, urbanization, water, climate, natural hazards, socio-economic systems, land use, trade, marginalized societies, and biodiversity.
Not open to students who have credit in NREM 309.

511 Water Resources (3) Hydrologic cycle and climate as a basis for water resources distribution and management. U.S. and international water resources issues: U.S. water allocation laws, national and international water conflicts, water quality, drinking water and wastewater treatment, surface and ground water hydrology, municipal water resources development. Includes laboratory and field work and a graduate-level research project.

515 Water Quality Management (3) Effects, consequences of point and non-point sources of pollution on quality of surface and drinking water; occurrence, sources and effects of regulated and unregulated contaminants; role of regulations in water quality management in U.S., centralized drinking water and wastewater treatment. Laboratory analysis of water quality parameters; may include field work.
Prerequisite: NREM 511 or permission of the department chairperson.

520 Wetland Characterization (3) Study of wetland functions and values. Delineation of wetland boundaries according to the U.S. Army Corps of Engineers criteria (wetland hydrology, hydric soils, hydrophytic vegetation). Includes a substantial component of field work.
Prerequisite: permission of the department chairperson.

521 Soil Resources (3) The basic properties of the soil portion of the ecosystem. Prime emphasis on the genesis and resulting chemical and physical characteristics of soils. Includes a graduate-level research project.
Prerequisite: CHEM 112, or the equivalent; or permission of the department chairperson.

522 Soil Quality (3) Chemical, physical, and biological properties of soil that affect plant production and other land uses. Emphasizes nutrient cycles in natural and cropped systems. Use and fate of pesticides. Land application of agricultural and urban wastes.
Prerequisite: CHEM 111 or equivalent; or permission of the department chairperson.
Not open to students who have credit in NREM 422.

524 Soil Classification and Interpretation (3) Soil genesis, morphology, classification, and survey. The relationship between soils information and land use; practical application in the decision-making process. Emphasizes field study of soils and their uses.
Not open to students who have credit in NREM 324.

527 Soil Conservation and Management (3) Principles and methods of controlling soil erosion, stressing use of basic soil concepts. Management systems and individual practices, with special emphasis on soil resource maintenance.
Not open to students who have credit in NREM 427.

531 Energy and Mineral Resources: Issues and Choices (3) Appraisal of the problems, prospects, and societal and technical issues surrounding the use of energy and mineral resources. Emphasizes environmental problems and ecoenergetics, consideration of the natural resource base, distribution and production problems, conservation, alternative energy systems, resource policy, and research.
Not open to students who have credit in NREM 331.

535 Renewable Energy and Sustainable Technology (3) Exploration of alternative/renewable energy systems (wind, solar, hydro, biomass, geothermal, fuel cells). Case studies of sustainable technology emphasize topics including industrial ecology (life-cycle analysis, design for the environment, clean manufacturing, and impact assessment) and appropriate technology applications in developing countries. Problem-solving applications using various approaches.
Not open to students who have credit in NREM 335.

541 Air Quality (3) Focuses on the contamination of the atmospheric environment. Topics include major contaminants; measurement techniques; dispersion; effects on the atmosphere, human health, vegetation, and materials; regulatory requirements and practices; control measures; noise pollution. Lab and field experiences.

Not open to students who have credit in NREM 241.

542 Air Quality Management (3) Basic technical and regulatory requirements of air quality management to plan and guide a successful air quality program at the facility level. Compliance, emission inventories and processes, meteorology and dispersion modeling, and permitting.

Prerequisite: NREM 241 or approval of instructor.

546 Indoor Environmental Quality (3) Focuses on problems in residential and nonresidential indoor environments; contaminants; health effects; sick buildings; diagnosis and measurement; mitigation measures. Lab and field experiences.

Not open to students who have credit in NREM 346.

547 Occupational/Industrial Hygiene (3) Introduces the principles of assessing and controlling exposures to workplace hazards. Topics include occupational disease; exposure to contaminant gases, dusts, radiation, noise, and biological agents; ergonomic concerns; regulatory requirements; engineering control and personal protection equipment.

Not open to students who have credit in NREM 347.

557 International Community Development (3) Application of practical methods to problems of development in poor rural agrarian communities and environmental management in poor urban communities in Asia, Africa, and Latin America. Emphasizes face-to-face methodologies to the identification and development of workable solutions to resource and environmental problems of disadvantaged populations in developing nations.

Not open to students who have credit in NREM 357.

571 Outdoor Recreation and Society (3) The role of outdoor recreation in modern society. Perspectives ranging from local to global. Examination of the history of growth in outdoor recreation in the United States to the present day, emphasizing issues in both public and private sectors. May require one weekend field trip in addition to regular laboratory periods.

Not open to students who have credit in NREM 371.

572 Applied Research Methods in Resource Management (3) Designed to train students in social science applications in natural resource and environmental management. These applications include quantitative and qualitative survey research designs, analysis of social data, and applications of survey results to political processes. Perspectives range from local to international.

Not open to students who have credit in NREM 372.

573 Outdoor Recreation Planning and Administration (3) Application of basic principles and procedures for the planning and administration of resource-based and activity-based recreation areas. May require one weekend field trip as well as in-class field trips.

Prerequisite: NREM 371 or 571 or permission of the department chairperson.

Not open to students who have credit in NREM 473.

577 Wilderness and Society (3) Defining wilderness, understanding its unique significance, and analyzing techniques of past and present management. Includes study of research in perception and use. Weekend trip to the Deam Wilderness—Hoosier National Forest or a state forest backcountry area.

Not open to students who have credit in NREM 477.

585 Wastewater Management (3) Effects of wastewater on receiving waters, need for wastewater treatment, principles of wastewater treatment technologies: onsite, centralized, conventional and alternative treatment technologies; management and regulatory strategies. Includes field trip(s).

Not open to students who have credit in NREM 385.

587 Solid and Hazardous Waste Management (3) Delineation of solid and hazardous waste management in the United States. Waste reduction, recycling, processing, and disposal methods are discussed. Technical, political, and economic aspects of waste management. Effects of improper disposal on environmental quality.

Not open to students who have credit in NREM 487.

588 Site Assessment and Remediation (3) Experience with Phase I and Phase II environmental site assessments. Conventional and innovative technologies for remediation of contaminated soils and groundwater. Review of relevant environmental regulations. Some environmental chemistry.

592 Environmental Interpretation (3) Develops skills and techniques necessary to the interpretation of ecological and environmental characteristics of earth systems. Emphasizes field work and creative presentation of concepts, and organization and management of interpretive programs including sites and facilities.

Not open to students who have credit in NREM 392.

595 Teaching Environmental Education (3) Opportunities for enriching instruction through environmental education in formal and nonformal educational settings. Studies conservation, outdoor and environmental education, including teaching techniques and instructional resources used in each.

Not open to students who have credit in NREM 395.

597 Special Studies in Environmental and Natural Resource Sciences (1-3) Special academic study opportunities in the environmental and natural resource sciences.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

608 Research Methodologies in Natural Resources and Environmental Sciences (3) Development of concepts and

skills for those preparing for graduate research in natural resources and environmental sciences. Introduction to research designs, data-gathering techniques, data analysis, and research planning. Emphasizes interpreting published research and the drafting of a concise research proposal.

609 Seminar (3) Presentations of graduate student research or program projects. Discussion and critical examination of resource/environmental topics. Assessment of scientific inquiry by data analysis and interpretation.

Prerequisite: NREM 608 or permission of the department chairperson.

669 Advanced Professional Practice (1-3) Advanced supervised professional learning experiences in environmental/natural resource management, studies, or education. Students complete an independent project and present it to a professional forum.

Prerequisite: permission of the department chairperson.

A total of 3 credits may be earned.

697 Advanced Topics in Environmental and Natural Resource Management (1-3) Advanced special topics course in environmental and natural resources management.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

PHILOSOPHY AND RELIGIOUS STUDIES

bsu.edu/philosophy
North Quadrangle 204, 765-285-1244

PHILOSOPHY (PHIL)

500 History of Ancient Philosophy (3) Development of philosophical theories and ideas from the rise of philosophy in Greece through the medieval period. Emphasizes the theories in relation to one another, the times that produced them, and the thinkers who offered them.

Not open to students who have credit in PHIL 300.

503 Reading and Special Study (3) For superior students: guided reading and investigation in topics in philosophy not covered intensively in available courses.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

505 Ethics (3-6) Variable content course involving a critical examination of broad topics in applied ethics or a critical examination of historical or current ethical theories and their application of contemporary problems.

A total of 6 credits may be earned.

Not open to students who have credit in PHIL 415, 420.

510 Introduction to Theory of Knowledge (3) A critical discussion of leading theories and problems of knowledge. The condition of knowledge and rational belief, the different kinds of knowledge, the nature of truth, and the challenge of skepticism.

Not open to students who have credit in PHIL 410.

513 Philosophy of Science (3) Central philosophical problems in the sciences such as the nature of scientific explanation, the testing of hypotheses, and ethical issues arising from science; for example, the use of human subjects in experimentation and prolonging life.

RELIGIOUS STUDIES (RELS)

503 Reading and Special Study (3) For superior students: guided investigation of topics related to religion not covered intensively in other available courses.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

PHYSICS AND ASTRONOMY

bsu.edu/physics
Cooper Science Complex 101, 765-285-8860

PROGRAMS

The department offers programs in professional physics that lead to the master of arts (MA) degree or master of science (MS) degree. A student may also select a program of study in physics education for prospective high school teachers of physics, which leads either to the master of arts (MA) or to the master of science (MS) degree, or the master of arts in education (MAE) in physics. The MA, MS, and MAE degree programs require a minimum of 30-33 credits, 6 of which may consist of courses in a minor area or electives in a related discipline. A student's curriculum must include a minimum of

24 credits of physics, applied physics, or astronomy, as approved by the department, which may include credit for successful completion of a thesis or research paper.

See the Science listing under the College of Sciences and Humanities, page 154, for the doctoral program in environmental science.

Admission requirements
Applicants must meet the admission requirements of the Graduate School and the Department of Physics and Astronomy and take the Graduate Record Exam (GRE) or an equivalent test.

MASTERS IN PHYSICS, 33 credits

Topics for research leading to an MA or MS degree in Physics may include applied nuclear (Radon) studies; condensed matter/nanostructure studies; observational stellar astronomy, galactic structure, and extragalactic astronomy; solar energy applications; microprocessor-based instrumentation, computer vision; radiocarbon dating; elementary particle physics (Ball State University/Fermi Lab); physics studies applied to policies on arms control, energy, and the environment; and physics education.

If the student chooses experimental physics as a research topic, it normally will be in one of the above areas for which laboratory and apparatus are available. However, it is possible for research to be conducted at a cooperating industrial or national research and development laboratory or educational institution. For research in both experimental and theoretical physics, remote access to the university's central computer is available; students also have access to desktop computers in the department. Students' choices of research topics must be approved by the department

Assistantships
Normally students who are awarded graduate assistantships will need about two years to complete work for the master's degree. Students should allow a minimum amount of time equivalent to about three semesters of thesis research for initial approval, completion, and final acceptance by the department and Graduate School.

Master of Arts in Physics, 33 credits

Degree requirements
Requires the student to write a research paper on a research project in physics or physics education. The research paper earns a total of 3 credits.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core requirements			
PHYC	534	Thermal Physics (3)	
	or		
	675	Statistical Mechanics (3)	3
	552	Electricity and Magnetism 2 (3)	
	or		
	673	Electrodynamics (3)	3
	565	Quantum Mechanics	3
	530	Mechanics (3)	
	or		
	671	Classical Mechanics (3)	3
	683	Seminar in Physics (1-4)	3
Courses in physics, applied physics, or astronomy as approved by the department. A minimum of 12 credits must be in courses at the 600 level.			9-15
Research requirement			
RES	697	Research Paper (1-3)	3
0-6 credits from			
Minors and electives as approved by the department			0-6
			33 crs

Master of Science in Physics, 33 credits

Degree requirements
Requires a 6-credit thesis, which is normally a formal report on the student's research in some feature of experimental, theoretical or computational physics, or physics education.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core requirements			
PHYC	565	Quantum Mechanics	3
	671	Classical Mechanics	3
	673	Electrodynamics	3
	675	Statistical Mechanics	3
	683	Seminar in Physics (1-4)	3
Courses in physics, applied physics, or astronomy as approved by the department			6-12
Research requirement			
THES	698	Thesis (1-6)	6
0-6 credits from			
Minors and electives as approved by the department			0-6
			33 crs

MASTER OF ARTS IN EDUCATION IN PHYSICS, 30 credits

Admission requirements
Applicants must meet the admission requirements of the Graduate School and the Department of Physics and Astronomy and take the Graduate Record Exam (GRE) or an equivalent test.

Designed for students choosing a profession in public school teaching. Candidates must possess a valid teaching license or be in the process of securing a senior high, junior high/middle school, or secondary school teaching license.

Degree requirements
Requires students to write research papers on research projects in physics, astronomy, physics education, or astronomy education. The research paper earns a total of 3 credits.

PREFIX NO SHORT TITLE	*CREDITS*
12-18 credits from APHY, ASTR, PHYC as approved by the department	12-18
9 credits from Professional Education Core	9
Research requirement RES 697 Research Paper (1-3)	3
0-6 credits from Minors and nondepartmental electives as approved by the department	0-6
	30 crs

APPLIED PHYSICS (APHY)

510 Introduction to Nanoscience and Technology (3) Explores science and technology at the nanoscale. Studies the physical properties of nanomaterials, the tools and techniques for nanosystem fabrication and investigation; principles of mechanical, optical, electrical, and magnetic nanosystems; current state of technology in physics, chemistry, biology, engineering, and information systems; and future applications.
Prerequisite: PHYC 260.

512 Fundamentals of Nanomaterials Growth and Device Fabrication (4) Introduces basic experimental techniques in: nanomaterials growth, nanodevices fabrication, and materials and devices characterization. Introductory laboratory in the field of nanoscience and technology. Intended for those interested in semiconductor technology or experimental work in general.
Prerequisite: PHYC 260 or permission of the department chairperson.

515 Medical Physics 1 (3) Biomechanics, statistical physics, bioelectric fields, biomagnetic fields, electricity, and magnetism at the cellular level.
Prerequisite: permission of the department chairperson or instructor.
Not open to students who have credit in APHY 315.

516 Medical Physics 2 (3) Signal analysis, images, biomagnetism, x-rays, nuclear medicine, magnetic resonance imaging.
Prerequisite: permission of the department chairperson or instructor.
Not open to students who have credit in APHY 316.

520 Solar Thermal Systems (3) Physics of the solar energy resource, solar collection, concentration, thermal conversion, energy storage, and the design and performance of solar thermal energy systems.
Prerequisite: PHYC 122; MATH 162 or 166.
Not open to students who have credit in APHY 420.

522 Photovoltaics (3) Physics of photovoltaic systems, including basic operating principles, design and technology, and performance of individual solar cells and solar cell systems.
Prerequisite: PHYC 260; MATH 162 or 166.
Not open to students who have credit in APHY 422.

ASTRONOMY (ASTR)

530 Astronomy and Astrophysics 1 (4) A review of mechanics, electromagnetic radiation, and atomic structure in modern observational astrophysics. Solar system astrophysics—including an introduction to celestial mechanics and astronomical coordinate and time systems—are surveyed, and astronomical instruments are discussed.
Prerequisite: ASTR 122; PHYC 122.
Not open to students who have credit in ASTR 330.

532 Astronomy and Astrophysics 2 (4) An examination of observational stellar astronomy with applications to the study of stellar structure and evolution and a review of the physics of stellar systems like star clusters, galaxies, and clusters of galaxies.
Prerequisite: ASTR 530.
Not open to students who have credit in ASTR 330.

580 Topics in Modern Astronomy (2) Covering selected topics in contemporary astronomy. Extensive use of library facilities including current journals and periodicals in astronomy. Discussions of current astronomical research.
Prerequisite: permission of the instructor.
A total of 4 credits may be earned, but no more than 2 in any one semester or term.
Not open to students who have credit in ASTR 380 under the same title.

582 Instruments and Techniques in Planetarium Operations (3) Use of planetarium instruments, console, and chamber. Organization and evaluation of planetarium programs and exhibits.
Prerequisite: ASTR 122 or permission of the department chairperson.
Not open to students who have credit in ASTR 382.

586 Advanced Observational Astronomy (3) Observatory and laboratory experience in investigating modern techniques in observational astronomy. Characteristics of telescopes, CCD cameras, electronic data acquisition, and software processing systems. Methods of reducing raw data.

602 Observational Astronomy Workshop for Teachers (3) Lecture/laboratory-oriented course that prepares middle and high school teachers to explain celestial events, plan observing sessions, and use star charts and planetaria-type computer software. Introduces image acquisition and software to extract meaningful data.

Not open to students who have credit in PHYC 602.

604 Physical Foundations of Astronomy Workshop for Teachers (3) Lecture/laboratory-oriented course that introduces middle and high school teachers to basic principles of physics presented in the context of modern astronomy and astrophysics. Fundamentals of mechanics and celestial mechanics and their applications to space exploration, as well as fundamental principles in optics and the structure of matter are discussed.

Not open to students who have credit in PHYC 604.

606 Stellar Evolution and Black Holes Workshop for Teachers (3) Lecture/laboratory-oriented course that introduces middle and high school teachers to the basic principles of stellar properties and stellar evolutions. Fundamental laws are reviewed in the context of pulsars, neutron stars, and black holes. Provides practical applications through hands-on experiences in how stellar properties are determined.

Prerequisite: ASTR 604 or PHYC 604, or permission of the instructor.

Not open to students who have credit in PHYC 606.

PHYSICS (PHYC)

530 Mechanics (3) Basic concepts of mechanics, general motion of particles in three dimensions. Simple and damped harmonic motion. Particle dynamics in noninertial frames of reference, central forces. Dynamics of systems of particles. Motion of rigid bodies in three dimensions. Dynamics of oscillation systems.

Prerequisite: permission of the department chairperson.

Not open to students who have credit in PHYC 330.

534 Thermal Physics (3) Laws of thermodynamics and introduction to the kinetic theory of gases. No regularly scheduled laboratory.

Prerequisite: PHYC 330 or permission of the department chairperson.

Not open to students who have credit in PHYC 434.

536 Computational Physics (3) Introduction to computational methods in physics, with an emphasis on application and on developing tools for implementing realistic computer simulations and interpretation of the data. These topics will include numerical integration, function fitting and minimization, realistic simulation of projectile motion and many-body systems, stochastic mechanics, wave motion, and molecular dynamics.

Prerequisite: permission of the department chairperson or the instructor; some prior programming experience at level of CS 120 is preferred.

540 Physical Optics (3) The electromagnetic wave theory of light; spectra, interference, diffraction, polarization, and double refraction.

Prerequisite: PHYC 122.

Not open to students who have credit in PHYC 340.

546 Acoustics (3) Elements of pure and applied acoustics. Topics include solutions to the wave equation, acoustic impedances, electro-mechanical-acoustic analogies, direct-radiator loudspeaker and enclosure theory, and room acoustics.

Prerequisite: PHYC 122.

Not open to students who have credit in PHYC 346.

550 Electricity and Magnetism 1 (3) Application of vector analysis to electrostatics, dielectric theory, magnetostatics, dipole and multipole fields, currents, and Maxwell's equations.

Prerequisite: PHYC 122; MATH 267 or equivalent.

Not open to students who have credit in PHYC 450.

552 Electricity and Magnetism 2 (3) The study of electric and magnetic fields in electrodynamics, Maxwell's equation, EM waves, radiation of moving charges, and relativistic kinematics and dynamics.

Prerequisite: PHYC 450, 550 or equivalent.

Not open to students who have credit in PHYC 452.

554 Electronics l (4) Introductory DC and AC circuit theory, semiconductor components, power supplies, transistor amplification, integrated circuit operational amplifiers, active filters, oscillators, and function generators. Basic combinational logic circuits and Boolean algebra. Emphasizes application of integrated circuits.

Prerequisite: PHYC 122 or permission of the department chairperson.

Not open to students who have credit in PHYC 354.

556 Electronics 2 (4) Sequential logic circuits including scalars, displays, memories, shift registers, analog-to-digital and digital-to-analog conversion techniques. Microprocessor architecture and support electronics for microcomputer design. IC chips and circuits for experiment to microcomputer interfacing. Use of a microprocessor development system.

Prerequisite: PHYC 354 or 554.

Not open to students who have credit in PHYC 356.

560 Introductory Nuclear Techniques (3) Experimental studies of radioactive disintegrations and decay products and their relationship to nuclear structure. Instrumentation in radioscope measurements. Two lectures and two two-hour laboratory periods a week.

Prerequisite: PHYC 260.

Not open to students who have credit in PHYC 360.

561 Elementary Particles (3) Investigates the nature and behavior of elementary particles through the study of the symmetries and dynamics responsible for their production, reactions, and decays.

Prerequisite: PHYC 464 or 564.
Not open to students who have credit in PHYC 461.

563 Nuclear Physics (3) The nucleus and nuclear interactions. Theoretical and experimental elements of radioactive decay and models of the nucleus.
Prerequisite: PHYC 260.
Not open to students who have credit in PHYC 463.

564 Introduction to Quantum Mechanics (3) De Broglie's postulate, the uncertainty principle, the Schroedinger equation, the free particle, square well potentials, harmonic oscillator, the hydrogen atom, and angular momentum in quantum mechanics, and other selected wave mechanics problems. No regularly scheduled laboratory.
Prerequisite: PHYC 260.
Not open to students who have credit in PHYC 464.

565 Quantum Mechanics (3) Review of barrier problems, the harmonic oscillator, and angular momentum using matrix methods. Problems involving perturbation theory, one-electron atoms, magnetic moments, spin, relativistic effects, symmetric and anti-symmetric wave functions, the helium atom, transition rates, and scattering theory.
Prerequisite: PHYC 464 or 564.
Not open to students who have credit in PHYC 465.

566 Condensed Matter Physics (3) Structure and physical properties of matter in the solid state. Electrical and magnetic properties and band theory of solids, with special emphasis on semiconductors.
Prerequisite: PHYC 260.

570 Introductory Mathematical Physics 1 (3) Application of mathematical techniques to the formulation and solution of physical problems in classical mechanics, thermodynamics, and electromagnetic theory and in quantum mechanics. Topics include computer algebra systems and applications.
Prerequisite: PHYC 122, 260; or permission of the department chairperson.
Not open to students who have credit in PHYC 370.

572 Introductory Mathematical Physics 2 (3) Techniques in the formulation and solution of physical problems. Computer algebra systems (e.g. mathematica) may be introduced for the study of topics such as boundary value problems, transforms, special functions of mathematical physics, and applications of tensor analysis in physics.
Prerequisite: PHYC 122, 260; or permission of the department chairperson.
Not open to students who have credit in PHYC 372.

580 Seminar in Modern Physics (3) Seminar covering selected topics in contemporary physics. Extensive use of library facilities including current journals and periodicals in physics. Discussions of current research in physics and related fields.
Prerequisite: permission of the instructor.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.
Not open to students who have credit in PHYC 380 under the same title.

585 Measures of Learning in Physics (1) Integration of the fundamental principles underlying undergraduate physics education and related measures of learning. Emphasis is on developing familiarity with the contents of local and national exams in physics which are often reflected in graduate level qualifying exams. Emphasis will be focused on basic concepts in the context of problem solving.
Not open to students who have credit in PHYC 485.

602 Observational Astronomy Workshop for Teachers (3) Lecture/laboratory-oriented course that prepares middle and high school teachers to explain celestial events, plan observing sessions, and use star charts and planetaria-type computer software. Introduces image acquisition and software to extract meaningful data.
Not open to students who have credit in ASTR 602.

604 Physical Foundations of Astronomy Workshop for Teachers (3) Lecture/laboratory-oriented course that introduces middle and high school teachers to basic principles of physics presented in the context of modern astronomy and astrophysics. Fundamentals of mechanics, celestial mechanics, and their applications to space exploration as well as fundamental principles in optics and the structure of matter are discussed.
Not open to students who have credit in ASTR 604.

606 Stellar Evolution and Black Holes Workshop for Teachers (3) Lecture/laboratory-oriented course that introduces middle and high school teachers to the basic principles of stellar properties and stellar evolutions. Fundamental laws are reviewed in the context of pulsars, neutron stars, and black holes. Provides practical applications through hands-on experiences in how stellar properties are determined.
Prerequisite: ASTR 604 or PHYC 604 or permission of the instructor.
Not open to students who have credit in ASTR 606.

641 Laser and Holography Workshop for Teachers (2) The field of lasers and holography for junior high and high school science teachers. Basic geometrical optics, physical optics, and atomic theory phenomena in relation to laser operation and hologram making. Laboratory oriented with considerable emphasis on laser safety and the use of lasers for demonstrating optical phenomena in the classroom.
Prerequisite: PHYC 112 or 122, or permission of the department chairperson.
Not open to students who have credit in PHYC 340, 540.

657 Introductory Integrated Circuit Analog Electronics Workshop for Teachers (2) Laboratory-oriented course that acquaints teachers who do not have a strong electronics background with the uses of modern integrated circuitry.

Emphasizes the construction and use of circuits that can be presented in the classroom. Introduces analog electronics topics.

Prerequisite: PHYC 112 or 122, or permission of the department chairperson.

Not open to students who have credit in PHYC 354, 356, 554, 556.

658 Introductory Integrated Circuit Digital Electronics Workshop for Teachers (2) Laboratory-oriented course that acquaints teachers who do not have a strong electronics background with the uses of modern integrated circuitry. Emphasizes the construction and use of circuits that can be presented in the classroom. Introduces digital and micro-processor electronics topics.

Prerequisite: PHYC 112 or 122, or permission of the department chairperson.

Not open to students who have credit in PHYC 354, 356, 554, 556.

659 Application of Nuclear Techniques Workshop for Teachers (2) Applications of nuclear techniques in research, medicine, the environment, energy production, and industry. Designed for junior high and high school science teachers. Laboratory oriented. Uses radiation detection devices and radiation safety procedures.

Prerequisite: PHYC 112 or 122, or permission of the department chairperson.

Not open to students who have credit in PHYC 360 or 560.

669 Work and Learning Experience in Physics (1-3) Paid work and learning experiences in applied or theoretical physics in an institutional, industrial, or university research or development setting.

Prerequisite: approval of a proposed program by the department chairperson.

A total of 3 credits may be earned in combination with PHYC 369.

No more than 3 credits in combination with PHYC 369 may be used as approved electives toward a departmental major.

671 Classical Mechanics (3) Classical Hamiltonian mechanics as applied to particles and rigid body motion.

Prerequisite: PHYC 330 or permission of the department chairperson.

673 Electrodynamics (3) Advanced mathematical techniques for solving problems in electrostatics and magnetostatics; fundamental concepts of electrodynamics. Applicants to electromagnetic fields in matter, waves, and radiation.

Prerequisite: PHYC 450, 550 or equivalent.

675 Statistical Mechanics (3) Thermal physics, kinetic theory, and statistical mechanics.

Prerequisite: PHYC 434 or 534, or permission of the department chairperson.

677 Quantum Theory of Solids (3) The quantum mechanical theory of the structure, cohesion, and static and dynamic processes in solids, particularly crystalline solids but with some reference to amorphous solids.

Prerequisite: PHYC 565 or permission of the department chairperson.

681 Resources and Methodology of Physics Research (3) Periodical resource material in physics, methodology of literature research. This course may be used to satisfy requirements of the graduate research methodology plan for a master's degree.

Prerequisite: permission of the department chairperson.

683 Seminar in Physics (1-4) Critical examination and discussion of recent experimental and theoretical developments in physics. Participation in and contribution of a presentation at departmental physics colloquia are expected.

A total of 4 credits may be earned.

685 Special Studies in Physics (1-8) Special activities in physics involving one or more of the following: experimental work, study of advanced topics in physics, and attendance in prescribed classes.

Prerequisite: permission of the department chairperson.

A total of 8 credits may be earned.

691 Advanced General Science (3) Further study of the principles of physics, chemistry, meteorology, geology, and astronomy that were introduced in the prerequisite.

Prerequisite: PHYC 101.

693 Theories of Physics for Secondary Physics Teachers (3) Classical mechanics, relativity, electricity, quantum mechanics, and statistical mechanics used to enable students to use new developments and recent scientific advances. Designed primarily for teachers and workers in the field who need to update their general knowledge of physics. No regularly scheduled laboratory.

Prerequisite: 8 credits in college physics.

696 Modern Developments in Physics Teaching (1-3) Recent developments in secondary physics curricula, multimedia teaching methods, national and local trends in physics teaching, laboratory work, textbooks, tests.

Prerequisite: permission of the department chairperson.

A total of 3 credits may be earned.

Not open to students who have credit in PHYC 396.

790 Internship in Science Education (3) Supervised experience in instruction of physics or science education courses.

POLITICAL SCIENCE

bsu.edu/poli-sci
North Quadrangle 258, 765-285-8780

PROGRAMS

The Department of Political Science offers a master of arts (MA) in political science and master of public administration (MPA).

Admission requirements
In order to be accepted by the Department of Political Science, students seeking admission to either the MA program or the MPA program must meet the admission requirements of the Graduate School, submit Graduate Record Examination (GRE) scores, two letters of recommendation, a personal statement describing their career goals and how the degree will help them achieve them. *Students with significant professional experience may request a waiver of the GRE requirement. Because access to GRE testing facilities may be limited in jurisdictions outside the US, students from outside the US may also request a waiver of the GRE requirement.*

MASTER OF ARTS IN POLITICAL SCIENCE, 30 credits

This degree gives students opportunities to broaden and strengthen their understanding of political science. The master of arts in political science prepares students for a variety of goals. Some students may wish to pursue doctoral work at another university after earning the MA degree at Ball State

University. Some may wish to enter law school; others may seek governmental employment; still others will go into business or professional organizations that require a knowledge of governmental processes. The MA degree program is flexible enough to prepare students for such a range of possibilities.

Degree requirements
Requires a minimum of 30 credits, at least 15 of which must be earned in political science courses at the 600 level. The 600-level courses must include POLS 625 Research Methods in Political Science and at least three additional 600-level

courses in at least two subfields of the discipline chosen by the student in conjunction with her/his advisor. Subfields include American politics, comparative politics/international relations, and public policy/administration. The university research and writing requirement can be met in one of three ways: a thesis for 6 credits, a research paper for 3 credits, or satisfactory completion of POLS 626 Research Seminar. Before graduation, students must pass a departmental comprehensive exam in two subfields of political science.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core area of study			
POLS	625	Res Meth in Political Sci	3
At least 9 credits of approved 600-level POLS electives covering at least 2 subfields			9
Research requirement			
POLS	626	Research Seminar (3)	
	or		
RES	697	Research Paper (1-3)	
	or		
THES	698	Thesis (1-6)	3-6
Electives			12-15
			30 crs

MASTER OF PUBLIC ADMINISTRATION (MPA), 36-41 credits

This degree provides graduate professional education to students who wish to prepare for administrative or research careers in public management at the federal, state, or local government level, with nonprofit organizations, or private sector corporations extensively involved with government. A full-time student can complete the MPA program (including internship) in two academic years. The requirements of the program ensure that each student will have a theoretical understanding and practical awareness of public policy and of the principles of management and administration in the public sector. The program blends the study of politics and administration with the techniques of modern management.

The flexibility of the program allows students to tailor an interdisciplinary curriculum to their needs, objectives, and goals. Program options include four disciplinary concentrations, which allow students to combine the study of public administration and policy with course work in substantive policy areas such as criminal justice, emergency management and homeland security, community and economic development, or information and communication technology.

Alternatively, students may choose to build a customized course of study through elective courses. Each student's background will be evaluated individually, and recommendations on program content will be made according to the student's educational and job experiences and career plans. Selection of such courses must be made in consultation

with the major advisor. Students may complete part of their MPA elective courses in such departments as accounting, criminal justice and criminology, economics, journalism, educational leadership, marketing, management, natural resources and environmental management, physiology and health science, and sociology.

Many opportunities exist for student participation in workshops and experiential learning settings where students and public or nonprofit administrators can interact. Students without appropriate professional experience will be required to complete a full-time internship for credit.

Before graduation, all students must pass a departmental comprehensive exam in public administration, public policy, and in their concentration area, if any.

Degree requirements

MPA with customized course of study, 36-39 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core area of study			
POLS	625	Res Meth in Political Sci	3
	648	Policy Design and Advoc	3
	650	Intro Pub and Nonprofit Admin	3
	651	Managing Orgs for Public Serv	3
	652	Managing HR for Public Ser	3
	653	Public and Nonprofit Fin Mgt	3
Research requirements			
POLS	626	Research Seminar (3)	
	or		
RES	697	Research Paper (1-3)	
	or		
THES	698	Thesis (1-6)	3-6
Electives in public administration and related areas as approved by the department			15
			36-39 crs

MPA with criminal justice and criminology (CJC) concentration, 36-39 credits

Core area of study			
POLS	625	Res Meth in Political Sci	3
	648	Policy Design and Advoc	3
	650	Intro Pub and Nonprofit Admin	3
	651	Managing Orgs for Public Serv	3
	652	Managing HR for Public Ser	3
	653	Public and Nonprofit Fin Mgt	3
Research requirements			
POLS	626	Research Seminar (3)	
	or		
RES	697	Research Paper (1-3)	
	or		
THES	698	Thesis (1-6)	3-6
Electives in public administration or related area as approved by the department			3
CJC concentration			
CJC	650	Criminal Justice Admin	3
	651	Interpersonal Relations in CJC	3
	652	Philosophical Aspects of CJC	3
	690	Independent Study in CJC (1-3)	3
			36-39 crs

MPA with community and economic development concentration, 37-40 credits

Core area of study			
POLS	625	Res Meth in Political Sci	3
	648	Policy Design and Advoc	3
	650	Intro Pub and Nonprofit Admin	3
	651	Managing Orgs for Public Serv	3
	652	Managing HR for Public Ser	3
	653	Public and Nonprofit Fin Mgt	3
Research requirements			
POLS	626	Research Seminar (3)	
	or		
RES	697	Research Paper (1-3)	
	or		
THES	698	Thesis (1-6)	3-6
CED concentration			
PLAN	510	Planning Law	3
	511	Property Law	1
	585	Intro Comm Dev and Enter Plng	3
	586	Methods of Public Interest Dev	3
6 credits from			
BL	665	Law, Ethics, Pub Pol and Bus (3)	
CAP	651	Research Methods (3)	
HSC	582	Environmental Health (3)	
PLAN	512	Intro to GIS for Urban Plan (3)	
	530	Hous and Comm Development (3)	
	590	Indep Study in Plannng (1-9)	
	598	Spec Proj Urb and Regl Plannng (3)	
	612	Community Development Studio (3)	
	620	Human Impact Analysis (2)	
	621	Environmental Impact Analysis (1)	
	626	Human Settlements (1)	
	627	Ecology of Planning (1)	
	628	Economics of Planning (1)	
	632	Studio Comm Dev and Ent Plannng (3)	
PMGT	525	Adv Mgt of Government Housing (3)	
	615	Senior Housing Option (3)	
	696	Property Management Seminar (3)	
UD	501	UD Studio 1: Sust Urban Syst (2)	
	503	UD Studio 3: Comm-Bsd Sust Des (2)	
	561	UD Communications 1 (3)	
	562	UD Communications 2 (3)	
	569	Topical Computer Graphics Work (1)	
	598	Special Projects Urban Design (1)	
	637	UD Topics and Colloquia (1)	

	640	History of Urban Form (3)	
	663	Urban Design Visualization (3)	6
			37-40 crs

MPA with emergency management and homeland security concentration, 36-39 credits

Core area of study			
POLS	625	Res Meth in Political Sci	3
	648	Policy Design and Advoc	3
	650	Intro Pub and Nonprofit Admin	3
	651	Managing Orgs for Public Serv	3
	652	Managing HR for Public Ser	3
	653	Public and Nonprofit Fin Mgt	3
Research requirements			
POLS	626	Research Seminar (3)	
	or		
RES	697	Research Paper (1-3)	
	or		
THES	698	Thesis (1-6)	3-6
EMHS concentration			
EMHS	552	Science WMDs Technol Hazards	3
	555	International Domestic Terror	3
	589	Emergency Response WMDs	3
6 credits from			
CS	547	Comp, Info, and Network Sec (3)	
EMHS	550	Haz Mat Health and Safety (3)	
	553	Arson Investigation (3)	
	593	Special Topics (3)	
GEOG	544	Adv Geog of Hazards and Env (3)	
GEOL	516	Geol of Hazards and Env (3)	
ISOM	601	Intro Comp and Net Sec (3)	
METC	534	Atmospheric Hazards (3)	
POLS	694	Terrorism and Homeland Sec (3)	
PR	660	P R Theories and Applications (3)	6
			36-39 crs

MPA with information and communication technology concentration, 38-41 credits

Core area of study			
POLS	625	Res Meth in Political Sci	3
	648	Policy Design and Advoc	3
	650	Intro Pub and Nonprofit Admin	3
	651	Managing Orgs for Public Serv	3
	652	Managing HR for Public Ser	3
	653	Public and Nonprofit Fin Mgt	3
Research requirements			
POLS	626	Research Seminar (3)	
	or		
RES	697	Research Paper (1-3)	
	or		
THES	698	Thesis (1-6)	3-6
Elective in public administration or related area as approved by the department			3
ICS concentration			
ICS	620	Info and Comm Technologies	4
	621	Info Movemnt, Mgmt, Storage	4
6 credits from			
CS	639	Seminar in Computer Science (3)	
ICS	623	Integration (3)	
	624	Knowledge Management (3)	
	645	Evolving Database Systems (3)	
	691	Internetworking, TCP and IP (3)	
ISOM	601	Intro Comp and Net Sec (3)	
MBA	623	Electronic Commerce (3)	
	or		
other courses as approved by the ICT certificate advisor			6
			38-41 crs

CERTIFICATE PROGRAM

Certificate in Public Administration, 12 credits

The graduate certificate in public administration will provide an option for individuals who desire professional graduate education in public and nonprofit administration, but who may not wish to pursue a full Master of Public Administration (MPA) degree or who may be enrolled in another graduate program. Students obtain graduate level training in theories, concepts, and applications related to public and nonprofit management by taking a sequence of four courses drawn from the core requirements of the MPA degree.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Select four courses			
POLS	648	Policy Design and Advoc (3)	
	650	Intro Pub and Nonprofit Admin (3)	
	651	Managing Orgs for Public Serv (3)	
	652	Managing HR for Public Ser (3)	
	653	Public and Nonprofit Fin Mgt (3)	12
			12 crs

POLITICAL SCIENCE (POLS)

503 Issues in Political Science (3) Survey and investigation of a particular topic, problem, or issue in political science with emphasis on subfields, specialties, and materials not covered in other courses. Exact content will be announced before each offering.

Not open to students who have credit in POLS 403.

505 Reading and Special Study (3-6) For students whose special aptitudes and interests qualify them to study semi-independently. Topics to be chosen and investigated in

consultation with the department chairperson and a professor possessing special competence in the topic involved.

Prerequisite: basic courses in the topic selected for special study.

A total of 6 credits may be earned.

507 Workshop in Political Science (2-6) Intensive study of selected problems in political science.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned.

511 American Political Thought (3) American political thought from the colonial period to the present. Puritanism, nature of rights, constitutionalism and federalism, nature of the Union, democracy, liberalism, conservatism, individualism and collectivism, welfare state, isolationism and internationalism, and national security and freedom.

Not open to students who have credit in POLS 411.

531 Congress (3) Legislative bodies and law-making: organization of legislative bodies, operation of the committee system, relations with interest groups, executive branches, bill drafting, legislative aids, controls over legislation, and movement for reform.

Prerequisite: POLS 130 or equivalent.

Not open to students who have credit in POLS 431.

534 State Legislatures (3) Legislative systems in American state government. External influences (constituencies, political parties, interest groups), internal influences (organizational structure, staff, norms, decision making), issues confronting state legislatures, and reform proposals.

Prerequisite: POLS 130, 237.

535 Intergovernmental Conflict and Cooperation (3) Analysis of the role of conflict, cooperation, dependence, and interdependence among federal, state, and local governments in shaping political relationships and public policy in the American federal system. Examine major conflicts and controversies related to federalism and intergovernmental relations and identify the constitutional principles underlying them.

Not open to students who have credit in POLS 435.

537 Government and Politics in Indiana (3) Survey of Indiana's political culture and tradition as compared to other states. Critical examination of Indiana's contemporary political processes and governmental policies.

Not open to students who have credit in POLS 437.

538 Metropolitan Problems (3) Cities and metropolitan communities; the nature, characteristics, functions, governmental structure, intergovernmental relations, social makeup and problems, economic base, decision-making structure, and other related topics; the present and future roles of planning and citizen participation in the entire community.

Prerequisite: POLS 238.

Not open to students who have credit in POLS 438.

543 American Constitutional Law (3) The Constitution of the United States, its development and interpretations through principal statutes and judicial decisions. Congressional policies embodied in socioeconomic legislation and doctrines developed by the Supreme Court.

Prerequisite: POLS 130.

Not open to students who have credit in POLS 443.

544 Constitutional Liberties (3) Relations between the individual and government as revealed through cases in constitutional law. Cases involving the Bill of Rights and the Fourteenth Amendment.

Prerequisite: POLS 130.

Not open to students who have credit in POLS 444.

549 Land-Use Regulation (3) The legislative and constitutional components of the regulation of land use at various levels of government, including zoning, subdivision regulations, urban renewal, codes, enforcement, eminent domain, conservation, reclamation, interstate compacts, and metropolitan and regional agencies.

550 Masculinity and Politics (3) Introduces students to the discipline of masculinity studies and shows how the discipline can enhance our understanding of politics in different historical periods. The course particularly emphasizes how influential political thinkers – like Plato, Machiavelli, and Nietzche – impacted the mutual development of masculinity and politics in the classical Greek and Roman and modern European and American worlds.

Not open to students who have credit in POLS 450.

554 Politics and Administration of Local Government Budgets (3) Local government budgeting with emphasis on political and administrative issues in budget preparation and accountability. Revenue development from tax and nontax sources, capital expenditure programming, financing pensions, contracting for services, cost/benefit analysis, and federal and state grant mechanisms.

Not open to students who have credit in POLS 454.

555 Administrative Law (3) Legal and political study of independent regulatory agencies; their powers, functions, and roles as determined by an analysis of relevant cases in which basic principles are identified and synthesized with other elements of public law.

Not open to students who have credit in POLS 455.

560 Public and Social Entrepreneurship and Social Change (3) Designed to provide students with an understanding of the basic theories and concepts of public and social entrepreneurship in creating social change in our community. The course will focus on roles, structures, strategies and tactics that public and not-for-profit organizations can and do use to make change at individual, policy, and societal levels.

Not open to students who have credit in POLS 460.

566 Administrative Problems in State Government (3) Administrative procedures and organizational behavior at the state level. Emphasizes the provision of government services and functions in budgeting and taxation, education, environmental protection, public health, and public works.

Prerequisite recommended: POLS 237 or 350.

Not open to students who have credit in POLS 466.

570 Public Opinion and Political Behavior (3) The nature of public opinion, instruments, techniques, and institutions involved in the formation of public opinion; the political uses and implications at home and abroad of public opinion and propaganda.

Not open to students who have credit in POLS 370.

571 Public Interest Groups and Government (3) The internal government and external political strategy of private associations—trade associations, unions, and professional, church, and patriotic organizations. The implications of pressure group activities for constitutionalism, majoritarianism, and constituency, and the effects of pressure groups upon political parties and the political process.

Not open to students who have credit in POLS 471.

572 Political Campaigns (3) Political campaigns considered as the linkage between citizens and the government in a representative democracy, from theoretical and practical perspectives. The course will answer questions on the why (theory), what (strategies), and how (techniques) of political campaigns.

Not open to students who have credit in POLS 372.

574 Women and Politics (3) National survey of women and the political process, with an emphasis on women and contemporary public policy issues.

Not open to students who have credit in POLS 474.

575 Minority Group Politics (3) The political effects of ethnic groups on American politics. Emphasizes both legal and extralegal means by which ethnic groups become involved in and influence public policy.

Prerequisite recommended: POLS 130.

Not open to students who have credit in POLS 475.

582 Governments and Politics of Western Europe (3) Europe as a political and cultural area: the government and political structures of the three major powers in Western Europe—Great Britain, France, and Germany; the current state of the Western European integration movement.

Prerequisite: POLS 130.

Not open to students who have credit in POLS 482.

586 Politics of Russia and the Successor States (3) Evaluates political, economic, and social change and performance in Russia and the other successor states of the former Soviet Union. Also assesses the historical and cultural context of modern Russia from the Bolshevik Revolution through the post-communist era.

Not open to students who have credit in POLS 486.

588 Government and Politics of China (3) A comprehensive survey of the government and politics of modern China, both of the Republic of China and Communist China.

Not open to students who have credit in POLS 488.

590 International Law (3) A survey of the Law of Nations by analyzing prominent decisions of international tribunals, examining representative legal principles, briefing appropriate cases, and conducting mock court trials.

Not open to students who have credit in POLS 490.

593 World Politics (3) Theories of contemporary interactions among states, especially the major powers, with particular attention to conflict resolution.

Not open to students who have credit in POLS 493.

595 Communist China's Foreign Policy (3) Communist China's role in international politics, with special emphasis on the effect of Communist China's foreign policy and the response to it.

610 Issues in International Relations (3) Examines important theoretical questions confronting students of international relations as a basis for examining current issues that are changing the nature of global and regional relationships.

611 International Political Economy (3) Explores the theoretical frameworks through which scholars understand the international political economy in order to understand the structures, institutions, and processes that are changing the nature of global and regional relationships.

Open only to graduate students.

615 Western Political Theory (3) In-depth examination of classic works in the Western political tradition including Plato, Aristotle, Aquinas, Machiavelli, Locke, Rousseau, and Marx. Special emphasis on the contributions of each thinker to the evolution of western concepts of justice, liberty, power, and the good society.

625 Research Methods in Political Science (3) A critical examination of methodological problems and practices in the formulation, execution, evaluation, and reporting of political science research, including a comparison of data-gathering techniques, their respective limitations, and appropriate application.

626 Research Seminar (3) Advanced techniques and applications of political and governmental research. According to need, the seminar will focus on one of the following: traditional political research, behavioral political research, and applied research in policy and administration.

Prerequisite: POLS 625 or permission of the department chairperson.

Open only to graduate students.

632 The American Presidency (3) This course will explore the theoretical, historical, and contemporary forces that combine to shape the modern presidency.

Open only to graduate students.

633 The American Judicial System (3) Examines the workings of the American judicial system, composed of courts, judge, jurors, lawyers, spectators, and rules. Topics covered include legal theory, roles of lawyers and judges, judge selection, trial and appellate courts, judicial policy, and the future of law.

636 Seminar in Comparative Politics (3) Study of the theories, methods, and approaches in comparative politics. Covers themes that can be applied to analyze different countries and regions of the world.

Prerequisite recommended: POLS 210, 280, 625 or equivalents.

642 Problems in Public Policy (3-6) Selected problems in public policy. Utilizes different approaches to the study of public policy to identify problems inherent in carrying out the basic stages of the policy process including issue definition, choices among alternatives, agenda setting, decision-making, implementation, and evaluation.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

648 Policy Design and Advocacy (3) This course is designed to provide students with an understanding of the basic theories and methods of public policy analysis. Focus will be on problem definition, alternative and criteria formulation, and decision-making phases of prospective policy analysis. Students will learn to conduct analyses for policy decisions in the public and non-profit sector.

650 Introduction to Public and Nonprofit Administration (3) Basic management principles associated with the public and nonprofit sectors. Topics include theories of public and nonprofit organizations, discretion and accountability, strategic planning, human resource management, revenue generation, and budgeting.

651 Managing Organizations for Public Service (3) This course is designed to provide students with an understanding of the basic theories and concepts for managing and leading public and nonprofit organizations. Topics include decision-making, goal setting, strategic planning, and performance measurement.

652 Managing Human Resources for Public Services (3) This course examines the lawful and effective exercise of personnel functions in public and nonprofit organizations. Students will learn principles of recruitment and selection, training and development, and employee performance evaluation and improvement.

653 Public and Nonprofit Financial Management (3) This course examines the process of public and nonprofit sector budgeting from the perspective of managerial planning and control. This includes an overview of issues and concepts important for administration and management of organizational financial affairs. Budget formats are reviewed, as are techniques and political aspects of financial decision-making.

669 Paid Internship in American Government (3-6) Students are paid for part-time or full-time work for one semester in the office of a public official in national, state, or local government, or of a candidate for public office, or of a political party. Assignments depend upon the interests of students and the convenience of sponsors.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned.

679 Practical Experience in Government (3-6) Unpaid full or part-time assignment in a public office with a candidate for public office, a political party, or private organization. Assignments depend upon the student's interest and the convenience of the sponsor.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned.

689 Comparative Politics and Government (3) Analysis of politics and government in selected major countries of the world. Considers political processes, governmental institutions, and/or public policies from a cross-national perspective.

Open only to graduate students.

694 Terrorism and Homeland Security (3) Introduction to political terrorism ranging from low-level acts of threats and violence to large-scale acts of violence using weapons of mass destruction. The nature of terrorism, policies and programs to reduce the risk and to manage terrorist events and the policies and programs to manage the consequences of terrorist violence will be discussed.

PSYCHOLOGICAL SCIENCE

bsu.edu/psych
North Quadrangle 104, 765-285-1690

PROGRAMS

Master of arts (MA) degrees in clinical psychology and in cognitive and social processes

Admission requirements
Applicants must meet the admission requirements of the Graduate School; have an undergraduate grade-point average of at least 3.0 on a 4.0 scale; submit scores from the Graduate Record Examination (GRE); submit three letters of reference, transcripts of all previous graduate and undergraduate course work, and departmental applications; and have taken undergraduate courses in psychology that include experimental design and methodology and statistics.

MASTER OF ARTS IN CLINICAL PSYCHOLOGY, 44-50 credits

A two-year program designed to prepare students to be competitive candidates for psychology doctoral programs and to enhance students' research skills by offering them a wide range of research experience from assisting faculty researchers to completing their own independent research projects. The program consists of a rigorous combination of classroom and research experiences.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDPS	642	Analysis of Variance	3
PSYS	632	Science of Psychopathology	3
	640	Foundations in Assessment	3
	652	Psychotherapy	3
	668	Physiological Psychology	3
	680	Research Methods in Psychology	3
	681	Applied Methods	4
	690	Colloquium (1)	4
	696	Clinical Diversity Seminar	3
3 credits from			
EDPS	730	Nonparametric Statistics (3)	
	740	Categorical Data Analysis (3)	
	741	Applied Regression Analysis (3)	
	742	Multivariate Statistics (3)	
	743	Factor Analysis (3)	
	744	Structural Equation Modeling (3)	
	746	Theory of Measurement (3)	3
Concentrations/Electives			
Minimum of 12 additional credits in electives, certificate, and/or concentration. Concentrations and certificates are optional. If concentration and/or certificates are selected, the credits will count toward the electives. Additional electives approved by the graduate program director. A concentration requires a minimum of 18 credits.			12
			44 crs

The university research and writing requirement is met by PSYS 680 and EDPS 642. PSYS 690 is required every semester, for 2 years. All graduate courses in psychological science include exposure to culturally-diverse content.

Concentration: Clinical/Counseling, 18 credits
Students may complete this concentration and/or one certificate listed below. If certificate is selected, the credits will count toward the concentration requirements.
Certificate in Applied Behavior Analysis
Certificate in Autism
Certificate in Neuropsychology
Certificate in Human Development and Learning

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
PSYS	613	Developmental Psychology (3)	
	685	Applied Research Internship (3-6)	
CPSY	606	Pre-Practicum Skills (3)	
	607	Appraisal Methods (3)	
	608	Psychosocial Rehabilitation (3)	
	610	Career Theories and Realities (3)	
	634	Intro Behavioral Medicine (3)	
	644	Practicum in Counseling (3)	
	662	Couples Sex Therapy (3)	
	664	Family Therapy (3)	
	676	Counseling Older Adults (3)	
	680	Social Justice (3)	
SCCO	675	Counseling Exceptional Child (3)	
			18 crs

Concentration: Assessment, 18 credits
Students may complete this concentration and/or one certificate listed below. If certificate is selected, the credits will count toward the concentration requirements.
Certificate in Institutional Research
Certificate in Neuropsychology

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
PSYS	685	Applied Research Internship (3)	
	697	Research Diversity Seminar (3)	
CPSY	610	Career Theories and Realities (3)	
EDPS	646	Tests and Measurements (3)	
	650	Individual Testing WS (3)	
	652	Intro Neuropsychology (3)	
	656	Pediatric Neuropsychology (3)	
	660	Diagnosis Learning Disorders (3)	
	746	Theory of Measurement (3)	
	750	Developmental Psychopath (3)	
	752	Practicum Neuro Assessment (3)	
SCCO	614	Career Counseling Assessment (3)	
SPCE	612	Theory and Pract EC Special Ed (3)	
	613	Assessment Strategies in ECSE (3)	
	680	Intro Persons Aut Spec Dis (3)	
	682	Interv and Treat Persons Aut (3)	
	686	Intro: Mild Interventions (3)	
	687	Educ Assessment: Mild Int (3)	

18 crs

Concentration: Cultural Diversity, 18 credits
Students may complete this concentration and one certificate listed below. If certificate is selected, the credits will count toward the concentration requirements:

Certificate in Diversity Studies

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
PSYS	524	Psychology of Women (3)	
	685	Applied Research Internship (3)	
	697	Research Diversity Seminar (3)	
ANTH	527	Culture and Medicine (3)	
	541	Anthropology of Gender (3)	
COMM	645	Intercultural Communication (3)	
EDPS	603	Human Development (3)	
	629	Adult Development (3)	
GERO	540	Women and Aging (3)	
SOC	520	Social Inequality (3)	
	521	Racial and Cultural Minori US (3)	
	522	Analysis of Social Inequality (3)	
	527	Sociology of World Religions (3)	
	531	Social Gerontology (3)	
	541	Social Change (3)	
	683	Qualitative Research Methods (3)	

18 crs

44-50 crs

MASTER OF ARTS IN COGNITIVE AND SOCIAL PROCESSES, 44 credits

A two-year program designed to provide extensive training in cognitive psychology, social psychology, research methods, and statistics. Its primary purpose is to prepare students for doctoral programs in cognitive psychology, social psychology, or a related area.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDPS	642	Analysis of Variance	3
PSYS	616	Perception and Cognition	3
	617	Memory Processes	3
	618	Advanced Cognitive Processes	3
	623	Theories of Personality	3
	668	Physiological Psychology	3
	680	Research Methods in Psychology	3
	681	Applied Methods	4
	690	Colloquium (1)	4
	697	Research Diversity Seminar	3

6 credits from

PSYS	695	Seminar in Psychology (3)	
SOPS	615	Social Cognition (3)	
	620	Group Dynamics (3)	
	640	Social Psychology of Attitudes (3)	
	660	Contemporary Social Psychology (3)	6

Additional electives approved by the graduate program director 6

44 crs

The university research and writing requirement is met by PSYS 680 and EDPS 642. All graduate courses in psychological science include diversity as a course objective. PSYS 695 must cover a social psychology topic. PSYS 690 is required every semester, for 2 years.

Teaching and Research Assistantships
Approximately 65 percent of students are awarded departmental assistantships and partial fee remissions. In return, students help faculty instructors or assist in faculty research. Exceptional second-year students may be offered the opportunity to teach introductory-level classes.

Interdepartmental Cooperative Arrangements
The department maintains a cooperative teaching and research arrangement with the counseling psychology and educational psychology departments for maximum flexibility in training.

PSYCHOLOGICAL SCIENCE (PSYS)

524 Psychology of Women (3) Psychological approaches to the study of women with special emphasis on achievement motivation and dependency, attitudes toward women, development of sex-role identity, biological and social influences on women's behavior, self-concepts and psychological conflict in women, and a critical appraisal of research in sex differences.

Not open to students who have credit in PSYS 324.

573 Industrial Psychology (3) Application of psychological principles to personnel selection and training, worker motivation and satisfaction, leadership, engineering psychology, and personnel problems in industry.

Not open to students who have credit in PSYS 373 or equivalent.

575 Advanced Industrial Psychology (3) Principles of personnel testing as applied to the selection and placement process. Focuses on the development of predictors and criteria, selection of an appropriate validation model, and the psychological dynamics of interview processes.

Prerequisite: PSYS 373 or 573 or equivalent or permission of the department chairperson.

584 Experimental Psychology (3) The study of behavior by the experimental method. Experimental studies will be conducted to evaluate research techniques and appropriate controls.

Not open to students who have credit in PSYS 284.

595 Special Topics in Psychology (1-12) Investigation of various topics related to psychology. Topics will vary at the discretion of the instructor.

Prerequisite: permission of the department chairperson.

A total of 12 credits may be earned.

613 Developmental Psychology (3) Concepts, principles, theories, and research concerning the biological and environmental influences on behavioral and psychological development. Emphasizes issues and topics related to the normal human life span. Designed primarily for students without undergraduate work in human growth and development.

Prerequisite recommended: PSYS 284 or 584 or equivalent.

615 Learning and Motivation (3) Analysis of research and theories of basic conditioning, learning processes, and motivation. Biological bases of motivation will also be considered. The major concentration will be on animal learning and motivation, but parallels to human behavior will be drawn.

Prerequisite recommended: PSYS 284 or 584 or equivalent.

616 Perception and Cognition (3) Analysis of research and theories of perception, cognition, and language. Covers information processing, attention, verbal learning and memory, problem solving, concept formation, and psycholinguistics.

Prerequisite: PSYS 284 or 584 or equivalent.

617 Memory Processes and Applications (3) Explores models of human memory processes, as well as biological, environmental, and social factors affecting memory.

Prerequisite: PSYS 616.

618 Advanced Cognitive Processes (3) Examines psychological theories, models, research, and applications of problem solving, decision making, reasoning, and other kinds of intelligent human cognitive processing.

Prerequisite: PSYS 616.

623 Theories of Personality (3) Review and comparison of theories of the structure, development, dynamics, and assessment of normal personality, with emphasis on empirical data presented by proponents of various theoretical positions.

Prerequisite recommended: PSYS 241.

632 Science of Psychopathology (3) Advanced introduction to psychopathology from a clinical perspective. Course includes focus on descriptive psychopathology, theoretical and etiological models of psychopathological syndromes, and methodological issues.

Prerequisite: PSYS 284 or equivalent and PSYS 318 or equivalent or permission of the department chairperson.

640 Foundations in Psychological Assessment (3) Provides an overview of basics issues in psychological assessment. Designed to familiarize the students with fundamental concepts and principles in testing and assessment and to identify the primary constructs assessed by clinical psychologists. Students will also learn about ethical and professional issues in psychological assessment. Intended to provide an empirically informed foundation for advanced assessment courses that focus on the development, utility, administration, scoring, and interpretation of specific assessment instruments.

Prerequisite: PSYS 632.

652 Psychotherapy (3) Several theoretical orientations, skills, and techniques will be explained and practiced using a common factors approach to therapy. Research on ethics, therapist and client issues, and the therapeutic process, as well as current issues in psychotherapy will be discussed. Classes will be a combination of lecture and discussion, prepared readings and exams, and role plays.

Prerequisite: permission of the department chairperson.

653 Advanced Topics in Psychotherapy (3) Selected topics in psychotherapy and related interventions are examined, including crisis intervention, medications, prevention, and community intervention. Also covered are historical, legal, financial, and ethical considerations, procedures for determining accountability, and public policy issues related to mental health services.

Prerequisite: PSYS 632, 652; permission of the instructor.

Open only to students in the clinical psychology MA program.

668 Physiological Psychology (3) Introduction to the physiological basis of behavior, involving the nervous system, its structure, biochemistry, and function. Emphasis on basic neuroscience and research methods. Includes a survey of the role of neurophysiology and neuroanatomy in functions of consciousness and mental disorders.

670 Health Psychology (3) A systematic introduction to the use of psychological procedures in the prevention, diagnosis, and treatment of such medical problems as cardiovascular disorders, headaches, obesity, asthma, and chronic pain.

Prerequisite: PSYS 632.

680 Research Methods in Psychology (3) Overview of research methods in psychology, including experimental, quasi-experimental, correlational, single-case, and program evaluation techniques.

Open only to students in the clinical psychology MA program and students in the cognitive and social processes MA program.

681 Applied Methods in Advanced Psychological Research (4) Regular meetings devoted to presentation, discussion, and writing associated with completing an independently designed and executed research study. This includes active participation in original research completed under the supervision of the instructor.

Prerequisite: PSYS 680.
Open only to MA students in psychological science.

682 Orientation to Professional Clinical (1) A 100-hour clinical practicum in a mental health setting. Designed to introduce students to issues involved with professional practice, including history, roles, organizational structures, ethics, standards, and credentialing.
Prerequisite: permission of the department chairperson.
Open only to clinical graduate students in psychological science.

685 Applied/Research Internship (3-6) Supervised applied experiences in the field of clinical psychology in one or more appropriate settings related to their therapeutic and/or research interests. Students must have earned 20 graduate credits in psychological science, at least half of which should be from the clinical sequence.
Prerequisite: permission of the department chairperson.
A total of 6 credits may be earned.
Open only to students in the clinical psychology MA program.

686 Applied Practicum (3-6) Supervised experience in an applied setting.
Prerequisite: 21 graduate credits in psychology; permission of the department chairperson.
A total of 6 credits may be earned.
Open only to master's candidates in cognitive and social processes.

687 Advanced Clinical Internship (3) Supervised advanced clinical experience in one or more appropriate settings. Emphasizes the development of advanced skills, the integration of professional knowledge, and skills appropriate to professional practice.
Prerequisite: PSYS 685.
Open only to students in the clinical psychology MA program.

690 Professional Development Colloquium (1) This weekly colloquium will be devoted to building marketable and specific skills for students preparing to matriculate into the workforce or a doctoral program. Activities will include thesis and research hypothesis development, resume-building, sponsored projects education, and faculty and student research presentations.
A total of 4 credits may be earned, but no more than 1 in any one semester or term.
Open only to MA students in psychological science.

691 Systems of Psychology (3) The major concepts of various schools of psychological thought and contemporary theoretical systems as they have evolved from their historical origins.

695 Seminar in Psychology (1-6) Investigation in the current literature of psychology. Topics will vary each semester, at the instructor's discretion.
Prerequisite: 12 graduate credits in psychology.
A total of 6 credits may be earned.

696 Diversity Issues in Clinical Psychology (3) Introduces the application of diversity perspectives to psychological practice. Race, ethnicity, economic status, national origin, disability, gender, sexual orientation and identity, age, and religious beliefs will be considered. Emphasizes why individuals working in all psychological subdisciplines need to understand diversity issues.
Open only to students in the clinical psychology MA program.

697 Diversity Issues in Psychological Research (3) Introduces the application of diversity perspectives to psychological research. Race, ethnicity, economic status, national origin, disability, gender, sexual orientation and identity, age, and religious beliefs will be considered. Emphasizes why individuals working in all psychological subdisciplines need to understand diversity issues.

698 Psychological Investigations (1-3) For students with special aptitude: an opportunity to pursue a line of psychological investigation individually under faculty supervision. Students will be expected to read the relevant literature and to participate in designing and conducting the investigation. Time spent in the investigation may vary from one semester to a full academic year, sometimes including the summer.
Prerequisite: permission of the department chairperson.
A total of 6 credits may be earned, but no more than 3 in any one semester or term.

SOCIOLOGY

bsu.edu/sociology
North Quadrangle 222, 765-285-5977

PROGRAM

The master of arts (MA) in sociology is designed to prepare students for professional employment or doctoral study in sociology at other universities

MASTER OF ARTS IN SOCIOLOGY, 33 credits

Admission requirements

Applicants must meet the admission requirements of the Graduate School and present evidence of preparation to do work in sociology.

Degree requirements
The master of arts in sociology requires 33 credits. Students must complete a 18-credit core of required courses. To complete the remaining 15 credits, students will choose one of the following concentrations, depending on their needs and backgrounds: thesis, institutional research certificate, teaching certificate, directed electives in methods and statistics, or certificate in interpretive ethnography. The research methodology course requirement is met by SOC 681.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core requirements, 18 credits			
SOC	600	Research Methods: Qual & Quant	3
	603	Readings in Sociological Thry	3
	681	Survey Research Methods	3
	682	Social Statistics	3
	684	Adv Sociological Data Analy	3
	699	Sem in Sel Topics in Soc	3
Complete one concentration			
Thesis concentration, 15 credits			
THES	698	Thesis (1-6)	6
Electives			9
			33 crs
Institutional research certificate concentration, 15 credits			
ID	602	Institutional Research	3
SOC	588	Internship 3: Field Experience (1-3)	3
Electives			9
			33 crs
Certificate in college and university teaching concentration, 15 credits			
EDHI	609	Prpng for Prof: Tch Hi Ed	3
	610	Issues in Higher Education	3
ID	601	Tchng Pract in Hi Ed	3
6 credits from			
EDAC	634	The Adult as a Learner (3)	
	635	Strategies for Teaching Adults (3)	
	699	Intern in Ad and Comm Ed (2-6)	
EDCC	640	Community College (3)	
EDFO	610	Women, Gender, and Education (3)	
EDHI	611	Tchng and Curr Issues in Hi Ed (3)	
	613	Admini and Fin in Higher Ed (3)	
EDTE	660	Instructi Des and Tech (3)	
	690	Pract in Ed Tech (2-4)	6
			33 crs
Directed electives in methods and statistics concentration, 15 credits			
6 credits from			
COMM	602	Quant Research in Comm (3)	
	605	Qual Research in Comm (3)	
EDPS	730	Nonparametric Statistics (3)	
EDST	660	Ethno Res in Ed (3)	
	697	The Grant Process and Research (3)	
GEOG	544	Adv Geog Info Systems Analysis (3)	
HSC	670	Hlth Sci Res Tech (3)	
PSYS	680	Research Methods in Psychology (3)	
	or		
equivalent courses to be determined with advisor			6
Electives			9
			33 crs
Certificate in interpretive ethnography concentration, 15 credits			
ANTH	601	Scope of Cultural Anthropology	3
3 credits from			
ANTH	550	Ethnographic Field School (3-12)	
	or		
	559	Ethnographic Methods (3)	
	or		
	695	Res Meths in Anth (3)	3
9 credits from			
ANTH	550	Ethnographic Field School (3)	
COMM	605	Qual Research in Comm (3)	
EDEL	676	Research in Elementary Educ (3)	
EDST	650	Intro to Qual Res (3)	
	660	Ethno Res in Ed (3)	
PSYS	595	Special Topics in Psychology (3)	
RELS	503	Reading and Special Study (3)	
SOC	681	Survey Research Methods (3)	
	683	Qualitative Research Methods (3)	9
			33 crs

Graduate Assistantships
A limited number of graduate assistantships are available each year to students who have maintained a minimum undergraduate grade-point average (GPA) of 2.75 on a scale of 4.0. There is a stipend, and part of the tuition is waived. Graduate assistants should plan for and expect assistantships to begin in the fall semester and end at the close of the spring semester. Renewal of the assistantship for a second year is available.

SOCIOLOGY (SOC)

502 Sociological Theory (3) Focuses on sociological theories of the nineteenth and early twentieth centuries. The investigation includes the intellectual and cultural backgrounds from which theories developed.
Not open to students who have credit in SOC 402.

520 Social Inequality (3) Examines causes and consequences of social class, status, and mobility in the United States and other countries.

Not open to students who have credit in SOC 320.

521 Racial and Cultural Minorities in the United States (3) Examines the causes of prejudice and discrimination toward minorities in the United States, minority group experiences, and proposals for reducing prejudice and discrimination.

Not open to students who have credit in SOC 421.

522 Analysis of Social Inequality and Social Trends (3) Quantitative analysis of social inequality and social trends in contemporary society.

Prerequisite: SOC 382 or equivalent.

Not open to students who have credit in SOC 422.

527 Sociology of World Religions (3) Study of the relationship between society and religion.

Not open to students who have credit in SOC 427.

531 Social Gerontology (3) Examines the effects of social and cultural factors of the aging process including an analysis of policies and programs designed to meet the needs of older adults.

Not open to students who have credit in SOC 431.

541 Social Change (3) Analyzes social movements and resistance to these movements.

Not open to students who have credit in SOC 441.

570 Population Dynamics and Demographic Methods (3) Investigation of historical and contemporary demographic patterns and their implications for the future. GIS and advanced method strategies will be used to analyze composition, distribution, and growth of human populations.

Not open to students who have credit in SOC 470.

572 Urban Dynamics and Problems (3) Examines the historic functions and institutional dynamics of the city with special reference to contemporary urban problems, including issues of community diversity and solidarity.

Not open to students who have credit in SOC 472.

580 Sociological Research Design (3) Examines the basic principles of conducting and analyzing sociological research.

Not open to students who have credit in SOC 380.

588 Internship 3: Field Experience (1-3) Unpaid supervised field experience in a business, industrial, governmental, educational, or other setting. Supervision will be jointly provided by sociology faculty and employers.

Prerequisite: permission of the sociology internship coordinator and the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

590 Independent Study in Sociology (1-3) Topics to be chosen and investigated in consultation with an instructor possessing special competence in the subject involved.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

600 Research Methods: Qualitative and Quantitative (3) Examines both qualitative and quantitative methods commonly used in sociological research. Explores ethics in research, research evaluation, and project design.

603 Readings in Sociological Theory (3) Focuses on the reading and in-depth study of significant contemporary sociological works.

Prerequisite: SOC 502 or equivalent.

669 Internship 2: Paid Field Work (1-3) Paid supervised field experience in a public agency or business setting. Training involves data analysis, evaluation research, and implementation of agency programs under the supervision of the employer and the department.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

681 Survey Research Methods (3) Provides practical knowledge on how to develop and conduct surveys.

682 Social Statistics (3) Calculation, application, and interpretation of statistics used in social and behavioral sciences.

683 Qualitative Research Methods (3) Examines the nature of qualitative research methodology. Provides experience in qualitative research proposal writing.

684 Advanced Sociological Data Analysis (3) Selection and use of advanced statistical techniques for analyzing sociological data. Topics include multiple regression and other multivariate models.

Prerequisite: SOC 682.

699 Seminar in Selected Topics in Sociology (3) Explores selected topics relevant to the discipline of sociology providing a critical evaluation from a variety of perspectives. May be repeated for different topics.

A total of 18 credits may be earned, but no more than 3 in any one semester or term.

TEACHERS COLLEGE

bsu.edu/teachers
Teachers College 1005, 765-285-5251
Interim Dean: Roy Weaver
Interim Associate Dean: Sheryl Stump
Associate Dean: Anita Welch

Ball State University's Teachers College is one of the largest granters of professional education degrees in the United States. The college's reputation for leadership is the result of its emphasis on educational practice and applied research.

The appeal of graduate programs in Teachers College arises from small class sizes that enable students to develop close working relationships with faculty and to interact frequently with their peers. Graduate programs emphasize practicing skills that emerge from theory and research, selected study of research with implications for solving problems or improving practice, opportunities to conduct significant research studies under the guidance of scholars, and an excellent placement record.

For many years, graduate programs in education focused on training and developing instructional and administrative leaders in traditional school settings. More recently graduate programs have been created to broaden the expertise of managers in business, industry, and community organizations; to train psychologists for work in community agencies and private practice; and to provide second-career opportunities for retirees from military, corporate, and government positions.

Teachers College offers doctoral, specialist, and master's degree programs in a variety of subjects. Degrees are offered by the Department of Educational Leadership (EdD and MAE in educational administration and supervision, EdS in school superintendency), the Department of Educational Psychology (MA in school counseling, MA, MS, and PhD in educational psychology, MS in quantitative psychology, EdS and PhD in educational psychology [school], and PhD in educational psychology [general]), the Department of Educational Studies (MA in adult and community education, MA in curriculum and educational technology, MA in executive development for public service, MA in secondary education, MA in student affairs administration in higher education, EdD in adult, higher, and community education, PhD in educational studies), the Department of Elementary Education (PhD, EdD, and MAE in elementary education), and the Department of Special Education (MA, MAE, and EdD in special education and MA in applied behavior analysis).

See the Science listing under the College of Sciences and Humanities, page 154, for the doctoral program in environmental science.

Applicants for graduate programs in Teachers College must meet all university admission requirements. In addition, applicants for specialist (EdS) and doctoral (PhD, EdD) programs must submit their scores on the verbal and quantitative sections of the Graduate Record Examination (GRE). Individual departments may establish additional admission requirements.

MAE CORE REQUIREMENT

Students admitted to MAE programs are required to complete three courses from a professional education core, including the following:

Educational Foundations

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
One course from			
CPSY	621	Theories and Techniques Couns (3)	
EDFO	631	Philosophy of Education (3)	
	641	History of American Education (3)	
	651	Educational Sociology (3)	
	660	Comparative Education (3)	
EDPS	600	Adv Educational Psych (3)	
	603	Human Development (3)	3

Educational Research and Measurement

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
One course from			
CPSY	653	Research Counseling Guidance (3)	
EDEL	676	Research in Elementary Educ (3)	
EDJH	676	Res in JH and MS Ed (3)	
EDPS	640	Research Methods (3)	
	641	Intro Statistical Methods (3)	
	646	Tests and Measurements (3)	
EDST	676	Res on Impact Stud Learn (3)	
SPCE	636	Research in Special Education (3)	3

Pedagogy and Curriculum

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
One course from			
EDCU	610	Elem Schl Curriculum (3)	
	620	Se School Curriculum (3)	
	630	Jr Hi and Mid School Curr (3)	
	673	Curriculum Evaluation (3)	
EDEL	626	Discipline and Classroom Mgt (3)	
	640	Intro to EC Education (3)	
	644	Education in a Diverse Society (3)	
	690	Practicum in Elementary Educ (1-8)	

EDMU	660	Multcl Multieth Ed in Amer Sch (3)	
EDPS	520	Intro Gifted Talented (3)	
EDRD	610	Teaching of Reading Elem Sch (3)	
	620	Disc Integ Lit in El Classroom (3)	
EDSE	534	Class Mgt: Imprvng Student Beh (3)	
	690	Pract in Sec Ed (1-9)	
	695	Dyn and Sec School Classroom (3)	
EDST	671	Eval of Ed Prgrms (3)	
EDTE	650	Curr Integ of Lrnng Tech (3)	
SPCE	600	Educ of Exc Children (3)	3-9

Some programs require specific courses from this core.

Students admitted to doctoral programs in Teachers College must complete the following: EDPS 640 or equivalent; 641 and 642 or another course from among qualitative and quantitative Concentrations; ID 705; one course from humanistic studies; and one course from behavioral studies.

EDUCATION: GENERAL (EDGE)

500 Analysis of Contemporary Educational Issues (1-8) Crucial contemporary issues in education are studied to determine their origin, status, and significance; to search for possible solutions through in-depth analysis; and to arrive at logical and practical personal positions.
A total of 8 credits may be earned.

690 Independent Study (1-4) Designed to meet the needs of students who wish to conduct independent study and research in education.
Prerequisite: permission of the department chairperson.
A total of 4 credits may be earned.

692 The Supervision of Student Teachers (3) For elementary and secondary teachers, school supervisors and administrators who will be cooperating in student-teaching programs. Placement and orientation of student teachers, program experiences for student teachers, diagnosing teaching difficulties, conference procedures, and evaluation techniques.

OFFICE OF TEACHER EDUCATION SERVICES AND CLINICAL PRACTICE

bsu.edu/teachers/licensing
Teachers College 205, 765-285-1168

The following is a complete list of the licensing programs offered at the graduate level at Ball State University. Initial contact for all programs and questions should be directed to otes@bsu.edu. In addition, specific content faculty and staff contacts are below for questions concerning the courses themselves.

Licensure Type and Program	Grade Coverage	Contact
INITIAL License – Administrator (First Administrator License)		
District Level: Superintendent	P-12	Dr. Kendra Lowery
Building Level Administrator	P-12	Dr. Rachel Geesa
Director of Career and Technical Education	P-12	Dr. Ed Lazaros
Director of Exceptional Needs	P-12	Mrs. Bonnie Krupa
Director of Curriculum and Instruction	P-12	Dr. Jill Bradley-Levine
School Counselor	P-12	Dr. Renae Mayes
School Psychology	P-12	Dr. Hernandez-Finch
INITIAL License – First Teacher License through the Traditional Route		
Art	P-12	Dr. Michael Prater
CTE: Family and Consumer Science	(5-12)	Mrs. Pam Stigall
Dual Physical Education and Health	(K-12)	Dr. Andrew Eberline
Music-Instructional	P-12	Dr. Don Ester
Music - Vocal	P-12	Dr. Don Ester
Exceptional Needs: Deaf and Hard of Hearing	K-12	Mrs. Bonnie Krupa
Exceptional Needs: Early Childhood Special Ed	K-12	Mrs. Bonnie Krupa
Exceptional Needs: Intense Interventions	K-12	Dr. Lisa Pufpaff
Exceptional Needs: Mild Interventions	K-12	Mrs. Bonnie Krupa

Speech Pathology	P-12	Dr. Mary Jo Germani
Theatre	K-12	Dr. Michael Daehn
Initial License - First Teacher License through the Alternative Route		
Elementary Transition to Teaching (T2T)	K-6	Dr. Scott Popplewell
Secondary Transition to Teaching (T2T) **Secondary T2T covers the following areas grades 5-12:** Business, Chemistry, Chinese (Mandarin), CTE: Engineering and Technology, CTE: Family and Consumer Science, Earth/Space Science, English/Language Arts, French, German, Japanese, Journalism, Latin, Life Science (Biology), Math, Physics, Social Studies (all areas), Spanish	(5-12)	Dr. Jill Bradley-Levine
STEM	(5-12)	Mrs. Kizman Jones
Speech Pathology	P-12	Dr. Mary Jo Germani
ADDITIONS – Added to an existing valid Indiana License		
CTE: Co-op	(5-12)	Dr. Allen Truell
Computer Education	P-12	Dr. Ayesha Sadaf
CTE: Business	(5-12)	Dr. Allen Truell
CTE: Marketing	(5-12)	Dr. Allen Truell
Early Childhood Ed - Add to Elementary license	P-3	Dr. Linda Martin
Elementary Ed. (add to Mild Intervention)	K-6	otes@bsu.edu
English as a New Language	P-12	Dr. Lynne Stallings
High Ability (Gifted and Talented)	P-12	Dr. K. Speirs Neumeister
Health Education (add to a Physical Ed license)	(5-12)	Dr. Martin Wood
Elementary Ed (add to Mild Interventions)	K-6	Dr. Linda Martin
Journalism	(5-12)	
Junior High/ Middle School Math	(5-9)	Dr. Ann Leitze
Physical Education addition to Health license	P-12	Dr. Andrew Eberline
Reading	K-6	Dr. Linda Martin
Social Studies (individual areas)	(5-12)	Dr. Sara Drake-Brown
Special Ed.- Deaf and Hard of Hearing		Mrs. Bonnie Krupa
Special Ed - Early Childhood Special Ed	P-3	Mrs. Bonnie Krupa
Special Ed - Intense Interventions		Dr. Lisa Pufpaff
Special Ed - Mild Interventions		Mrs. Bonnie Krupa
Technical Education	(5-12)	Dr. Rich Seymour
LICENSE EXPANSIONS*/CONVERSIONS – Specialty Licensing Cases**		
Building Level Admin - Conversion from Rules 46-47	P-12	otes@bsu.edu
Mild Disabilities Rules 400/46-47 to REPA	K-12	otes@bsu.edu
Secondary License 7-12 to 5-12	(5-12)	otes@bsu.edu
Elementary 1-6 to K-6	K-6	otes@bsu.edu
Elementary REPA Conversion	K-6	otes@bsu.edu
Physical Education 5-7or 5-12 to K-12	K-12	otes@bsu.edu
Special Education Mild K-6 to K-12	K-12	otes@bsu.edu

***An expansion** program will expand the current grade coverage of a previous set of valid Indiana licensing rules to the current set of licensing standards.

A conversation is typically for an individual who was licensed under a previous set of valid Indiana licensing rules. This program will convert that license to the current licensing rules if such an action is needed.

Licensing Programs

Programs at the graduate level prepare students for teacher licensure based on the current rules and standards, "Rules for Educator Preparation and Accountability, REPA," in the state of Indiana. The State Board of Education has approved programs at Ball State University that meet the requirements for the following license types:

- Instructional
- School Services
- Administrative

Each type of license entails three different levels of licensure. Initial practitioner is the first license one receives. Proficient practitioner is one step up from initial practitioner. Accomplished practitioner follows as the last level of license one can receive under REPA.

Initial Practitioner to Proficient Practitioner

Under REPA, which went into effect January 2013, the initial license issued within each license type will be the **initial practitioner** license. Upon successful completion of the two-year Residency program, those eligible may apply for a proficient practitioner license. This **proficient practitioner** license must be renewed every five years by completing renewal requirements set by the Indiana Department of Education (IDOE). If these requirements are met by completing 6 semester credits of course work through Ball State, The Office of Teacher Education Services and Clinical Practice will approve the online *LVIS application for renewal, and forward application materials to the IDOE for processing.

*LVIS – License Verification and Information System

Proficient Practitioner to Accomplished Practitioner

Upon successful completion of the bulleted information below, one holding a proficient practitioner license can apply for an **accomplished practitioner** license. Please note that the requirements for obtaining an **accomplished practitioner** license differ per license type (instructional, administrative, school services). The **accomplished practitioner** license is the highest level of license one can achieve and is valid for 10 years.

For an **instructional license** these requirements include:

- Six (6) semester credits completed at an accredited Indiana institution – The six (6) credits must have been completed after the issue date of the license you are renewing or
- Six (6) semester credits completed at an accredited Out-of-State institution. The six (6) credits must have been completed after the issue date of the license you are renewing or
- Professional Growth Plan (PGP)
- National Board of Professional Teaching Standards Certification (NBPTS).
- Official transcripts showing completion of Masters degree from accredited institution
- Proof of two (2) years teaching experience in an accredited school
- Hold Proficient Practitioner/Standard/Provisional license for five (5) years
- Provide evidence of current CPR/AED certification (through state approved agencies).

For an **administrative license** these requirements include:

- Official transcripts showing a total of 60 credits of graduate course work from accredited institution in Administration and related areas
- Five (5) years administrative experience in the content area of the license in an accredited school or public school district
- Provide evidence of current CPR/AED certification (through state approved agencies).

For a **school services license** these requirements include:

School Counselor

- Proof of two (2) years experience as a school counselor in an accredited school
- Hold Proficient Practitioner/Standard/Provisional license for five (5) years.
- Provide evidence of current CPR/AED certification (through state approved agencies).

School Psychologist

- Proof of two (2) years experience as a school psychologist in an accredited school or public school district
- Hold Proficient Practitioner/Standard/Provisional license for five (5) years
- Provide evidence of current CPR/AED certification (through state approved agencies).

LICENSE RENEWAL

An **initial practitioner** license is valid for two years. A **proficient practitioner** license is valid for five years, and an **accomplished practitioner** license is valid for ten years. Each validation time period starts from the *date of application*.

Credit for renewal MUST be earned after your license issue date. The required semester six (6) semester credits must be from an accredited institution.

Approval of credits for license renewal is guided by official university policy as well as state guidelines, and is administered by the Office of Teacher Education Services and Clinical Practice.

Policy for Renewing Instructional, School Services, or Administrative Licenses

Indiana instructional, school services, and administration and supervision licenses may be renewed with six (6) semester credits from an accredited institution. Candidates who expect to receive the recommendation for license renewal from Ball State University must comply with the following graduate school policies when making decisions about course selection for purposes of license renewal:

Renewing the Proficient Practitioner or Accomplished Practitioner License

All course work must meet the following criteria:

- At least 3 of the 6 credits must be earned through Ball State University.
- Graduate (or undergraduate) credit must be earned with a minimum overall GPA of a 3.0 and no grades below *C*.
- The credit must be earned during the time period most recent license was issued and valid.
- Provide evidence of current CPR/AED certification (through state approved agencies).
- Provide evidence of completion of suicide prevention training (through state approved agencies) prior to license recommendation.

Renewing an Emergency Permit

The Indiana Department of Education, Office of Educator Effectiveness and Licensing issues and renews all Emergency Permits. Emergency Permits are not issued, or renewed by Ball State University.

*At the time of this posting, all licensing information from the Indiana Department of Education was accurate. Please check with The Office of Teacher Education Services if you have any questions.

REQUIREMENTS FOR ADMINISTRATIVE LICENSES

District Administrator: Superintendent

- Requires a minimum of an EdS degree in school superintendency.
- School Leaders Licensure Assessment completed with a score of 165 or higher.
- Further information regarding this program may be obtained by contacting the Office of Teacher Education Services and Clinical Practice.

BUILDING LEVEL ADMINISTRATOR (K-12)

The following items, along with the required course work, must be completed prior to applying for this license:

- Candidates who apply for this license-only program will already have earned a master's degree in a related, department-approved educational field. Students who wish to complete this license-only program must meet all admission criteria for a master's degree and be accepted through the Department of Educational Leadership and the Graduate School.
- Successful completion of the courses below will not result in a second master's degree, but will lead towards a building-level license for the candidate. If the student decides to pursue a second master's degree in educational administration and supervision, the candidate will need to be accepted into the master's degree program and complete the additional required course work. At least 18 credits of the license-only program must be earned through Ball State University.
- Two years of full time teaching experience in an accredited school or schools in the grade coverage and areas as listed on the student's standard or proficient grade teaching license. This must be verified in the form of a letter by the student's employing school system and submitted to the educational license office prior to or at the time of application for this license.
- School Leaders Licensure Assessment test completed with a satisfactory score.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Required courses			
EDAD	600	Intro to Ed Leadership	3
	630	Human Resource Development	3
	635	Educational Decision Making	3
	684	Educational Finance and Ethics	3
	686	School Law	3
	689	The School Principal	3
	694	Principal Internship (3)	6
			24 crs

DIRECTOR OF CURRICULUM AND INSTRUCTION

Under the Indiana Administrative Code (Rules 2002), the following criteria are specified for candidates wishing to obtain the Director of Curriculum and Instruction license:

- hold a proficient practitioner license;
- successfully meet the standards for the district level administrator;

- successfully meet all developmental standards;
- successfully obtain a master's degree;
- successfully complete the School Leaders Licensure Assessment (SLLA);
- be recommended by the licensing advisor of the accredited institution.

"The holder of the district level administrator; director of curriculum and instruction license is only able to serve as a director of curriculum and instruction administrator or supervisor. The district level administrator; director of curriculum and instruction licensure applies to all who have the role or responsibility for direct supervision or primary evaluation of other licensed personnel, regardless of title, for example assistant to, assistant, or deputy." (p. 17, Indiana Administrative Code).

Program of Studies

Candidates who wish to apply for the Director of Curriculum and Instruction License (District Level Administrator License) will be expected to hold a Master of Arts in one of the following areas: elementary education, secondary education, educational administration and supervision, curriculum and educational technology; meet the minimum criteria defined under REPA; and have taken the following courses

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Required courses			
EDAD	600	Intro to Ed Leadership	3
EDCU	601	Princ and Proc of Curr Dev	3
	610	Elem Schl Curriculum	3
	620	Se School Curriculum	3
EDPS	640	Research Methods	3
EDST	671	Eval of Ed Prgrms	3
	676	Res on Impact Stud Learn (3)	
	or		
EDJH	676	Res in JH and MS Ed (3)	
	or		
EDEL	676	Research in Elementary Educ (3)	3
6 credits from			
EDCU	630	Jr Hi and Mid School Curr (3)	
	640	Altern School Curricula (3)	
EDST	680	Staff Dev to Strengthn Curr (3)	6
6 credits from			
EDEL	644	Education in a Diverse Society (3)	
EDFO	631	Philosophy of Education (3)	
	641	History of American Education (3)	
	651	Educational Sociology (3)	
EDMU	660	Multcl Multieth Ed in Amer Sch (3)	
	670	Soc and Cult Min in Amer Ed (3)	6
6 credits from			
EDJH	512	Inst Strtgs Apprchs JH and MS (3)	
EDRD	610	Teaching of Reading Elem Sch (3)	
EDSE	695	Dyn and Sec School Classroom (3)	
EDSU	650	Supervision of Instruction (3)	6
6 credits from			
EDTE	650	Curr Integ of Lrnng Tech (3)	
	670	Technology Policy and Pedagogy (3)	
	675	Dist Ed and Distrib Lrnng Tech (3)	
	685	Info Sys for Inst and Assess (3)	6
			45 crs

Director of Career/Technical Education

- Requires a minimum of a master's degree.
- Further information regarding this program may be obtained by contacting the Office of Teacher Education Services and Clinical Practice.

Director of Exceptional Needs

- Requires a minimum of a master's degree. Further information regarding this program may be obtained by contacting the Special Education Department or visiting https://cms.bsu.edu/academics/collegesanddepartments/online/academic-programs/licenses/excepneeds
- Students must hold a master's degree to obtain this license. In addition, at least a proficient practitioner level license is required to enroll in this program.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Required courses			
EDAD	600	Intro to Ed Leadership	3
	684	Educational Finance and Ethics (3)	
	or		
	685	Fiscal Mangmnt of Ed Agencies (3)	3
	687	Legal Aspects of Education	3
	689	The School Principal	3
SCCO	600	Intro School Counseling (3)	
	or		
SPCE	677	Tch Parnts to Educate Exc Chld (3)	3
	637	Org and Admin of Spec Ed	3
	639	Spec Ed Admin and Org Beh	3
	687	Educ Assessment: Mild Int	3
	694	Intern in Spec Ed (3-9)	3
9 credits from			
SPAA	543	Introduction to Audiology (3)	
SPCE	577	Intro to Intense Interv Needs (3)	
	600	Educ of Exc Children (3)	
	612	Theory and Pract EC Special Ed (3)	
	631	Comp Tech and Learner Spec Nds (3)	
	632	Intro to Emo and Behav Dis (3)	

	686	Intro: Mild Interventions (3)	9

36 crs

SPCE 686 is required for students without the prerequisite for SPCE 687.

REQUIREMENTS FOR SCHOOL SERVICES LICENSES

School Counselor

- Requires 45-48 semester-credit master's degree in counseling psychology (school track) or a master's degree in community counseling along with the appropriate additional course relating to a school setting to meet the licensing requirements.
- Further information regarding this program may be obtained by contacting the
- Office of Teacher Education and Clinical Practice or the Department of Educational Psychology, Social Psychology, and Counseling.

School Psychologist

- Requires a minimum of a master's degree.
- Further information regarding this program may be obtained by contacting the Office of Educational Psychology.

REQUIREMENTS FOR SPECIAL EDUCATION LICENSES

The following licensing programs can only be added to existing licenses. It should be noted that coursework alone *will not* achieve a license addition. Coursework, plus the following will allow a completed license addition.

- Appropriate licensing exam
  - Visit the following website for the most recent testing updates: http://cms.bsu.edu/academics/collegesanddepartments/teachers-college/centers-schools-and-offices/otes/test-requirements
- Appropriate and completed licensing application through the Office of Educator Effectiveness and Licensing

Early Childhood Special Education

This program adds the developmental level Early Childhood (birth-6 grade) to an existing special education license. The result is a single license in P-6 Mild ONLY.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDPS	627	Child Development	3
SPCE	600	Educ of Exc Children	3
	612	Theory and Pract EC Special Ed	3
	613	Assessment Strategies in ECSE	3
	614	Dev Meth Inf Tddls Spec Nds	3
	616	Dev Meth PS Spec Needs	3
	617	Pract: Infant, Toddlers, and PS (1-12)	4
	677	Tch Parnts to Educate Exc Chld	3

25 crs

Exceptional Needs: Hearing Impaired

The Indiana developmental levels covered by the Exceptional Needs: Deaf and Hard of Hearing license will match the levels of coverage of the candidate's existing teaching licenses. Contact the Office of Teacher Education and Clinical Practice for other requirements.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*

The following courses or approved undergraduate equivalents:

SNLN	551	American Sign Language 1	3
	552	American Sign Language 2	3
SPAA	543	Introduction to Audiology	3
SPCE	540	Hist Educ Deaf and Psych Deaf	3
	546	Tchng Spch and Soc Comm Deaf	3
	548	Practicum in Deaf Education	3
	554	Intro Lang for Deaf Hard Hrng	3
	556	Lang Meth for Deaf Hard Hrng	3
	558	Tch Read Sub Deaf Hrd Hrng	3
	600	Educ of Exc Children	3
	670	Pract in Spec Ed: Deaf (1-6)	3

33 crs

Exceptional Needs: Intense Intervention

The Indiana developmental levels covered by the Exceptional Needs: Intense Intervention license will match the levels of coverage of the candidate's existing teaching licenses. Please contact the Office of Teacher Education and Clinical Practice for other requirements.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDPS	606	Learn Achievement Motivation	3
SPCE	566	Intro to Ortho, Sens, Mul Dis	3
	577	Intro to Intense Interv Needs	3
	578	Educ Meth for Int Inter Nds	3
	579	Educ Meth Orthop-Sens	3
	580	Educ HS Intense Inter Nds	3
	600	Educ of Exc Children	3
	631	Comp Tech and Learner Spec Nds	3
	693	Pract in Spec Ed: Phys Imp (1-9)	3

	698	Pract Spec Ed: Int Interv (1-9)	3
			30 crs

Exceptional Needs: Mild Intervention

This licensure program requires an existing elementary and/or secondary teaching license. The Indiana developmental levels covered by the Exceptional Needs: Mild Intervention license will match the levels of coverage of the candidate's existing teaching licenses. Please contact the Office of Teacher Education and Clinical Practice for other requirements.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
The following courses or approved undergraduate equivalents:			
EDPS	606	Learn Achievement Motivation	3
SPCE	600	Educ of Exc Children	3
	603	Collab in Spec Educ	3
	632	Intro to Emo and Behav Dis	3
	686	Intro: Mild Interventions	3
	687	Educ Assessment: Mild Int	3
	688	Methods of Mild Intervention	3
	697	Practicum: Mild Interventions (1-9)	3
			24 crs

Exceptional Needs: Visually Impaired

For teachers wishing to add the license area of visual impairment to their existing license.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
The following courses or approved undergraduate equivalents:			
SPCE	651	The Eye: Functions and Hlth	3
	652	Progrs Servs for Visual Impd	3
	653	Comm Skills for Visual Imprd	3
	654	Instrct Accom for Visual Imprd	3
	655	Prns Orientation and Mobility	3
	656	Practicum in Teaching Students	3
			18 crs

Teaching License Additions—(only to be added to existing teaching licenses)

Computer Education

This license area may only be added to an existing teaching license.

Computer Education Teaching License

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
One course from each area:			
EDTE	650	Curr Integ of Lrnng Tech	3
	670	Technology Policy and Pedagogy	3
	585	School Information Infra (3)	
	or		
	675	Dist Ed and Distrib Lrnng Tech (3)	3
	652	Multi Web Des and Dev for Ed (3)	
	or		
	655	Inq and Sim Models in Ed Comp (3)	
	or		
	660	Instructi Des and Tech (3)	3
	665	Visual and Digital Literacies (3)	
	or		
EDRD	545	Integrat Techn in Lit Prog (3)	3
SPCE	631	Comp Tech and Learner Spec Nds	3
			18 crs
3 credits from			
CS	616	Digital Animation (3)	
EDRD	545	Integrat Techn in Lit Prog (3)	
EDTE	650	Curr Integ of Lrnng Tech (3)	
	680	Adv Proj in Dig Media (3)	
	685	Info Sys for Inst and Assess (3)	
	690	Pract in Ed Tech (2-4)	
	699	Indep Study in Ed Tech (1-4)	
MATH	631	Technology Mathematics Teach (3)	3
			21 crs

- At the discretion of the Department of Educational Studies graduate advisor or EDTE program advisor, an introductory course in educational computing may be required for a student seeking a computer education license. If so, any course designed for teachers that is an introduction to computers may be used. In such cases, EDTE 650 must be taken as an elective.

Any content-area course that addresses significant curriculum integration of technology may be substituted for EDRD 545 or MATH 631.

English as a New Language License, 15 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
ENG	616	Intro to Theor of Lang Learn	3
	617	Methods for Teaching ELL	3
	619	Assessment in TESOL	3
	620	Eng Linguistics for Educators	3
	633	Practicum in TESOL (1-6)	3
			15 crs

This program is offered on-line only.

Gifted and Talented Education

Deleted: High Ability

This license area may only be added to an existing teaching license.

EARLY CHILDHOOD, YOUTH, AND FAMILY STUDIES

CERTIFICATE PROGRAMS

Certificate in Early Childhood Administration, 15 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDEL	630	Sch, Fam and Com Partnerships	3
	640	Intro to EC Education	3
	641	Admin of EC Programs	3
	644	Education in a Diverse Society	3
	651	Educ Programs Young Children	3
			15 crs

Certificate in Early Childhood Education, Master Teacher, 15 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDEL	640	Intro to EC Education	3
	644	Education in a Diverse Society	3
	651	Educ Programs Young Children	3
	653	Obs and Assess in EC	3
	672	Mentoring EC Professionals (1-3)	3
			15 crs

This program is offered on-line only.

EDUCATION: ELEMENTARY (EDEL)

630 School, Family, and Community Partnerships (3) Benefits, challenges, and principles of family involvement in early childhood settings and elementary schools with an emphasis on the diversity of contemporary families. The significance of genuine partnerships between the home, school, and community as a foundation for optimal educational development of young children and program improvement.

640 Introduction to Early Childhood Education (3) An introduction to the history and theories of early childhood education with emphasis on current issues and developmentally appropriate practices in programs servicing children from birth through age 8.

641 Administration of Early Childhood Programs (3) The various organizational patterns and operational procedures of schools and centers for young children.

645 Leadership and Advocacy in Childhood Education (3) Examines professional responsibility in the field of early childhood education, considering issues such as ethics, equity, standards, assessment, accreditation, the preparation of early childhood educators, and advocacy.

648 Play and Creativity in Early Childhood (3) The role of play and creative experiences in the development and learning of young children. Addresses the philosophy, techniques, and problems of providing creative and play experiences for young children.

649 Infant and Toddler Education (3) Educational environments appropriate for and supportive of infants and toddlers; affective and cognitive factors affecting educational processes. Opportunity to observe and participate in an educational program for infants and toddlers.

651 Educational Programs for Young Children (3) Considers historical and current program models in early childhood education, as well as current theory and practice in early childhood curricular content areas. Related research and issues are examined and discussed.
Prerequisite: EDEL 640.

653 Observation and Assessment in Early Childhood (3) Explores the uses and types of observation and assessment for planning instruction, identifying children with special needs, and program development. Underscores the use of assessment to promote development and guide planning and teaching strategies.
Prerequisite: EDEL 640.

672 Mentoring Early Childhood Professionals (1-3) Explores coaching and mentoring methods for early childhood professionals in order to improve teaching strategies that impact child outcomes. Designed to impact mentors' ability to increase professional capacity, resulting in greater professional effectiveness.
Prerequisite: EDEL 640.
A total of 3 credits may be earned.

740 Research in Early and Elementary Education (3) Students will identify research areas of need in the fields of early and elementary education. Students will plan, implement, analyze, and prepare an early research project in preparation for their dissertation.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

Open to doctoral-level students and other graduate students by permission of the department chairperson.

799 Seminar in Early Childhood Education (2) Seminar for doctoral candidates who will study, by means of group and individual in-depth investigation and critical discussion, current literature on issues, problems, and research related to early childhood education.

Prerequisite: permission of the department chairperson.

A total of 8 credits may be earned, but no more than 2 in any one semester or term

EDUCATIONAL LEADERSHIP

bsu.edu/edleadership
Teachers College 903, 765-285-8488

PROGRAMS

Master of arts in education (MAE) in educational administration and supervision; specialist in education (EdS) in school superintendency; and doctor of education (EdD) in educational administration and supervision. Certification programs include K-12 educational administration.

MASTER OF ARTS IN EDUCATION IN EDUCATIONAL ADMINISTRATION AND SUPERVISION, 36 credits

Admission requirements
Applicants for the MAE in Educational Administration and Supervision must complete the university application for graduate admission form and return it to the Graduate School. To be admitted to graduate study toward this master's degree, a student must meet the following minimum criteria:

A. Hold an earned bachelor's degree from a college or university that is accredited by its regional accrediting association.
B. Have one of the following:
   - An undergraduate cumulative grade-point average (GPA) of at least 2.75 on a 4.0 scale.
   - A cumulative GPA of at least 3.0 on a 4.0 scale in the latter half of the baccalaureate.
   - A 3.2 GPA in 9 credits of graduate work approved by the chairperson in the major department and an acceptable score on the Graduate Record Examination (GRE). Such students will be considered probationary students until the conditions of their admission have been met.

Degree requirements
The MAE in Educational Administration and Supervision degree requires completion of at least 36 credits of graduate course work. A minimum of 27 credits must be completed in the major, supplemented by a course in research, a course in curriculum, and a foundations course.

A student must maintain a GPA of at least 3.2 on a 4.0 scale.
The following courses, totaling 27 credits, must be taken in educational administration and supervision

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Required courses			
EDAD	600	Intro to Ed Leadership	3
	630	Human Resource Development	3
	635	Educational Decision Making	3
	684	Educational Finance and Ethics	3
	686	School Law	3
	689	The School Principal	3
	694	Principal Internship (3)	6
EDSU	650	Supervision of Instruction	3
			27 crs
The remaining 9 credits are designated as follows			
EDCU	601	Princ and Proc of Curr Dev	3
EDPS	640	Research Methods	3
And one course from			
EDFO	631	Philosophy of Education (3)	
	641	History of American Education (3)	
	651	Educational Sociology (3)	
EDMU	660	Multcl Multieth Ed in Amer Sch (3)	3
			9 crs
			36 crs

DOCTORAL PROGRAMS

Application Process
The student applies for admission to the doctoral degree program by submitting the following to the Graduate School:

- Graduate application (obtained from the Graduate School or online at *bsu.edu/gradschool*)
- One copy of all college/university transcripts
- Graduate Record Examination (GRE) scores

The student must also submit a professional portfolio to the Department of Educational Leadership; the portfolio consists of the following items:

- Autobiography (500-1000 words)
- A 3-5 page paper containing the applicant's philosophy of education and statement of purpose to be accomplished by earning the doctoral degree and describing the contributions the candidate expects to make to the doctoral program and to the profession of educational administration
- A current vitae
- Names and addresses of five references (department will contact them directly)
- One copy of all college/university transcripts

When all admission materials have been received, the Department of Educational Leadership reviews and evaluates the application. As part of the evaluation, the applicant may be invited to campus for a personal interview. Following the evaluation, the department makes a recommendation to the Dean of Teachers College and the Dean of the Graduate School, who makes the final decision and notifies the candidate.

Assistantships
A limited number of doctoral assistantships, awarded on a competitive basis, are available to candidates who are accepted into the doctoral program. In addition to the assistantship stipend, doctoral students receive a remission of the contingent portion of the general fee, remission of the graduate course fee, and an out-of-state fee waiver.

SPECIALIST IN EDUCATION IN SCHOOL SUPERINTENDENCY, 63 credits

The EdS degree in school superintendency provides opportunities for specialized study in the school superintendency. The program assists qualified individuals in developing the knowledge, performances, and disposition essential for success in the day-to-day operation of the school system and develops broad understandings relative to the scope and nature of educational programs. The program schedule will qualify the student for the superintendent license. The program includes appropriate work from the field of educational administration and related fields, such as educational psychology, curriculum, adult and community education, educational foundations, and counseling psychology.

Degree requirements
The EdS degree in school superintendency requires the satisfactory completion of prescribed graduate course work beyond the master's degree with a minimum of a 3.2 GPA. All candidates for the degree will have

- completed a minimum of 63 graduate credits including the master's degree
- a minimum of 24 credits of the "specialist-required courses," which must be completed at Ball State University.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Required courses			
EDAD	630	Human Resource Development	3
	635	Educational Decision Making	3
	684	Educational Finance and Ethics	3
	686	School Law	3
	689	The School Principal	3
EDCU	601	Princ and Proc of Curr Dev	3
EDPS	640	Research Methods	3
EDSU	650	Supervision of Instruction	3
3 credits from			
EDFO	631	Philosophy of Education (3)	
	641	History of American Education (3)	
	651	Educational Sociology (3)	
EDMU	660	Multcl Multieth Ed in Amer Sch (3)	3
			27 crs
Specialist-required courses: (a minimum of 24 credits must be taken at Ball State)			
EDAD	640	Edu Admin and Public Rltns	3
	685	Fiscal Mangmnt of Ed Agencies	3
	687	Legal Aspects of Education	3
	688	Schl Bldings, Grnds, and Equip	3
	696	Superintendent Internship (3)	6
	698	Sem and Theory of Ed Admin	3
	780	School District Administrator	3
	782	Specialist Capstone Seminar	3
EDCU	610	Elem Schl Curriculum (3)	
	or		
	620	Se School Curriculum (3)	3
6 credits from courses generally taken in master's degree			
EDEL	644	Education in a Diverse Society (3)	
EDFO	631	Philosophy of Education (3)	
	641	History of American Education (3)	
	651	Educational Sociology (3)	
EDMU	660	Multcl Multieth Ed in Amer Sch (3)	
EDPS	603	Human Development (3)	
	641	Intro Statistical Methods (3)	
	646	Tests and Measurements (3)	
EDST	671	Eval of Ed Prgrms (3)	
SCCO	600	Intro School Counseling (3)	6
			36 crs
			63 crs

Internship
Each student in the EdS program must complete a supervised internship. The internship assignment will be arranged by the department in consultation with the student. Students are responsible for any necessary leave and other arrangements related to this assignment. Internship assignments will ordinarily be arranged in a school setting to provide a practical, supervised experience in educational leadership. Ball State faculty, in cooperation with an outside agency, will supervise all interns.

Specialist Committee
A three-member committee, consisting of educational administration faculty members, will usually be appointed during the first semester that the student is accepted into the degree program. The committee chair, in consultation with the student, will develop a plan of study. The committee will also conduct the required written and oral examinations when the student has completed all course work.

Deadline for Completion of Degree Work
All requirements (30 credits) listed in the "specialist-required courses" section must be met within a six-year time limit from the date of the completion of the first class in the specialist in education degree program.

Additional admission requirements
Applicants are expected to have a GPA of 3.2 or higher on previously completed graduate work.

DOCTOR OF EDUCATION IN EDUCATIONAL ADMINISTRATION AND SUPERVISION, 90 credits

The doctor of education degree (EdD) is designed to meet the needs of advanced graduate students who hold or are seeking to assume leadership roles in education and who are dedicated to advancing the profession through quality teaching, research, and service. The curriculum emphasizes school administration in K-12 settings. The program is designed to satisfy the licensing requirements in Indiana for the school superintendency; however, sufficient flexibility exists to design a program to meet the needs of the individual candidate.

Degree requirements
The doctoral degree program with a major in educational administration and supervision consists of a minimum of 90 graduate credits. 48 credits must be completed at Ball State. A master's degree is required; previous graduate course work may be counted toward the 90 total credits required in the program.

Research requirements
A minimum of 15 credits in research is required *prior* to DISS 799.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Required courses			
EDAD	635	Educational Decision Making	3
EDPS	640	Research Methods	3
	641	Intro Statistical Methods	3
ID	705	Research Colloquium (1-3)	3
3 credits from			
EDPS	642	Analysis of Variance (3)	
	646	Tests and Measurements (3)	
	785	Multilevel Statistical Model (3)	
EDST	650	Intro to Qual Res (3)	
	660	Ethno Res in Ed (3)	3
			15 crs

Dissertation
Each student is required to write a dissertation on a topic approved by the committee. Students sign up for DISS 799 for a total of 10 dissertation credits. 10

Required courses
The doctoral student ordinarily will have taken the following educational administration courses earned for the master's in educational administration and supervision, administrative license, and/or the EdS in school superintendency, and those students may have met many of the requirements below as a part of those programs. A minimum of 40 credits of graduate work is required in the major, a majority of which must be taken at Ball State University.

Master's courses

EDAD	600	Intro to Ed Leadership	3
	630	Human Resource Development	3
	635	Educational Decision Making	3
	684	Educational Finance and Ethics	3
	686	School Law	3
	689	The School Principal	3
	694	Principal Internship (3)	6
EDCU	601	Princ and Proc of Curr Dev	3
EDPS	640	Research Methods	3
EDSU	650	Supervision of Instruction	3
3 credits from			
EDFO	631	Philosophy of Education (3)	
	641	History of American Education (3)	
	651	Educational Sociology (3)	
EDMU	660	Multcl Multieth Ed in Amer Sch (3)	3
			36 crs

EdS courses

EDAD	640	Edu Admin and Public Rltns	3
	685	Fiscal Mangmnt of Ed Agencies	3
	687	Legal Aspects of Education	3
	688	Schl Bldings, Grnds, and Equip	3
	696	Superintendent Internship (3)	6
	698	Sem and Theory of Ed Admin	3
	780	School District Administrator	3
	782	Specialist Capstone Seminar	3
EDCU	610	Elem Schl Curriculum (3)	

	or		
	620	Se School Curriculum (3)	3
6 credits from			
EDEL	644	Education in a Diverse Society (3)	
EDFO	631	Philosophy of Education (3)	
EDMU	660	Multcl Multieth Ed in Amer Sch (3)	
EDPS	603	Human Development (3)	
	641	Intro Statistical Methods (3)	
	646	Tests and Measurements (3)	
EDST	671	Eval of Ed Prgrms (3)	
SCCO	600	Intro School Counseling (3)	6
			36 crs

Additional courses in the major			
EDAD	798	Adv Political Sem in Ed Admin (3)	6
(must be taken for 3 credits for two consecutive semesters)			
EDPS	600	Adv Educational Psych	3
	641	Intro Statistical Methods	3
One multicultural course from			
EDEL	644	Education in a Diverse Society (3)	
EDFO	651	Educational Sociology (3)	
EDMU	660	Multcl Multieth Ed in Amer Sch (3)	
	670	Soc and Cultl Min in Amer Ed (3)	
SOC	521	Racial and Cultural Minori US (3)	3

Cognate Requirements
The doctoral student must have either two cognate fields (or minors) consisting of a minimum of 15 credits each or a single cognate field consisting of a minimum of 24 credits. For the 15-credit cognate, 9 credits must be taken at Ball State University; 12 credits of the 24-credit cognate must be taken at Ball State University. Cognates are available in all university major fields of study for the master's, specialist, and doctoral degrees. In addition, cognates are offered in composition; general foundations of business; general field of education; gifted studies; higher education; history, philosophy, and sociology of education; literary theory; literature, couples and family counseling; neuropsychology; psychology of human development, teacher education in higher education; the teaching of English; theory of computing, and research methodology.

Doctoral Committee
The student's doctoral committee is appointed after the student has been admitted to study for the doctoral degree—usually near the end of the first year of doctoral work. Until the committee has been appointed, the director of the doctoral program or a delegated representative will serve as the program advisor for the student.

Residence Requirement
The residence requirement for this degree is the completion of at least 15 credits in two consecutive semesters of graduate work beyond the master's degree. Summer may be used as one of the semesters for residency purposes.

Additional admission requirements
After admission, the student must begin course work within two years, and all requirements for the degree must be met within seven years from the date of the first course taken after admission to the doctoral program.

Criteria for Selection
The Department of Educational Leadership considers primarily the following criteria in determining its recommendation: the applicant's Graduate Record Examination (GRE) scores; the GPA in previously completed graduate work; the content of reference letters; the compatibility of the degree program and the applicant's goals/needs; other evidence of advanced graduate academic skills (writing, research, etc); and relevant career or life experiences/accomplishments.

EDUCATION: ADMINISTRATION (EDAD)

600 Introduction to Educational Leadership (3) Examines purposes and organizational structures of educational institutions created by federal, state, and local governments offering programs and services from early childhood through adulthood. Contemporary operational and administrative problems, developing trends, etc., are considered for analysis.
Prerequisite: to be taken within the first 9 credits of the educational leadership program.

601 Introduction to Charter School Leadership (3) Examines purposes, structures, and the entrepreneurial development of educational institutions authorized by political subdivisions. Explores theoretical, practical, and political dimensions of leadership needed to enhance organizational performance. The management of operations, finances, and facilities are studied. Developing trends are considered for analysis.
Prerequisite: permission of the department chairperson.
Open only to students seeking a certificate in charter school leadership.

610 Administration of the Elementary School (3) Review of the organizational structure of education at the federal, state, and local levels. Examination of current trends, operational methods, relationships, and goals of public education. Intensive treatment of the responsibilities of the elementary school administrator.
Prerequisite: EDAD 600, one additional EDAD course; EDSU 650.

620 Administration of the Secondary School (3) Review of the organizational structure of education at the federal, state, and local levels. Examination of current trends, methods, relationships, and goals of public education. Intensive treatment of the duties and responsibilities of the secondary school principal.
Prerequisite: EDAD 600, one additional EDAD course; EDSU 650.

630 Human Resource Development (3) Focuses on techniques used to maintain effective human relations and use of human resources. Staff evaluation systems, staffing projections, staff-related record management, benefit programs, etc. Emphasizes negotiations in the public sector and contract management.

Prerequisite: EDAD 600.

635 Educational Decision Making (3) Designed for the student preparing to be a building level administrator. Designed to build on material of EDAD 600. Decision-making theory will serve as framework from which the student will be expected to use authentic scenarios and real data to investigate/analyze and decide future direction leading to school improvement.

Prerequisite: EDAD 600.

636 Data-Based Decision Making for Charter School Leaders (3) Educational leaders should rely on data-driven decision making to guide their school improvement efforts and their understanding of their environments. This course provides charter school leaders with information regarding student assessment systems and state and federal accountability models. Current educational initiatives impacting educational services and standards-based expectations are included. Candidates will learn how to access and evaluate their own school-community data. Candidates will apply research-based decision making models as they analyze relevant school data in order to decide future directions leading to school improvement.

Prerequisite: permission of the department chairperson.

Open only to students seeking a certificate in charter school leadership or renewal of an administrative license.

640 The Educational Administrator and Public Relations (3) Development and analysis of appropriate organizational, procedural, and administrative arrangements for public relations programs in educational institutions. Problems of developing understanding and effective communication relative to the community power structure, student and teacher militancy, civil-rights issues, societal polarization, media relationships, adequate financial support, and instituting educational change.

683 Charter School Law, Human Resources and Special Education (3) Basic principles of school law with focus on charter school legislation, regulations, and court decisions. Focuses on techniques to maintain effective human relations and use of human resources (employment issues, alternative teaching programs). Focuses on charter school responsibilities to educate children with disabilities pursuant to IDEA.

Prerequisite: permission of the department chairperson.

Open only to students seeking a certificate in charter school leadership or renewal of an administrative license.

684 Educational Finance and Ethics (3) Introduction to school finance and school business administration at all levels. Applies contemporary theories of economics to educational funding, sources of revenue, resource allocation considerations, and study of current trends in fiscal structure and operations in education. Includes discussion of ethics in school finance.

685 Fiscal Management of Educational Agencies (3) Basic concepts of fiscal management, procedures, and practices in educational institutions at all levels. Intensive study of budgeting and accounting as tools for planning and controlling educational operations.

Prerequisite: EDAD 684 or equivalent or permission of the department chairperson.

686 School Law (3) Basic principles of school law with special attention to legislation in Indiana and related court decisions. Other related topics such as tenure, teacher dismissal, employment, publications, and limitations on the board of education.

687 Legal Aspects of Education (3) An advanced course in school law with special attention to research in legal aspects of educational administration.

688 School Buildings, Grounds, and Equipment (3) Roles and responsibilities of the educational administrator and procedures that contribute to effective planning of new or remodeled educational facilities. Gives special attention to such matters as school surveys, development of educational specifications, standards and guidelines for instructional and service areas, site requirements, financing, construction patterns, equipment needs, and community involvement.

689 The School Principal (3) Provides overview of this key position. Analyzes/investigates roles and functions of principalship. Emphasis on linking theory to practice, facilitating transition to leadership position, and development of appropriate skills and attitudes. Leadership and management will be addressed. Theoretical concepts and practical illustrations are used to expand insights into the issues facing the school principal.

690 Charter School Leadership for Improving Student Achievement (3) Provides charter school leaders with the knowledge, skills, and attitudes necessary to improve student achievement in their schools. Analyzes/investigates roles and functions of school leaders. Emphasis on linking theory to practice. Theoretical concepts and practical illustrations are used to expand insights into current issues facing school leaders.

Prerequisite: permission of the department chairperson.

Open only to students seeking a certificate in charter school leadership or renewal of an administrative license.

692 Inservice Workshop in Education (1-3) For inservice teachers and administrators who wish to work on educational problems encountered in their own schools. Repeated registrations are permitted. A maximum of 6 credits may be applied to licensure in educational administration and supervision.

A total of 9 credits may be earned, but no more than 3 in any one semester or term.

693 Mid-Career Seminar for Educational Leaders (1-3) Seminar in education leadership for practitioners needing to update knowledge and skills in applied leadership. Repeated registrations are permitted.

Prerequisite: master's degree; permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

Open only to practicing educational leaders or educators seeking renewal of administrative licenses.

694 Principal Internship (3) Practical experience in the duties and responsibilities of the school principal and related problems. The intern will be assigned to a principal in the field.

Prerequisite: permission of the department chairperson or program director.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

695 Career/Technical Director Internship (3 or 6) Practical experience in the duties and responsibilities of a career/technical director. This internship is served under the direct supervision of an on-site, experienced educational administrator or director ("field of supervisor") and a member of the faculty of the BSU Department of Educational Leadership. Specialized and in-depth projects are included to provide for the participant's special needs and specific interests. Personal reflection, organization of activities and self-assessment are also important components of the internship experience. Internships are approved through the Department of Technology. Offered on-line only.

A total of 6 credits may be earned.

696 Superintendent Internship (3) Practical experience in the duties and responsibilities of the school superintendent and related problems. The intern will be assigned to a superintendent in the field.

Prerequisite: permission of the department chairperson or program director.

A total of 6 credits may be earned, but no more than 3 in any one semester of term.

698 Seminar in Theory of Educational Administration (3) Focuses on current theories of administration, contributions of behavioral science research to solving administrative problems, and the implication of theoretical orientations to educational administration.

Prerequisite: completion of at least two other EDAD courses.

700 Independent Study (1-6) Designed to meet the needs of students who wish to conduct independent study and research in educational leadership.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned.

Open only to specialist and doctoral students.

750 Seminar in Quantitative Applications for Educational Leaders (3) Seminar in educational leadership for practitioners needing to update knowledge and skills in applied leadership. This seminar provides students an opportunity to apply quantitative data analysis skills. Emphasizes academic writing, quantitative data collection, and analysis. May be used as a choice in the EDAD specialization or a cognate in the General Field of Education; cannot be applied as a required research course.

Prerequisite: master's degree or permission of the department chairperson.

Open only to doctoral students.

751 Seminar in Qualitative Applications for Educational Leaders (3) Seminar in educational leadership for practitioners needing to update knowledge and skills in applied leadership. This seminar provides students an opportunity to apply qualitative data analysis skills. Emphasizes academic writing, qualitative data collection, and analysis. May be used as a choice in the EDAD specialization or a cognate in the General Field of Education; cannot be applied as a required research course.

Prerequisite: master's degree or permission of the department chairperson.

Open only to doctoral students.

780 School District Administrator (3) Effective administrative leadership procedures, processes, and relationships in various types of educational institutions. Attention directed to functions of superintendent and other chief administrators as educational leaders relative to personnel, governing bodies, student groups, educational organizations, other agencies, and various publics.

Prerequisite: completion of at least two other EDAD courses.

782 Specialist Capstone Seminar (3) Designed to be taken near the end of the student's specialist program. It is designed to be a culmination of all the knowledge base that the student has been exposed to in course work, practica, and internships.

Prerequisite: permission of the department chairperson or instructor.

Open only to EdS and EdD students.

791 Internship in Educational Management (3-6) A field assignment with opportunities to participate directly in administrative and supervisory activities within a selected educational operation.

Prerequisite: permission of the department chairperson or program director.

A total of 6 credits may be earned.

792 Seminar in Writing and Analyzing Dissertation Literature Reviews (3-6) Students will receive training in efficient use of the Ball State University Library resources, review outstanding literature reviews, develop skills useful in identifying and synthesizing quality research studies in their topics of interest, and engage in argumentative analysis. Students will learn techniques for organizing and expressing

their ideas, as well as mapping and analyzing ideas. An objective of the course is for students to write a draft of their dissertation literature reviews.

Prerequisite: completion of at least three other EDAD courses or permission of the department chairperson.

A total of 6 credits may be earned.

Open only to doctoral students.

797 Advanced Policy Seminar in Educational Administration (Introduction to Educational Policy) (3) This seminar is designed to introduce students to educational policy debates, with a particular focus on the major issues and challenges facing U.S. policymakers.

Prerequisite: permission of the department chairperson or program director.

Open only to specialist or doctoral students.

798 Advanced Political Seminar in Educational Administration (Politics and Education) (3) Students enrolled in this seminar will become familiar with the ways in which the political process impacts the management, procedures, and practices of educational institutions. Students will learn to track legislation and use state agency data to assist their school corporation. They will more clearly define their positions on political issues and acquire expertise in representing their school corporation to the local community and influencing political entities.

Prerequisite: permission of the department chairperson or program director.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

Open only to specialist or doctoral students.

EDUCATIONAL PSYCHOLOGY

bsu.edu/edpsych
Teachers College 505, 765-285-8500

Educational psychology is a social science that involves the study of human development, learning, adjustment, measurement, research, and statistics as they relate to the problem of understanding human beings. These objectives are accomplished through research and service functions and through teaching about human relationships, human development, and changes in human behavior. Programs related to the practical application of psychological principles in psychoeducational settings are offered primarily at the graduate level.

Student financial support includes doctoral and graduate assistantships.

PROGRAMS

Master of arts (MA) in educational psychology, school psychology, and school counseling; master of science (MS) in educational psychology and quantitative psychology; specialist in education (EdS) in school psychology; doctor of philosophy (PhD) in educational psychology and school psychology, and certificates in gifted and talented education, human development and learning, Identity and Leadership Development Program for Counselors, and neuropsychology.

Admission requirements
For all masters, specialist, and doctoral degrees, applicants must apply to both the Graduate School and the Department of Educational Psychology. Applicants are screened according to departmental criteria after they have been admitted by the Graduate School. Separate application forms are required by the Graduate School and the department.

MASTER OF ARTS IN EDUCATIONAL PSYCHOLOGY, 30 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDPS	600	Adv Educational Psych	3
	606	Learn Achievement Motivation	3
	641	Intro Statistical Methods	3
	646	Tests and Measurements	3
	640	Research Methods (3)	
	or		
	643	Research Design (3)	3
3 credits from			
EDPS	603	Human Development (3)	
	or		
	627	Child Development (3)	
	or		
	628	Adolescent Development (3)	
	or		
	629	Adult Development (3)	3
Electives approved by program director			12
			30 crs

MASTER OF SCIENCE IN EDUCATIONAL PSYCHOLOGY, 33 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core courses			
EDPS	600	Adv Educational Psych	3
	606	Learn Achievement Motivation	3
	641	Intro Statistical Methods	3
	642	Analysis of Variance	3
	643	Research Design	3
	746	Theory of Measurement	3
6 credits from			
EDPS	603	Human Development (3)	
	627	Child Development (3)	
	628	Adolescent Development (3)	
	629	Adult Development (3)	6
3 credits from			
EDEL	644	Education in a Diverse Society (3)	
EDFO	651	Educational Sociology (3)	
EDMU	660	Multcl Multieth Ed in Amer Sch (3)	
	670	Soc and Cultl Min in Amer Ed (3)	3
THES	698	Thesis (1-6)	6
			33 crs

MASTER OF SCIENCE IN QUANTITATIVE PSYCHOLOGY, 33 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core requirements			
EDPS	641	Intro Statistical Methods	3
	642	Analysis of Variance	3
	643	Research Design	3
	741	Applied Regression Analysis	3
	742	Multivariate Statistics	3
	746	Theory of Measurement	3
EDPS	600	Adv Educational Psych (3)	
	or		
	606	Learn/Achievement Motivation (3)	3
Complete one of the following concentrations:			
Quantitative concentration, 6 credits from			
EDPS	698	Special Topics (3)	
	730	Nonparametric Statistics (3)	
	740	Categorical Data Analysis (3)	
	743	Factor Analysis (3)	
	744	Structural Equation Modeling (3)	
	785	Multilevel Statistical Model (3)	6
Mixed methods concentration, 6 credits from			
EDST	650	Intro to Qual Res (3)	
	655	Intro Mixed Methods Research (3)	
	660	Ethno Res in Ed (3)	
	671	Eval of Ed Prgrms (3)	
SOC	681	Survey Research Methods (3)	6
Thesis requirement			
THES	698	Thesis (1-6)	6
			33 crs

MASTER OF ARTS IN SCHOOL COUNSELING, 60 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
CPSY	678	Counseling Culturally Diverse	3
EDPS	603	Human Development	3
	623	Social Emotional Needs Gifted	3
SCCO	600	Intro School Counseling	3
	606	Child Therapy and Assessment	3
	614	College and Career Readiness	3
	644	Practicum School Counseling	3
	646	Adv Prac School Counseling	3
	653	Research in School Counseling	3
	660	Partnership Collab in Schools	3
	675	Counseling Exceptional Child	3
	685	Organization Guidance Program	3
	688	Group Counseling in Schools	3
	692	Youth Crisis Trauma Counseling	3
	695	Internship School Counseling (3-6)	6
SPCE	600	Educ of Exc Children	3
One course from			
CPSY	636	Psychopathology (3)	
EDPS	750	Developmental Psychopath (3)	3
One course from			
EDAD	686	School Law (3)	
EDPS	776	Issues Professional Psychology (3)	3
One course from			
EDCU	610	Elem Schl Curriculum (3)	
	620	Se School Curriculum (3)	
	630	Jr Hi and Mid School Curr (3)	
EDEL	600	Basic Concepts in Elem Educ (3)	
	626	Discipline and Classroom Mgt (3)	
EDFO	631	Philosophy of Education (3)	
	641	History of American Education (3)	
	651	Educational Sociology (3)	
EDJH	512	Inst Strtgs Apprchs JH and MS (3)	
EDSE	534	Class Mgt: Imprvng Student Beh (3)	
	695	Dyn and Sec School Classroom (3)	3
			60 crs

Candidates will be issued the school services standard license for counselor after they have completed the following state requirements:

- One of the following professional experiences: (1) a valid out-of-state school counseling license and one year of experience as a school counselor in another state, or (2) an internship in a school setting for one academic year.
- A master's degree in counseling or a related field and 30 semester credits in counseling and guidance at the graduate

level.

- Completion of a supervised practicum in counseling with students at all levels.
- Recommendation by the accredited institution where the approved qualifying program was completed.
- A passing score of the Indiana CORE content test for school counselors.

The holder of the school services license is eligible to serve as a counselor at all grade levels.

MASTER OF ARTS IN SCHOOL PSYCHOLOGY, 30 credits

Designed for students seeking Indiana school psychologist licensure or school psychologist certification in other states. It is NASP/NCATE-approved and is patterned after guidelines suggested by the National Association of School Psychologists.

Combined Admission

In selected instances, applicants with baccalaureate degrees may be of such outstanding quality that they are eligible for concurrent admission into either the MA and EdS or the MA and PhD programs in school psychology. Applicants must meet the admission requirements of the Graduate School, achieve scores on the GRE at a level commensurate with master's degree applicants applying to the advanced degree programs, and submit the additional materials appropriate to the degree program desired (see Admission, Specialist in Education in Educational Psychology [School] or Doctor of Philosophy in Educational Psychology [School]). Candidates for admission must be approved by the department and should contact the program director for appropriate forms and additional information.

Degree requirements

Requirements include the satisfactory completion of a minimum of 30 credits of prescribed graduate courses with an overall grade-point average (GPA) of at least 3.0 and a GPA of 3.0 in courses in the major. Students seeking Indiana school psychologist licensure are required to complete at a minimum the EdS in Educational Psychology (School), which includes an academic-year internship. Check with the program director for any recent changes dictated by professional organizations or licensure requirements. All course work must be approved by the program director.

EdS IN EDUCATIONAL PSYCHOLOGY (SCHOOL), 73 credits

Degree requirements

Candidates for the specialist degree in educational psychology (school) at Ball State University must have satisfactorily completed a minimum of 73 graduate credits beyond the baccalaureate (that may include credit earned at the master's degree level); the departmentally approved examination; the professional portfolio of evidence; and supervised practicum and internship experiences. Because the specialist degree is intended for those seeking school psychologist licensure in Indiana and other states, all course work must be approved by the program director.

Check with the program director for any recent changes dictated by professional organizations or licensure requirements.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
CPSY	688	Group Counseling Techniques (3)	
	or		
SCCO	606	Child Therapy and Assessment (3)	3
EDPS	612	Psychological Consultation	2
	640	Research Methods (3)	
	or		
	643	Research Design (3)	3
	641	Intro Statistical Methods	3
	651	Personality Assessment	3
	652	Intro Neuropsychology	3
	653	Cognitive Assessment	3
	654	Acad Achieve Interv	3
	685	Intro School Psychology	2
	686	Pre-Practicum Consultation	1
	687	Pre-Prac School Psych (1-3)	1
	688	Practicum Consultation (3-6)	3
	689	Practicum School Psych (1-6)	4
	690	Superv Intern School Psych (3)	6
	775	Evidence Based Interventions (3)	
	or		
SCCO	692	Youth Crises Trama Counseling (3)	3
SPCE	609	Intro to App Beh Analy	3
	610	Behavioral Consultation (3)	
	or		
SCCO	675	Counseling Exceptional Child (3)	3
	600	Educ of Exc Children (3)	
	or		
EDPS	660	Diagnosis Learning Disorders (3)	3
3 credits from			
CPSY	636	Psychopathology (3)	
EDPS	750	Developmental Psychopath (3)	
PSYS	632	Science of Psychopathology (3)	3
3 credits from			
EDCU	601	Princ and Proc of Curr Dev (3)	
	610	Elem Schl Curriculum (3)	
	620	Se School Curriculum (3)	
	630	Jr Hi and Mid School Curr (3)	3
3 credits from			
EDPS	600	Adv Educational Psych (3)	
	765	Theories of Learning (3)	
	768	Theories Cognitive Development (3)	3

3 credits from			
EDPS	603	Human Development (3)	
	627	Child Development (3)	
	628	Adolescent Development (3)	
	720	Development Theories Research (3)	3
3 credits from			
EDRD	610	Teaching of Reading Elem Sch (3)	
	620	Disc Integ Lit in El Classroom (3)	
	640	Issues in Teaching of Literacy (3)	
	680	Classroom Literacy Assessment (3)	3
3 credits from			
SOPS	610	Social Psychology (3)	
	615	Social Cognition (3)	
	620	Group Dynamics (3)	
	640	Social Psychology of Attitudes (3)	
	655	Counsel Apps of Soc Psych (3)	
	660	Contemporary Social Psychology (3)	3
3 credits from			
CPSY	678	Counseling Culturally Diverse (3)	
EDEL	644	Education in a Diverse Society (3)	
EDFO	651	Educational Sociology (3)	
EDMU	660	Multcl Multieth Ed in Amer Sch (3)	
	670	Soc and Cultl Min in Amer Ed (3)	3
			73 crs

DOCTOR OF PHILOSOPHY IN EDUCATIONAL PSYCHOLOGY (GENERAL), 91 credits

The doctoral program in educational psychology trains research scholars who will contribute to the understanding of teaching, learning and development; educational accountability and program evaluation; and individual differences in learning and adjustment in educational settings. The core program features areas of study such as learning, human development, statistics, measurement and research methods.

Graduates will be skilled researchers with substantive knowledge of measurement, research design, and analysis of data. Graduates will be qualified for academic positions in higher education and research positions in public and private institutions such as professional evaluation firms and testing companies.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Educational psychology core			
EDPS	600	Adv Educational Psych	3
	601	Research in Educational Psyc (1-6)	6
	606	Learn Achievement Motivation	3
	641	Intro Statistical Methods	3
	642	Analysis of Variance	3
	643	Research Design	3
	649	Fund Neuropsych (3)	
		or	
	652	Intro Neuropsychology (3)	3
	720	Development Theories Research	3
	741	Applied Regression Analysis	3
	742	Multivariate Statistics	3
	746	Theory of Measurement	3
	765	Theories of Learning	3
	768	Theories Cognitive Development	3
	769	Motivation Learning	3
	790	Practicum Teaching Edpsy	3
EDST	650	Intro to Qual Res	3
ID	705	Research Colloquium (1-3)	3
6 credits from			
EDPS	627	Child Development (3)	
	628	Adolescent Development (3)	
	629	Adult Development (3)	6
3 credits from			
EDPS	744	Structural Equation Modeling (3)	
	785	Multilevel Statistical Model (3)	3
3 credits from			
EDEL	644	Education in a Diverse Society (3)	
EDFO	651	Educational Sociology (3)	
EDMU	660	Multcl Multieth Ed in Amer Sch (3)	
	670	Soc and Cultl Min in Amer Ed (3)	3
			66 crs
Cognate			
Completion of at least one 15-credit cognate is required			15
Dissertation			
DISS	799	Doctoral Dissertation (1-24)	10
			91 crs

DOCTOR OF PHILOSOPHY IN EDUCATIONAL PSYCHOLOGY (SCHOOL), 130 credits

The PhD program consists of a minimum of 130 graduate credits. The candidate must complete a major in school psychology of at least 40 credits and at least one cognate of 15 credits. As required by the Commission on Accreditation of the American Psychological Association, all students must complete a professional psychology core including courses in the biological aspects of behavior, the cognitive and affective aspects of behavior, and the social aspects of behavior. Course work in individual differences, human development, dysfunctional behavior or psychopathology, cultural and individual diversity, and professional standards and ethics also are required. Theories and methods of assessment and diagnosis, evidence-based interventions, psychological consultation and supervision, and evaluating the efficacy of interventions are required course work consistent with developing competencies as a health service psychologist. In

addition, candidates must complete course work in the history and systems of psychology, psychological measurement, research methodology, and techniques of data analysis. All candidates for the degree must submit a research project for presentation or publication in addition to the completion of a dissertation and a doctoral-level internship at sites approved by both the school psychology internship and program directors. Candidates are expected to meet the requirements for Indiana school psychologist licensure as outlined in the section Requirements for School Services Licenses.

Students applying for the program should check with the program for any recent changes dictated by professional organizations or licensure requirements.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
CPSY	678	Counseling Culturally Diverse	3
EDCU	610	Elem Schl Curriculum	3
EDPS	603	Human Development	3
	612	Psychological Consultation	2
	640	Research Methods (3)	
	or		
	643	Research Design (3)	3
	641	Intro Statistical Methods	3
	642	Analysis of Variance	3
	651	Personality Assessment	3
	652	Intro Neuropsychology	3
	653	Cognitive Assessment	3
	654	Acad Achieve Interv	3
	660	Diagnosis Learning Disorders	3
	685	Intro School Psychology	2
	686	Pre-Practicum Consultation	1
	687	Pre-Prac School Psych (1-3)	1
	688	Practicum Consultation (3-6)	3
	689	Practicum School Psych (1-6)	4
	691	Prac Clinical Settings (1-3)	2
	720	Development Theories Research	3
	741	Applied Regression Analysis	3
	746	Theory of Measurement	3
	750	Developmental Psychopath	3
	765	Theories of Learning	3
	775	Evidence Based Interventions	3
	776	Issues Professional Psychology	3
	778	Practicum Interventions	3
	789	Supervision School Psychology (3-6)	3
	791	Doc Intern School Psych (3-6)	3
	792	Doc Intern Professional Psych (3-9)	3
EDRD	610	Teaching of Reading Elem Sch	3
ID	705	Research Colloquium (1-3)	3
PSYS	691	Systems of Psychology	3
SCCO	606	Child Therapy and Assessment	3
	675	Counseling Exceptional Child	3
	692	Youth Crisis Trauma Counseling	3
SOPS	610	Social Psychology	3
SPCE	609	Intro to App Beh Analy	3

Additional Requirements	
Cognate	15
Completion of at least 10 dissertation credits	10
	130 crs

DOCTORAL COGNATES

The Department of Educational Psychology offers several doctoral cognates including neuropsychology, gifted studies, developmental psychology, educational psychology, quantitative psychology, psychological assessment, and research methodology. More information regarding the requirements for each of these cognates can be obtained from the doctoral program director. Examples of cognates that may be chosen from other departments include counseling psychology, clinical psychology, special education, and general education.

CERTIFICATE PROGRAMS

To be admitted to certificate programs, students need to be admitted to the Graduate School. Graduate student status includes transcripts documenting a completed baccalaureate degree and a cumulative undergraduate grade-point average of at least 2.75 on a 4.0 scale or a 3.0 on a 4.0 scale in the latter half of the baccalaureate to be enrolled.

Certificate in Gifted and Talented Education, 12 credits

As all states have different licensing requirements, this certificate may not meet the requirements in every state.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDPS	520	Intro Gifted Talented	3
	621	Identif and Evaluation Gifted	3
	625	Models and Strategies Gifted	3
	611	Creative Thinking (3)	
	or		
	623	Social Emotional Needs Gifted (3)	3
			12 crs

Certificate in Human Development and Learning, 15 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDPS	600	Adv Educational Psych	3
	606	Learn Achievement Motivation	3
	627	Child Development	3
	628	Adolescent Development	3
	629	Adult Development	3
			15 crs

Certificate in Identity and Leadership Development Program for Counselors, 12 credits

Admission requirements
To be admitted to the Certificate in Identity and Leadership Development Program for Counselors, students would need to:

- enroll in a graduate program in counseling or a closely related field or
- complete a school counseling or other student services degree and
- obtain graduate student status. Graduate student status includes transcripts documenting a completed baccalaureate degree and a cumulative undergraduate grade-point average of at least 2.5 on a 4.0 scale, or a 3.0 on a 4.0 scale in the latter half of the baccalaureate to be enrolled. The courses for the certificate program would be under the Department of Counseling Psychology, Social Psychology, and Counseling.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
CPSY	601	Leadership In Counseling	3
SCCO	614	College and Career Readiness (3)	
	or		
EDAD	600	Intro to Ed Leadership (3)	3
CPSY	678	Counseling Culturally Diverse (3)	
	or		
EDAD	630	Human Resource Development (3)	3
CPSY	609	Counseling Ethics Prof Issues (3)	
	or		
EDAD	686	School Law (3)	3
			12 crs

Certificate in Instructional Design and Assessment (IDA), 15 credits

There is a college moratorium on admission to this degree.

Certificate in Neuropsychology, 15 credits

Admission requirements
Admissions standards for graduate study leading to a certificate in neuropsychology will be the same as the graduate admission standards set by the Graduate School for a doctoral degree (e.g. GPA 3.0).

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDPS	629	Adult Development	3
	649	Fund Neuropsych	3
	655	Child Neurodevelopment	3
	665	Develop Psycholinguistics	3
	753	Adv Topics in Neuro	3
			15 crs

EDUCATIONAL PSYCHOLOGY (EDPS)

520 Introduction to the Gifted and Talented Student (3) Examination of definition, characteristics, and identification procedures related to gifted and talented children in school and society. Review and analysis of research findings pertaining to these topics.

Not open to students who have credit in EDPS 420.

600 Advanced Educational Psychology (3) Advanced survey of the psychological principles underlying the processes of teaching and learning. Theories, research, and applications are explored with an emphasis on the implications for effective learning approaches, instruction, assessment, and policy.

601 Research in Educational Psychology (1-6) Students in the first two years of their doctoral work will complete an independent research project. Students will learn about resources and opportunities for successful graduate research, including library resources, institutional review of university research, grant writing, submitting conference presentations and procedures for publishing research.

Prerequisite: permission of the program director.

A total of 12 credits may be earned, but no more than 6 in any on semester or term.

603 Psychology of Human Development (3) Advanced lifespan human development. Covers biological, cognitive, social, and emotional development from conception to death, emphasizing theories, research, and applications to educational and psychological practice.

606 Human Learning and Achievement Motivation (3) Coverage of principles of human learning and achievement motivation applied to education and everyday life. Topics include behavioral, cognitive, and social-cognitive orientations to human learning and achievement motivation.

611 Development of Creative Thinking (3) Theories and strategies for fostering the creative self and developing creative thinking. Analyzes the effects of personality characteristics and of various biological, cognitive, motivational, and environmental conditions on the development of creative behavior.

612 Psychological Consultation (2) Examination of the theoretical approaches to psychological consultation. Emphasizes the consultant-consultee relationship in behavioral process, developmental, triadic, organizational, and eclectic models of consultation. Research concerning various models is emphasized.

Prerequisite: EDPS 653 or permission of the program director.

621 Identification and Evaluation of Gifted and Talented Students (3) Explores in-depth practices of identifying gifted students and evaluating programs and services for this population of learners. Topics include measurement and contextual factors regarding the identification of gifted

students and best practices for data collection and analysis for gifted program evaluations.

Prerequisite: EDPS 420 or 520.

623 Investigating the Social and Emotional Needs of Gifted Students (3) Examination of the research related to gifted students and the social and emotional dimensions that are unique to this population. Emphasis is placed on understanding the lived experiences of gifted children as well as social intervention and curricular strategies that can be employed with various educational environments.

625 Models and Strategies for Gifted Learners (3) Examination of the theoretical models and strategies used in differentiation of instruction for gifted students. Part of the sequence for the license in gifted education. Students learn models and the instructional strategies necessary for their implementation. In addition, they create their own unit based on one of the models studied.

Prerequisite: EDPS 420 or 520.

627 Child Development (3) Advanced child development. Covers the biological, cognitive, social, and emotional developmental processes from conception to the transition into early adolescence, emphasizing current research in child development.

628 Adolescent Development (3) Advanced adolescent development. Covers the biological, cognitive, and social developmental processes from the beginning of puberty through the transition into early adulthood, emphasizing current research in adolescent development.

629 Adult Development and Aging (3) An advanced course in adult development. Covers the biological, cognitive, and social developmental processes from early adulthood through late adulthood, including death and dying. Content is based on current theories and research.

640 Methodology of Educational and Psychological Research (3) Development of concepts and skills to enable graduate students to become better informed consumers of educational and psychological research and to provide a foundation for graduate students who may engage in research. Introduction to the common types of research study, the instruments by which studies are carried out, and the interpretation and application of research.

641 Introduction to Statistical Methods (3) A basic statistical course for graduate students in education. Problems taken from the fields of education and psychology and include the computation, interpretation, and application of such statistical techniques as measures of central tendency, measures of variability, correlation techniques, validity and reliability, standard scoring techniques, probability, tests of significance, chi square, and analysis of variance.

642 Analysis of Variance (3) An extension of elementary descriptive and inferential statistics through basic statistical research designs, including analysis of variance and covariance.

Prerequisite: EDPS 641 or PSYS 241, or a proficiency test administered within the department.

643 Research Design (3) Systematic presentation of the strategies and methods required to develop and critique research designs to meet the needs of psychological and educational research paradigms. The focus is on developing the skills necessary to conduct independent research in a variety of methodological domains. Both quantitative and qualitative methods will be fully represented.

646 Tests and Measurements (3) Educational and vocational tests and measurements used for measuring proficiency, aptitudes, interests, and personality traits and their use in the complete educational program.

649 Fundamentals of Neuropsychology (3) Introduction to brain-behavior relationships with special emphasis on cognitive, emotional, and biological contributors to behavior. Brain dysfunction and common disorders are explored with an empirical approach using basic neuroscience research methods. This course is offered on-line only, primarily intended for those seeking a Certificate in Neuropsychology.

Not open to students who have credit in EDPS 652.

650 Individual Testing (Wechsler Scales) (3) Theory and supervised practice in the administration, scoring, and interpretation of the Wechsler Intelligence Scale for children and the Wechsler Adult Intelligence Scale. Other individual intelligence tests will be examined and evaluated.

Not open to students in school psychology program.

651 Personality Assessment of Children and Adolescents (3) Theory, administration, scoring, and interpretations of personality assessment instruments such as projective techniques, rating scales, and personality inventories, typically used for children and adolescents.

Prerequisite: EDPS 653 or permission of the program director.

652 Introduction to Neuropsychology (3) Introduction to brain-behavior relationships with special emphasis on cognitive, biological and sensory motor functioning. Brain dysfunction and common disorders are explored with an empirical approach using basic neuroscience research methods.

Prerequisite: EDPS 653 or permission of the instructor.

653 Individual Cognitive Assessment (3) Administration, interpretation, and analysis of individual measures of cognitive functioning.

Prerequisite: permission of the department chairperson.

Open only to students in school psychology.

654 Academic Achievement and Intervention (3) Introduction to norm-referenced and curriculum-based assessment of achievement with a focus on intervention

planning, implementation, and evaluation. Emphasis on discussion of empirically-based instructional and behavioral techniques.

Prerequisite: EDPS 653 or equivalent; permission of the department chairperson.

Open only to students admitted to the school psychology program.

655 Child Neurodevelopment (3) Study of brain-behavior relationships in children with special emphasis on neurodevelopment. Discussion of research concerning various childhood disorders, diagnostic issues and rehabilitation planning. This course is offered on-line only, primarily intended for those seeking a Certificate in Neuropsychology.

Prerequisite: EDPS 649 or 652, or permission of the department chairperson.

Not open to students who have credit in EDPS 656.

656 Pediatric Neuropsychology (3) Advanced study of brain-behavior relationships in children and adolescents with special emphasis on neurodevelopment. Assessment procedures useful in diagnosis and rehabilitation planning and research concerning various childhood neuropsychological disorders.

Prerequisite: EDPS 652 or permission of the department chairperson.

660 Diagnosis and Interventions for Learning and Related Disorders (3) Discussion of issues of diagnosis and implementation of interventions designed for children with learning disorders.

Prerequisite: courses in individual assessment and special education highly desirable.

665 Concepts of Developmental Psycholinguistics (3) Review and analysis of the psychological and neurobiological factors related to language acquisition and development. Discussion of theories related to language acquisition, usage, and behavior. Introduction to language development with the purpose of remediation and intervention. This course is offered on-line only, primarily intended for those seeking a Certificate in Neuropsychology.

Prerequisite: EDPS 649 or 652, or permission of the department chairperson.

Not open to students who have credit in EDPS 669.

669 Concepts in Developmental Neuropsycholinguistics (3) Comprehensive review and analysis of neurobiological and environmental developmental theories as applied to language acquisition and behavior. Application of these concepts to language assessment within the context of neuropsychological and psychoeducational evaluation as well as remediation and intervention.

Prerequisite: EDPS 652 or permission of the instructor.

685 Introduction to School Psychology (2) Introduction to the practice of professional psychology in the schools with an emphasis on the history, ethics, scope, role, and activities of school psychologists.

Prerequisite: admission into a school psychology program, permission of the instructor.

686 Pre-Practicum in Consultation (1) General orientation to the professional activity of school consultation in educational settings.

Prerequisite: admission into a school psychology program, permission of the instructor.

Open only to students admitted to a graduate training program in school psychology.

687 Pre-Practicum in School Psychology (1-3) General orientation to the practice of school psychology in educational and other settings. Time spent with guided and directed experiences in schools and other professional settings.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

Open only to students admitted to a school psychology program.

688 Practicum in Consultation (3-6) Application of principles and theories of consultation taught in EDPS 612. Consultation to school and clinical settings.

Prerequisite: EDPS 612, 653, and 687; permission of the program director.

A total of 9 credits may be earned, but no more than 6 in any one semester or term.

689 Practicum in School Psychology (1-6) Preparation for internship. Supervised experience in the choice, administration, and written interpretation of standardized and nonstandardized assessments in various educational and clinical settings. Interview and observational strategies, as well as professional standards of practice and legal issues, will be addressed.

Prerequisite: EDPS 612, 651, 653, and 687; or permission of the program director.

A total of 9 credits may be earned, but no more than 6 in any one semester or term.

690 Supervised Internship in School Psychology (3) Internship in the principles, practices, and applications of psychoeducational evaluation and consultation with a school or other appropriate setting. Ordinarily required if seeking school psychology certification.

Prerequisite: completion of most of the curriculum for certification as a school psychologist; permission of the department chairperson or program director.

A total of 12 credits may be earned, but no more than 3 in any one semester or term.

Open only to school psychology students.

691 Practicum in Clinical Settings (1-3) Application of principles and theories of psychoeducational assessment in a clinic-based setting. Through supervised experiences, students will conduct comprehensive evaluations, including administration and interpretation of various standardized assessments, diagnostic interviews, written reports, and

presentation of assessment results with clients/parents in the Psychoeducational, Diagnostic, and Intervention Clinic.

Prerequisite: EDPS 653, 654, and 750.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

696 Practicum in Gifted Education (1-6) Supervised teaching and laboratory experiences with gifted and talented children in educational settings. Meets teaching licensure requirements.

Prerequisite: permission of the department chairperson.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

698 Special Topics (3-6) Group or individual investigation and study of current issues, problems, and developments in human development, classroom learning, research methods, or statistics.

Prerequisite: permission of the instructor.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

699 Independent Study: Educational Psychology (1-6) Individual students may participate in planned experiences related to educational psychology that are not provided by the regular sequence, study more extensively than present courses allow in a theoretical area of educational psychology, or conduct independent research related to educational psychology.

Prerequisite: permission of the department chairperson.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

709 Forensic Psychology (3) A survey of forensic issues in psychology, including instruction in legal issues, principles, and relevant case law. Students will be expected to prepare testimony, examine cases, and participate in mock trial proceedings. Designed for graduate students in psychology, practicing psychologists, and physicians.

Prerequisite: permission of the department chairperson.

720 Developmental Theories and Research Across the Lifespan (3) An exploration of theories and empirical research models and methods in developmental psychology across the lifespan. Emphasizes formulating research proposals using current models and methods with particular focus on the application of developmental principles to practice in applied settings.

730 Introduction to Nonparametric Statistics (3) Focus on statistical methods appropriate for data in which standard assumptions such as normality and equality of variance are not met. Covers approaches for problems from one sample estimates of location to nonparametric multivariate techniques such as factor analysis. Students will learn about methods based on ranks, permutation tests, and the bootstrap.

Prerequisite: EDPS 641 or 642.

735 Item Response Theory (3) Item Response Theory (IRT) involves the study of statistical methods for analyzing and interpreting responses to items on cognitive and affective scales. Focuses on statistical models for such responses, with special emphasis on assessment of model fit, assumption violations, and reporting of results. Extensions of standard IRT models are also discussed, including multidimensional IRT, differential item functioning assessment, methods for scaling and equating, and models for unfolding type data. Students will learn both the theory underlying IRT, and how to use these models in practice with computer software.

Prerequisite: EDPS 641 or 642.

740 Categorical Data Analysis (3) A survey of statistical methods specifically designed for categorical variables, including chi-square, log-linear models, logistic regression, regression for count variables, and survival analysis.

Prerequisite: EDPS 641 or 642.

741 Applied Regression Analysis (3) A presentation of the rationale of linear regression, its application to the analysis of educational and psychological data, and its relationship to other statistical techniques such as the analysis of variance, discriminant analysis, and factor analysis.

Prerequisite: EDPS 641 or 642; or permission of the instructor.

742 Multivariate Statistics and Data Mining (3) A survey of multivariate statistical techniques including, but not limited to, discriminant function analysis, the multivariate analysis of variance, cluster analysis, latent class and mixture modeling, canonical correlation, generalized additive models, neural networking, and tree based algorithms. Includes practical applications of statistical analyses of educational and psychological data, using software.

Prerequisite: EDPS 641 or 642.

Prerequisite recommended: EDPS 741.

743 Factor Analysis (3) Introductory and advanced treatment of exploratory and confirmatory factor analysis. Includes application of factor analytic models using software.

Prerequisite: EDPS 641 or 642.

Prerequisite recommended: EDPS 741.

744 Structural Equation Modeling (3) Focuses on the application of covariance structure models to a variety of research problems. Students will learn about the major structural equation model and how to apply them using multiple software packages.

Prerequisite: EDPS 641 or EDPS 642.

Prerequisite recommended: EDPS 741 or EDPS 743.

746 Theory of Measurement (3) Study of major principles underlying psychometric theory including true score models, reliability, validity, scaling and equating, introductory item response theory analysis, and instrument construction.

Prerequisite: EDPS 641 or 642.

750 Developmental Psychopathology (3) Emphasis is placed on understanding typical and atypical developmental

trajectories throughout the lifespan. Biological family, social, and cultural contexts that contribute to psychological, emotional, and educational disturbances are discussed.

752 Practicum in Neuropsychological Assessment (3-6) Supervised practice in administering and interpreting a variety of neuropsychological test batteries for children and adults including the preparation of neuropsychological reports.

Prerequisite: EDPS 652 and permission of the instructor.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

753 Advanced Topics in Neuropsychology (3) Introduces advanced materials, procedures, and research in clinical neuropsychology. Topics of discussion emphasize selected disorders, rehabilitation and professional issues. This course is offered on-line only, primarily intended for those seeking a Certificate in Neuropsychology.

Prerequisite: EDPS 649 or 652, EDPS 655 or 656, and EDPS 665 or 669.

Not open to students who have credit in EDPS 754.

754 Seminar in Neuropsychology (3) Introduces advanced materials, procedures, and research in clinical neuropsychology. Emphasizes selected neurologic disorders, methods of assessment and rehabilitation, and professional issues.

Prerequisite: EDPS 652, 656.

765 Theories of Learning (3) A doctoral seminar in contemporary learning theories. Covers the systematic roots of learning theories within psychology and their implications for educational and psychological practice.

Prerequisite: EDPS 600 or equivalent.

768 Theories of Cognitive Development (3) A doctoral seminar on the current theories of cognitive development, including constructivist, information processing, and socio-cultural perspectives. Emphasizes both historical writings and current research literature in cognitive development and their application in educational and psychological settings.

Prerequisite: EDPS 603 or 627 or 628.

769 Motivation and Self-Regulated Learning (3) Extensive review of contemporary theories and research in academic motivation and self-regulation with a special attention to practical applications and intervention development. Individual and contextual factors leading to optimal performance and psychological well-being will be examined.

775 Evidence-Based Interventions in Psychology (3) Study of empirically supported prevention and intervention strategies. Emphasizes prevention of social, emotional, and behavioral difficulties and the selection and implementation of effective short-term treatments.

Prerequisite: EDPS 651 and 750; or permission of the instructor.

776 Legal, Ethical, and Multicultural Issues in Professional Psychology (3) Emphasis on development of personal models for legal, ethical, and multicultural issues that arise in professional psychological practice. Critical examination and consideration of commonly encountered legal and ethical dilemmas. Discussion of issues related to working with diverse populations.

Prerequisite: EDPS 685 and 688; permission of the instructor.

778 Practicum in Evidence-Based Interventions (3) Directed and supervised experience in the provision of evidence-based behavioral, psychosocial and/or academic programs and interventions. Prevention programs and evidence-based services from a multi-tiered system of support model may also be included.

Prerequisite: EDPS 775 or permission of the instructor.

Parallel: EDPS 791

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

785 Multilevel Statistical Modeling (3) Students will learn the most recent statistical models for multilevel data. Methods are appropriate for datasets in which individuals are sampled in clusters, where the assumption of independence is likely to be violated. Surveys multilevel techniques appropriate for ANOVA, regression, categorical, and multivariate data.

Prerequisite: EDPS 641 or 642, and 741.

789 Supervision in School Psychology (3-6) Directed experience in the supervision of school psychologists. Models and methods of supervision are introduced with emphasis on ethical issues, evaluation, and research. Instruction progresses from theory and role playing to hands-on supervisory experiences.

Prerequisite: permission of the department chairperson.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

790 Practicum in Teaching Educational Psychology (3-6) Candidates for advanced graduate-degree programs in educational psychology will be closely supervised in giving classroom instruction, in assisting beginning students, and in developing other proficiencies and skills required for successful college teaching.

Prerequisite: admission to advanced graduate-degree programs or permission of the department chairperson.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

791 Doctoral Internship in School Psychology (3-6) Supervised doctoral-level internship involving the theory and practice of psychoeducational assessment and consultation within a school, clinic, or other appropriate setting.

Prerequisite: permission of the program or internship director.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

Open only to students admitted to the PhD program in

school psychology.

792 Doctoral Internship in Professional Psychology (3-9) Directed and supervised predoctoral internship experience within a school, clinic, or other appropriate setting to meet the requirements of the doctoral program in school psychology.

Prerequisite: permission of the program or internship director.

A total of 12 credits may be earned, but no more than 9 in any one semester or term.

Open only to students admitted to the PhD program in school psychology.

SCHOOL COUNSELING (SCCO)

600 Introduction to School Counseling (3) Counseling and guidance in the schools for counselors, teachers, administrators, and other educational personnel. History and philosophy of school counseling, counselor roles and function, modes of intervention (e.g., direct services, consultation, curriculum), and ethics of school counseling will be studied.

601 (CPSY 601) Introduction to Identity and Leadership Development for Counselors (3) Expands upon the Identity and Leadership Development Workshop for Counselors. Students focus on the Nine-Step Success Process and develop the knowledge and skills they need to meet the identity needs of secondary students, especially those from diverse backgrounds, or who may be at risk.

606 Child Therapy and Assessment (3) Investigation of major theories of counseling and psychotherapy with children and adolescents. Core assessment constructs will be reviewed and applied. Models of assessment and therapy techniques are used to develop basic skills needed to effectively counsel children and teens.

Parallel: SCCO 600 or permission of the department chairperson.

614 College and Career Readiness (3) School counselors' roles in using career development theory, results from career-related assessment and diagnostic tools, intervention strategies related to career exploration, decision making, and life career adjustment; sources and application of career-development materials.

Prerequisite: 9 or more credits in counseling and guidance courses including SCCO 600 and 606.

644 Practicum in School Counseling (3) Supervised experience that includes counseling with one or more of the following populations: children, adolescents, and families under the supervision of a professional counselor. Practical experience for building individual, group, and school-related counseling skills and practice various strategies for functioning as effective school counselors.

Prerequisite: SCCO 600 and 606, or permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

Open only to school counseling and school psychology students; other graduate students by permission.

646 Advanced Practicum in School Counseling (3) Advanced supervised experience that includes counseling with one or more of the following populations: children, adolescents, and families under the supervision of a professional counselor. Practical experience for building individual, group, and school-related counseling skills and practice various strategies for functioning as effective school counselors.

Prerequisite: SCCO 644 or permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

653 Research in School Counseling (3) Students will investigate, summarize, and interpret research in school counseling with a perspective that incorporates a focus on systemic change, advocacy, leadership and collaboration in schools settings. Each student will write and submit a research report to fulfill course requirements.

Prerequisite: SCCO 600 and 606, or permission of the department chairperson.

660 Partnership and Collaboration in Schools (3) Theory and practice of partnerships, collaboration, and consultation services in the school setting are examined. Skills needed by school counselors to implement and evaluate comprehensive school-family-community partnership models will be developed.

Prerequisite: SCCO 600 or permission of the department chairperson.

Parallel: SCCO 685.

675 Counseling Exceptional Children (3) Examination of theory and research on the social, emotional, and career needs of exceptional children. Emphasizes counseling program development, models, and skills to meet the special needs of this population.

Prerequisite: SCCO 644 or permission of the department chairperson.

Prerequisite or parallel: SPCE 600, 646.

685 Organization of the Guidance Program (3) Organization, administration, and functions of counselors, teachers, and administrators in guidance programs. Emphasizes evaluation and improvement of effectiveness and efficiency of the guidance program in facilitating growth and development.

Prerequisite: 9 or more credits in counseling and guidance courses including SCCO 600 and 606.

688 Group Counseling in Schools (3) Major approaches to group counseling theory and techniques applied to group work in school settings to promote the academic, college/career, and personal/social development of children and adolescents.

Interpersonal dynamics, personal communication styles, and fundamental group counseling strategies will be examined through group facilitation experiences and class discussion.

Prerequisite: SCCO 600.

692 Youth Crisis and Trauma Counseling (3) Investigation of the individual and systemic impact of traumatic life events on children, adolescents and families. School based crisis and trauma prevention, intervention, and assessment skills will be developed.

Prerequisite: SCCO 600 and 606 or permission of the department chairperson.

695 Field Internship in School Counseling (3-6) Intensive supervised experience in application of basic psychotherapeutic procedures and evaluation techniques in an approved school setting. Experience will be gained in one or several approved schools under joint supervision of a university faculty member and a school representative designated for this responsibility.

Prerequisite: SCCO 644 and 646.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

EDUCATIONAL STUDIES

bsu.edu/edstudies
Teachers College 805, 765-285-5461

The department offers a variety of graduate programs for students interested in working in secondary and junior high/middle school (grades 5-12), higher education, adult and community education, and curriculum and educational technology. Graduate courses and program emphases are available in adult, higher, community, curriculum; history, philosophy, and sociology of education; computer education; multicultural education; higher education; college student affairs; junior high/middle school education; secondary education; supervision; and educational technology. Courses are designed and taught with a balance among theory, research, practice, and skills for the practicing educator.

Specific degree programs prepare graduates for careers in curriculum and instructional leadership, higher education teaching and administration, adult and community education, educational technology, and organizational development and administration. In addition, post-baccalaureate students seeking initial teacher certification may be able to simultaneously pursue a master's degree program.

PROGRAMS

Master of arts (MA) in adult and community education, in curriculum and educational technology, in executive development for public service, in secondary education, and in student affairs administration in higher education; master of arts in technology education; minor in higher education (masters degree programs); doctor of education (EdD) in adult, higher, and community education; and doctor of philosophy (PhD) in educational studies. A transition-to-teaching program is also available as are certificates in adult education, college and university teaching, community college leadership, community education, computer education, diversity studies, middle level education, curriculum, institutional research, and qualitative research in education.

MASTERS PROGRAMS, 30-33 credits

Admission requirements

Applicants must meet the admission requirements of the Graduate School.

Degree requirements

The MA degree requires completion of at least 30 credits of graduate course work. A minimum of 15 credits must be completed in the major, supplemented by a research course and electives from the major or related subjects. Students must maintain grade-point averages (GPA) of at least 3.2 on a scale of 4.0. An exact program is designed to fit students' needs and meet degree requirements. A master's thesis (6 credits) or research paper (3 credits) may be written for the master's degree program.

Master of Arts in Adult and Community Education, 30-33 credits

This program provides students with enhanced concepts and competencies in designing, implementing, and evaluating educational programs for adults in a variety of public and private educational settings. The program provides students with an understanding of how educational, social, political, and economic systems interface within communities. The program seeks to develop individuals who are committed to fostering learning as a lifelong process and in creating learning organizations and societies.

Degree requirements

The MA degree requires completion of at least 30 credits of graduate course work. A minimum of 18 credits must be completed in the major, supplemented by a research course and electives from the major or related subjects. If students choose electives from the major, they are encouraged to

design an area of concentration (9 credits) in either adult or community education. Students must maintain GPAs of at least 3.2 on a 4.0 scale. An exact program is designated to fit students' needs and meet degree requirements.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core requirements			
EDAC	631	Adult and Community Education	3
	632	Org Ad and Comm Ed Progs	3
	634	The Adult as a Learner	3
	635	Strategies for Teaching Adults	3
	638	Prog Planning in Comm Ad Ed	3
	648	The Community Educator	3
Research requirement			
EDPS	640	Research Methods (3)	
	or		
EDST	660	Ethno Res in Ed (3)	
	or		
	697	The Grant Process and Research (3)	
	or		
THES	698	Thesis (1-6)	3-6
9 additional credits in adult and community education or from any other related field.			
Adult Education			
EDAC	629	Psychology of Adult Adjustment (3)	
	655	Cont Ed for Professionals (3)	
	699	Intern in Ad and Comm Ed (2-6)	
EDST	671	Eval of Ed Prgrms (3)	
	680	Staff Dev to Strengthn Curr (3)	
Community Education			
EDAC	644	Collaborative Learning (3)	
	646	Work Vol Comm Agncs (3)	
	681	Managing Community Education (3)	
	699	Intern in Ad and Comm Ed (2-6)	
EDCU	675	Eval Ed Pers Strength Curr (3)	
EDST	671	Eval of Ed Prgrms (3)	9
			30-33 crs

Master of Arts in Curriculum and Educational Technology, 30 credits

This 30-credit program is designed for educators who are seeking to integrate technology into P-12 curriculum and other instructional contexts. Graduates are prepared to become leaders through course work and experiences that focus on development of a conceptual framework in which technology is an embedded aspect of the teaching and learning process and curriculum development strengthens instructional practice. Graduates will be able to develop curriculum and utilize technology in ways that keep pace with the evolving needs of schools and society.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDCU	601	Princ and Proc of Curr Dev	3
EDST	671	Eval of Ed Prgrms	3
	676	Res on Impact Stud Learn	3
EDTE	650	Curr Integ of Lrnng Tech	3
	670	Technology Policy and Pedagogy	3
A *B* or better grade is required in EDST 671.			
3 credits from			
EDCU	610	Elem Schl Curriculum (3)	
	620	Se School Curriculum (3)	
	630	Jr Hi and Mid School Curr (3)	
	640	Altern School Curricula (3)	3
3 credits from			
EDFO	631	Philosphy of Education (3)	
	641	History of American Education (3)	
	651	Educational Sociology (3)	3
			21 crs
In addition to the core courses, students must choose from one of two, 9-credit concentrations.			
Curriculum concentration, 9 credits from			
EDCU	610	Elem Schl Curriculum (3)	
	620	Se School Curriculum (3)	
	630	Jr Hi and Mid School Curr (3)	
	640	Altern School Curricula (3)	
	673	Curriculum Evaluation (3)	
	675	Eval Ed Pers Strength Curr (3)	
EDST	680	Staff Dev to Strengthn Curr (3)	9
			9 crs
Educational technology concentration, 9 credits from			
EDRD	545	Integrat Techn in Lit Prog (3)	
EDTE	585	School Information Infra (3)	
	652	Multi Web Des and Dev for Ed (3)	
	655	Inq and Sim Models in Ed Comp (3)	
	660	Instructi Des and Tech (3)	
	665	Visual and Digital Literacies (3)	
	675	Dist Ed and Distrib Lrnng Tech (3)	
	680	Adv Proj in Dig Media (3)	
	685	Info Sys for Inst and Assess (3)	
	690	Pract in Ed Tech (2-4)	
	699	Indep Study in Ed Tech (1-4)	
MATH	631	Technology Mathematics Teach (3)	
SPCE	631	Comp Tech and Learner Spec Nds (3)	9
			9 crs
			30 crs

6 credits maximum for EDTE 690 and 699 combined.

Master of Arts in Executive Development for Public Service, 30 credits

An interdisciplinary and intercollegiate degree, the executive development program prepares graduates to provide educational services in a variety of social, industrial, health and human services, military, and governmental settings. A broad range of courses related to management and public agency administration are offered to prepare students to function in an executive, managerial, or supervisory capacity within government or not-for-profit agencies.

Program Objectives

- Provide an in-depth examination of society and community.
- Develop an awareness of the role of government in individual lives.
- Emphasize an understanding of human behavior and the differences among individuals comprising public service organizations.
- Teach principles of human relations and communication techniques.
- Provide training in the application of principles of administration and management.
- Provide opportunities to design a unique program of study based on educational expectations and occupational goals.

Degree requirements

The MA degree program requires at least 30 credits of graduate course work. Students must maintain a GPA of at least 3.0 on a 4.0 scale. Students must complete a research requirement. Students must take at least two courses in adult education and at least one course from four of the other seven categories of study:

- adult education, program evaluation, and staff development
- business and related areas
- communications
- computer science and educational technology
- educational administration and supervision
- health science, gerontology, and wellness
- political science
- psychology
- other concentrations approved by the student's advisor

It is strongly recommended that students choose one additional course from adult education, management, communication studies, political science, and psychology to complement their skills or competencies and to sharpen a public service focus.

In order to meet research requirements, students often elect from EDPS 640: Methodology of Educational and Psychological Research; EDST 697: The Grant Process and Research; EDST 660: Ethnographic Research in Education; or POLS 625: Research Methods in Political Science.

Internship

Students may elect a 2- or 3-credit internship with a business or a not-for-profit firm by taking EDAC 699 Internship in Adult and Community Education. This field experience or internship is under the joint supervision of the university (supervisor) and an experienced practitioner in an approved business or nonprofit setting. Permission of the program director and/or department chairperson is required. A total of 6 credits may be earned.

Master of Arts in Secondary Education, 30-36 credits

The Master of Arts in Secondary Education (MASE) extends the professional knowledge of teachers in four core areas: Curriculum, Multicultural Education, Pedagogy, as well as the Social Foundations of Education. The program enables practicing teachers to explore theoretical concepts that relate directly to their instruction to improve instructional effectiveness. Students may pursue additional course work in the six core areas or elect courses through which they enhance their knowledge of content. Thirty credits of graduate courses are required to fulfill the degree requirements. It is possible to complete the Master of Arts in Secondary Education via distance education or online options.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core requirements			
EDCU	601	Princ and Proc of Curr Dev	3
EDST	676	Res on Impact Stud Learn	3
EDTE	650	Curr Integ of Lrnng Tech	3
One course from each of the categories below			
Foundations			
EDFO	620	Soc, Hist, Phil Found Ed (3)	
	621	Education and Ethics (3)	
	631	Philosophy of Education (3)	
	641	History of American Education (3)	
	651	Educational Sociology (3)	3
Multicultural			
EDMU	660	Multcl Multieth Ed in Amer Sch (3)	
	670	Soc and Cultl Min in Amer Ed (3)	3
Pedagogy			
EDJH	512	Inst Strtgs Apprchs JH and MS (3)	
	534	Pract Apprchs-Stud Beh (3)	
EDSE	695	Dyn and Sec School Classroom (3)	3
Choose one of the concentrations below			
Concentration in the Education Core, 12 credits			
Curriculum			
EDCU	620	Se School Curriculum (3)	
	630	Jr Hi and Mid School Curr (3)	
	640	Altern School Curricula (3)	3
3 credits of additional course work from one of the above categories or from other graduate courses offered by the Department of Educational Studies			3
6 credits from minors and electives			6

30 crs

Concentration in Teaching of a Content Area, 12 credits

One curriculum course

Curriculum

EDCU	620	Se School Curriculum (3)	
	630	Jr Hi and Mid School Curr (3)	
	640	Altern School Curricula (3)	3

9 credits in additional course work from a content area (i.e., English, Mathematics, Reading, Social Studies, Gifted and Talented, Special Education, Science, etc.) 9

30 crs

Concentration in Dual Credit Credentials, 18 credits

18 credits in additional course work from a content area (i.e., English, Mathematics, Social Studies, Science, etc.) 18

36 crs

Master of Arts in Student Affairs Administration in Higher Education, 30 credits

This graduate program is designed for those interested in student affairs administration in colleges, universities, and community colleges. The program prepares student affairs educators to work in college and university academic and student support services such as academic advising and support, admissions, career centers, disability services, financial aid, first-year experience, Greek life, health services, housing and residence life, international student programs, judicial affairs, multicultural centers, ombudsperson, orientation, recreation services, registration, religious affairs, service learning, student activities and programs, student life, student voluntary services, and student unions. This program is jointly sponsored by the Department of Educational Studies and the Division of Student Affairs.

Admission requirements
Applicants must meet admission requirements of the Graduate School. In addition to being accepted by the Graduate School for regular admission, applicants must submit an application for the graduate program in Student Affairs Administration in Higher Education that includes responding to two essay questions, submitting a resume, and providing contact information for three references. Completed applications are recommended by February 1. Applicants must interview for the graduate program. The majority of interviews are conducted at Interview Day, generally scheduled in late February. Admission offers are made after these interviews.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDHI	600	Intro to Student-Aff Admin	3
	601	Thyrs Coll Stud Dev: Hi Ed App	3
	602	The American College Student	3
	690	Sem in Student Aff Admin (1-3)	3
	698	Prin and Pract Stud Aff Ad	3
	699	Pract in Stud Aff Admin	3
One course from			
EDCC	640	Community College (3)	
EDHI	610	Issues in Higher Education (3)	
	613	Admini and Fin in Higher Ed (3)	3
Research requirements, 3-6 credits from			
CRPR	698	Creative Project (3 or 6)	
EDPS	640	Research Methods (3)	
	641	Intro Statistical Methods (3)	
	646	Tests and Measurements (3)	
EDST	650	Intro to Qual Res (3)	
	660	Ethno Res in Ed (3)	
	671	Eval of Ed Prgrms (3)	
RES	697	Research Paper (1-3)	
SOC	600	Research Methods: Qual & Quant (3)	
THES	698	Thesis (1-6)	3-6
Electives			3-6

30 crs

MASTER OF ARTS IN TECHNOLOGY EDUCATION, 30 credits

Designed for students whose educational goals are to increase and update their knowledge and skills in technology education. The degree requires 30 graduate credits with courses in technology education, research, and directed electives. This program may be completed entirely through distance education.

Admission requirements
Applicants must meet the admission requirements of the Graduate School.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Professional courses: 15 credits from			
TEDU	510	Technology: Use and Assessment (3)	
	635	Implementing Technology Educ (3)	
	690	History Philosophy of Tech Ed (3)	
	691	Strategies Materials Tech Ed (3)	
	694	Curriculum Development Tech Ed (3)	
	695	Curriculum Eval in Technical Educ (3)	
	698	Seminar in Technology Education (3)	15
Research methods requirements			
TEDU	699	Research in Technical Educ	3
Directed electives (with approval of program advisor)			12

Students who select an optional research concentration of 3-6 credits toward their directed electives choose one of the following:

CRPR	698	Creative Project (3 or 6)
RES	697	Research Paper (1-3)
THES	698	Thesis (6)

30 crs

TEDU 699 is a program requirement and a prerequisite for those pursuing the research concentration.

ALTERNATIVE ROUTE TO A SECONDARY LICENSE IN TECHNOLOGY EDUCATION, 18 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
TDPT	508	Problems in CADD	3
TEDU	635	Implementing Technology Educ	3
	691	Strategies Materials Tech Ed	3
	694	Curriculum Development Tech Ed	3
	697	Problems in Technology Educ (1-3)	3
Directed elective			3

18 crs

Open only to Indiana-licensed educators.

MINOR IN HIGHER EDUCATION (MASTERS DEGREE PROGRAMS), 9 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDCC	640	Community College (3)	
	641	Community College Diversity (3)	
	698	Comm Coll Leader Seminar (3)	
EDHI	601	Thyrs Coll Stud Dev: Hi Ed App (3)	
	602	The American College Student (3)	
	609	Prpng for Prof: Tch Hi Ed (3)	
	610	Issues in Higher Education (3)	
	611	Tchng and Curr Issues in Hi Ed (3)	
	613	Admini and Fin in Higher Ed (3)	
	675	Legal Issues in Hi Ed (3)	9

9 crs

DOCTOR OF EDUCATION IN ADULT, HIGHER, AND COMMUNITY EDUCATION, 91-97 credits

A doctoral program with three major concentrations that prepares graduate students for professions in a variety of educational, governmental, community, business, and industrial settings.

The **adult and community education concentration** emphasizes developing critical skills and conducting research in teaching and learning, program planning, leadership, continuing education, community organizing, organizational management, and evaluation using a social justice framework. Through the courses, learners understand how power issues, especially related to race and diversity, impacts decisions and policies within educational programs.

The **higher education concentration** emphasizes developing skills in higher education administration, organizational and policy development, teaching, curriculum development, and social justice advocacy related to post-secondary institutions.

The **community college leadership concentration** emphasizes developing administrative and teaching skills specifically for community college environments.

Admission requirements
Applicants must meet the admission requirements of the Graduate School. An applicant must also have a master's degree from an accredited college or university, have earned a graduate grade-point average (GPA) of at least 3.2 on a scale of 4.0 at the master's degree level, and have acceptable scores on the Graduate Record Examination (GRE). The program faculty also consider the content of reference letters; the compatibility of the degree program and the applicant's goals/needs; other evidence of advanced graduate academic skills (writing, research, etc.); and relevant career or life experiences/accomplishments. Applicants must speak and write standard English fluently, complete the application process for admission to the doctoral program, and demonstrate commitment to adult, higher, and community education.

General requirements
A minimum of 91 graduate credits beyond the bachelor's degree. At least 48 of the 91 credits, and at least half of required credits in the research requirement, the major concentration, and the cognate must be completed at Ball State. A master's degree is required; previous graduate course work may be counted toward the 91 total credits required in the program. Exact requirements will vary depending on the concentration. Students will earn 57 credits in the Core Courses, Research Courses, and the Major Concentration (Adult and Community Education, Higher Education, or Community College Leadership), and a single cognate of 24 credits or two cognates of 15 credits each. Completion of the dissertation earns 10 credits, at minimum.

Cognate requirements
The doctoral student must have either two cognate fields (or minors) consisting of a minimum of 15 credits each or a single cognate field consisting of a minimum of 24 credits. For the 15-credit cognate, 9 credits must be taken at Ball State University; 12 credits of the 24-credit cognate must be taken at Ball State University. Cognates are offered in higher education; community college leadership; and adult and community education. Cognates are also available in all university major fields of study for the master's, specialist, and doctoral degrees.

Credits transferred from prior graduate study at Ball State University
Per the discretion of the student's doctoral committee, past graduate credits earned from Ball State University may be transferred into the core, research, cognate, and/or major concentration portions of the student's curriculum. In some cases, this may include entire Ball State master's-level programs, totaling up to 42 credits.

Dissertation
Each student is required to write a dissertation on a topic approved by the committee. Students register for DISS 799 for a total of at least 10 dissertation credits.

Doctoral committee
The student's doctoral committee is appointed after the student has been admitted to study for the doctoral degree – usually near the end of the first year of doctoral work. Until the committee has been appointed, the director of the doctoral program or a delegated representative will serve as the primary advisor for the student.

Residence requirement
The residence requirement for this degree is the completion of at least 15 credits in two consecutive semesters of graduate work beyond the master's degree. Summer may be used as one of the semesters for residency purposes.

Additional admission requirements
After admission, the student must begin course work within two years, and all requirements for the degree must be met within seven years from the date of the first course taken after admission to the doctoral program.

Degree requirements

Adult and community education concentration, 91-97 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core required courses, 24 credits			
EDAC	631	Adult and Community Education	3
	634	The Adult as a Learner	3
	635	Strategies for Teaching Adults	3
	648	The Community Educator	3
	655	Cont Ed for Professionals	3
	700	Sem in Ad and Comm Ed	3
	780	Sem Mgng Life Ed Prgrms	3
EDST	697	The Grant Process and Research	3
			24 crs
Research requirements, 21 credits			
EDAC	710	Res in Ad and Comm Ed	3
	730	Pract in Ad and Comm Ed (2-6)	3
EDPS	640	Research Methods	3
	641	Intro Statistical Methods	3
EDST	671	Eval of Ed Prgrms	3
ID	705	Research Colloquium (1-3)	3
3 credits from			
EDST	650	Intro to Qual Res (3)	
	660	Ethno Res in Ed (3)	3
			21 crs
Electives, 12 credits			
Four courses are selected in consultation with the Doctoral Committee			
EDAC	629	Psychology of Adult Adjustment (3)	
	632	Org Ad and Comm Ed Progs (3)	
	638	Prog Planning in Comm Ad Ed (3)	
	640	Found Ad and Comm Ed (3)	
	644	Collaborative Learning (3)	
	646	Work Vol Comm Agncs (3)	
	681	Managing Community Education (3)	
	698	Sem in Ad and Comm Ed (3)	
	699	Intern in Ad and Comm Ed (3)	
EDCC	640	Community College (3)	
EDHI	610	Issues in Higher Education (3)	
EDST	655	Intro Mixed Methods Research (3)	
	660	Ethno Res in Ed (3)	12
Cognate(s)			24 or 30 crs
Dissertation course			
DISS	799	Doctoral Dissertation (1-24)	10
			91-97 crs

Community college leadership major concentration, 91-97 credits

Core required courses, 15 credits			
EDCC	640	Community College	3
	700	Adv Sem Comm College Lead	3
EDHI	610	Issues in Higher Education	3
	613	Admini and Fin in Higher Ed	3
	675	Legal Issues in Hi Ed	3
			15 crs
Research requirements, 24 credits			
EDHI	699	Pract in Stud Aff Admin	3
	710	Adv Res Sem in Higher Ed	3
EDPS	640	Research Methods	3
	641	Intro Statistical Methods	3
EDST	650	Intro to Qual Res	3
	660	Ethno Res in Ed	3
	671	Eval of Ed Prgrms	3
ID	705	Research Colloquium (1-3)	3
			24 crs

Community college leadership major concentration, 18 credits

Required courses, 12 credits

EDCC	641	Community College Diversity	3
	698	Comm Coll Leader Seminar (3)	9

Electives, 6 credits (select three courses from the following)

EDAC	631	Adult and Community Education (3)	
EDFO	610	Women, Gender, and Education (3)	
	660	Comparative Education (3)	
EDHI	601	Thyrs Coll Stud Dev: Hi Ed App (3)	
	602	The American College Student (3)	
	609	Prpng for Prof: Tch Hi Ed (3)	
	611	Tchng and Curr Issues in Hi Ed (3)	
	698	Prin and Pract Stud Aff Ad (3)	
	699	Pract in Stud Aff Admin (3)	
EDST	697	The Grant Process and Research (3)	6

18 crs

Cognate(s) 24 or 30 crs

Dissertation course

DISS	799	Doctoral Dissertation (1-24)	10 crs

91-97 crs

Higher education concentration, 91-97 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*

Core required courses, 15 credits

EDCC	640	Community College	3
EDHI	610	Issues in Higher Education	3
	613	Admini and Fin in Higher Ed	3
	675	Legal Issues in Hi Ed	3
	700	Seminar in Higher Education	3

15 crs

Research requirements, 24 credits

EDHI	699	Pract in Stud Aff Admin	3
	710	Adv Res Sem in Higher Ed	3
EDPS	640	Research Methods	3
	641	Intro Statistical Methods	3
EDST	650	Intro to Qual Res	3
	660	Ethno Res in Ed	3
	671	Eval of Ed Prgrms	3
ID	705	Research Colloquium (1-3)	3

24 crs

Higher education major concentration, 18 credits

Required courses, 9 credits

EDHI	601	Thyrs Coll Stud Dev: Hi Ed App	3
	609	Prpng for Prof: Tch Hi Ed	3
	611	Tchng and Curr Issues in Hi Ed	3

Electives, 9 credits (select three courses from the following)

EDCC	641	Community College Diversity (3)	
	698	Comm Coll Leader Seminar (3)	
EDFO	610	Women, Gender, and Education (3)	
	660	Comparative Education (3)	
EDHI	602	The American College Student (3)	
	698	Prin and Pract Stud Aff Ad (3)	
	699	Pract in Stud Aff Admin (3)	
EDST	697	The Grant Process and Research (3)	9

18 crs

Cognate(s) 24 or 30 crs

Dissertation course

DISS	799	Doctoral Dissertation (1-24)	10 crs

91-97 crs

DOCTOR OF PHILOSOPHY IN EDUCATIONAL STUDIES, 91 credits

This integrated interdisciplinary doctorate addresses changes in the character and delivery of public education, teacher education, and educational research through the study of three related disciplines in Curriculum, Educational Technology, and Cultural and Educational Policy Studies. The program addresses the following critical issues facing education in the 21st century: 1) the increasing role of technology in learning, instructional design, curriculum development, assessment, and pedagogy; and 2) the influence of societal trends in demographics, economics, and politics on the structure and culture of schools. The program serves a variety of professionals who wish to advance their careers in higher education as teacher educators and researchers, as well as curriculum directors, program evaluators and consultants in schools. Graduates are prepared with the necessary knowledge, skills, and understanding to: assist students, teachers, and policy makers to function in a knowledge society; implement teaching and learning strategies; engage in systematic assessment, evaluation, and research; and develop strategies to address the learning needs of changing populations.

Admission requirements
Applicants must meet the admission requirements of the Graduate School. Applicants must also be able to demonstrate their ability to pursue advanced knowledge in each of the three areas of major concentration: Curriculum, Educational Technology, and Cultural and Educational Policy Studies. Applicants must hold a masters degree from an accredited college or university with a grade-point average of at least 3.5 on a 4.0 scale and have acceptable scores on the Graduate Record Examination (GRE).

Degree requirements
The PhD in Educational Studies requires a minimum of 91 credits beyond the bachelor's degree with a 24-credit research core and a 12-credit Educational Studies core consisting of

one course from each of the three disciplinary areas: Curriculum, Educational Technology, and Cultural and Educational Policy Studies. The fourth course is a capstone doctoral seminar. An additional 21 credits in one of the disciplines completes the student's area of specialization, and an additional 12 credits in each of the other disciplines provide for two directed cognates. Completion of the dissertation earns 10 credits.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Research core			
EDPS	640	Research Methods	3
EDST	650	Intro to Qual Res	3
	671	Eval of Ed Prgrms	3
ID	705	Research Colloquium (1-3)	3
			12 crs
12 credits from			
EDPS	641	Intro Statistical Methods (3)	
	642	Analysis of Variance (3)	
	741	Applied Regression Analysis (3)	
EDST	655	Intro Mixed Methods Research (3)	
	660	Ethno Res in Ed (3)	
	670	Adv Theor Qual Rsh (3)	
	676	Res on Impact Stud Learn (3)	
	770	Adv Eval of Ed Prgrms (3)	
SOC	681	Survey Research Methods (3)	12
			24 crs
Educational Studies core			
EDCU	601	Princ and Proc of Curr Dev	3
EDFO	631	Philosophy of Education	3
EDST	735	Seminar in Educational Studies	3
EDTE	650	Curr Integ of Lrnng Tech	3
			12 crs

Area of Major Concentration
Select Curriculum, Educational Technology, or Cultural and Educational Policy Studies.

Curriculum

Required for the Major Concentration:			
EDCU	725	Curr Thry, Proc, and Products	3
	798	Sem in Curr Dev (3-6)	3
6 credits from the following:			
EDCU	610	Elem Schl Curriculum (3)	
	620	Se School Curriculum (3)	
	630	Jr Hi and Mid School Curr (3)	
	640	Altern School Curricula (3)	
	673	Curriculum Evaluation (3)	
	675	Eval Ed Pers Strength Curr (3)	
	690	Problems in Curriculum (1-9)	
	700	Sem Curr Staff Dev Evalu (3)	
	799	Intern in Super and Curr (4)	
EDST	680	Staff Dev to Strengthn Curr (3)	6
9 additional credits from above or approved related courses.			9
			21 crs

Educational Technology

EDTE	585	School Information Infra (3)
	652	Multi Web Des and Dev for Ed (3)
	655	Inq and Sim Models in Ed Comp (3)
	660	Instructi Des and Tech (3)
	665	Visual and Digital Literacies (3)
	670	Technology Policy and Pedagogy (3)
	675	Dist Ed and Distrib Lrnng Tech (3)
	680	Adv Proj in Dig Media (3)
	685	Info Sys for Inst and Assess (3)
	690	Pract in Ed Tech (2-4)
	699	Indep Study in Ed Tech (1-4)
	770	Res and Eval in Ed Tech (3)
	790	Internship in Educational Tech (3-5)

9 credits for this specialization may be from approved related courses.

21 crs

Cultural and Educational Policy Studies

EDAD	797	Adv Policy Sem in Ed Admin (3)
	798	Adv Political Sem in Ed Admin (3)
EDEL	645	Lead and Advocacy in Child Ed (3)
EDFO	610	Women, Gender, and Education (3)
	621	Education and Ethics (3)
	632	Sem in the Phil of Ed (3)
	641	History of American Education (3)
	642	Sem in Hist Ed Thought (3)
	651	Educational Sociology (3)
	652	Sem in Ed Soc (3)
	660	Comparative Education (3)
	699	Ind Study in Found of Ed (1-3)
	700	Cri Ed Pol St Anl (3)
EDMU	660	Multcl Multieth Ed in Amer Sch (3)
	670	Soc and Cultl Min in Amer Ed (3)
	690	Ind Study in Multicul Ed (1-3)
SPCE	701	Sem: Pols and Issues Spec Ed (3)

9 credits for this specialization may be from approved related courses.

21 crs

Program Summary

Research Core	24
Educational Studies Core	12
Area of Major Concentration from above	21
Directed Cognate from above	12
Directed Cognate from above	12
Dissertation	10
	91 crs

DOCTORAL COGNATES, 15 or 24 credits

Cognate in Community College Leadership, 24 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDAC	634	The Adult as a Learner	3
EDCC	640	Community College	3
	641	Community College Diversity	3
	698	Comm Coll Leader Seminar (3)	9

Select two from the following

EDAC	635	Strategies for Teaching Adults (3)	
	648	The Community Educator (3)	
	681	Managing Community Education (3)	
	699	Intern in Ad and Comm Ed (3)	
EDHI	609	Prpng for Prof: Tch Hi Ed (3)	
	610	Issues in Higher Education (3)	
	611	Tchng and Curr Issues in Hi Ed (3)	
	613	Admini and Fin in Higher Ed (3)	
	675	Legal Issues in Hi Ed (3)	
	699	Pract in Stud Aff Admin (3)	
EDST	697	The Grant Process and Research (3)	6

24 crs

Cognate in Curriculum, 15 or 24 credits

This cognate will serve a variety of doctoral programs across campus. In consultation with their cognate advisers, students will select the appropriate 15 or 24 credits from the courses below.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDCU	601	Princ and Proc of Curr Dev (3)	
	610	Elem Schl Curriculum (3)	
	620	Se School Curriculum (3)	
	630	Jr Hi and Mid School Curr (3)	
	640	Altern School Curricula (3)	
	673	Curriculum Evaluation (3)	
	700	Sem Curr Staff Dev Evalu (3)	
	725	Curr Thry, Proc, and Products (3)	
	798	Sem in Curr Dev (3-6)	

15 or 24 crs

Cognate in Educational Technology, 15 or 24 credits

This cognate will serve a variety of doctoral programs across campus. In consultation with their cognate advisers, students will select the appropriate 15 or 24 credits from the courses below.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDTE	585	School Information Infra (3)	
	650	Curr Integ of Lrnng Tech (3)	
	652	Multi Web Des and Dev for Ed (3)	
	655	Inq and Sim Models in Ed Comp (3)	
	660	Instructi Des and Tech (3)	
	665	Visual and Digital Literacies (3)	
	670	Technology Policy and Pedagogy (3)	
	675	Dist Ed and Distrib Lrnng Tech (3)	
	680	Adv Proj in Dig Media (3)	
	685	Info Sys for Inst and Assess (3)	
	770	Res and Eval in Ed Tech (3)	

15 or 24 crs

Cognate in Higher Education, 15 or 24 credits
The study of higher education is intended for students who plan to pursue careers in college and university settings. Students wishing to become college/university presidents, deans, professors, student affairs administrators, and financial aid advisors, for example, will especially benefit from this cognate. See graduate program director for detailed information about cognate requirements.

Cognate in Cultural and Educational Policy Studies
Recommended for doctoral students who contemplate teaching courses or conducting research in the field of educational foundations or who wish to strengthen their professional preparation by broadening their understanding of the bases of educational policy and practice. See graduate program director for detailed information about cognate requirements.

Cognate in Teacher Education
Candidates who intend to work in higher education in teacher preparation are the principal beneficiaries of this cognate. Emphasis is on exposing future college professors to the research in teacher preparation and in studying the variety of field and laboratory experiences. Much of the study can be tailored to individual candidates' needs.

SENIOR HIGH, JUNIOR HIGH, AND MIDDLE SCHOOL EDUCATION LICENSE (grades 6-12): TRANSITION TO TEACHING, 18 credits

18-credit program will allow individuals who have an undergraduate degree in a similar field to become eligible for an Indiana teaching license.

This secondary transition to teaching program covers the following areas grades 5-12: Business, Chemistry, Chinese (Mandarin), CTE: Engineering and Technology, CTE: Family and Consumer Science, Earth/Space Science, English/Language Arts, French, German, Japanese, Journalism, Latin, Life Science (Biology), Math, Physics, Social Studies (all areas), Spanish.

Admission requirements

- Earned baccalaureate degree from regionally accredited college or university in content area of license.
- 3.0 grade-point average (GPA) or 2.5 grade-point average plus five years of work experience in related field.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDFO	620	Soc, Hist, Phil Found Ed	3
EDJH	585	Princ of Tchng in Mid Schl	3
EDPS	600	Adv Educational Psych	3
EDSE	560	Student Tchng: Sec Schl (3-7)	3
	580	Prin of Tchng in Sec School	3

One course from below

Methods Course in Content Area (3)

EDJH	512	Inst Strtgs Apprchs JH and MS (3)	
	534	Pract Apprchs-Stud Beh (3)	
EDSE	695	Dyn and Sec School Classroom (3)	3
			18 crs

CERTIFICATE PROGRAMS

Applicants pursuing only a certificate program will be admitted as nondegree students. A student who completes a certificate, however, can apply these credits to a degree-granting program upon receiving departmental approval. An applicant must complete an application from the Department of Educational Studies and provide two copies of official transcripts from the institution granting the baccalaureate degree and each institution attended for undergraduate and graduate work. Standards for admission:

A. Hold an earned bachelor's degree from a college or university that is accredited by its regional accrediting association.
B. Satisfy one of the following:
   - An undergraduate cumulative grade-point average (GPA) of at least 2.5 on a 4.0 scale (all undergraduate course work, including work completed prior to the baccalaureate degree, is used to calculate the GPA).
   - A cumulative GPA of at least 2.75 on a 4.0 scale in the latter half of the baccalaureate.
   - Students not meeting these criteria may be considered for admission at the discretion of the Department of Educational Studies chairperson.
C. A student who is currently enrolled in a graduate program of study leading to a degree, who wishes simultaneously to pursue this graduate certificate, must complete the appropriate application, available from the Department of Educational Studies.
D. Graduate students enrolled only in certificate programs may not hold graduate assistantships.
E. Students may be enrolled full- or part- time in the certificate program.
F. Completion of a graduate certificate does not guarantee admission into a graduate degree program.

Certificate in Adult Education, 15 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core courses			
EDAC	631	Adult and Community Education	3
	655	Cont Ed for Professionals	3
Select one of the following			
EDAC	634	The Adult as a Learner (3)	
	635	Strategies for Teaching Adults (3)	3
Select two of the following			
EDAC	629	Psychology of Adult Adjustment (3)	
	632	Org Ad and Comm Ed Progs (3)	
	638	Prog Planning in Comm Ad Ed (3)	
	644	Collaborative Learning (3)	
	646	Work Vol Comm Agncs (3)	
	648	The Community Educator (3)	
	681	Managing Community Education (3)	
	698	Sem in Ad and Comm Ed (3)	
EDFO	660	Comparative Education (3)	
EDMU	660	Multcl Multieth Ed in Amer Sch (3)	
EDST	680	Staff Dev to Strengthen Curr (3)	
	697	The Grant Process and Research (3)	
EDTE	660	Instructi Des and Tech (3)	
	665	Visual and Digital Literacies (3)	
	675	Dist Ed and Distrib Lrnng Tech (3)	
or equivalent course to be determined with advisor			6
			15 crs

Certificate in College and University Teaching, 15 credits

Students must earn a *C* (2.0) or better grade in each course and a 3.0 GPA in the program.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Core courses			
EDHI	609	Prpng for Prof: Tch Hi Ed	3
	610	Issues in Higher Education	3
Teaching practicum, 3 credits from			
EDAC	699	Intern in Ad and Comm Ed (2-6)	
EDTE	690	Pract in Ed Tech (2-4)	
ENG	602	English Internship (1-6)	
	633	Practicum in TESOL (1-6)	
HSC	675	Internship in Health Science (3-6)	
ID	601	Tchng Pract in Hi Ed (3)	
JOUR	675	Journalism Teaching Internship (3)	
MUSC	710	Teaching Internship (1-6)	
SCI	790	Intern in Sci Ed (1-4)	3
or equivalent course to be determined with advisor.			
Elective Courses			
6 elective credits from the following:			
Teachers College			
EDAC	634	The Adult as a Learner (3)	
	635	Strategies for Teaching Adults (3)	
	699	Intern in Ad and Comm Ed (2-6)	
EDCC	640	Community College (3)	
EDFO	610	Women, Gender, and Education (3)	
EDHI	611	Tchng and Curr Issues in Hi Ed (3)	
	613	Admini and Fin in Higher Ed (3)	

EDTE	660	Instructi Des and Tech (3)
	690	Pract in Ed Tech (2-4)

Sciences and Humanities

ENG	604	Teaching with Technology (3)
	605	Teaching in English Studies (3-9)
	609	Indiana Writing Project (1-9)
	616	Intro to Theor of Lang Learn (3)
	617	Methods for Teaching ELL (3)
	690	Seminar in Composition (3-18)
HSC	564	Hlth Ed in Clinical Setting (3)
	675	Internship in Health Science (3-6)
MATH	680	Special Studies Teaching Math (1-6)
	690	Curriculum Instruct Math Ed (3)
	697	Math Teacher Leadership 1 (3)
SCI	690	Workshop in Science Education (1-12)
	695	Adv Teach Meth in Sci (3-6)
	696	Curr Iss in Sci Ed (3-6)
	790	Intern in Sci Ed (1-4)

Applied Sciences and Technology

NUR	620	Curricular Designs in Nursing (3)
	622	Teaching in Nursing (3)

Communication, Information, and Media

JOUR	674	College Journalism (3)
	675	Journalism Teaching Internship (3)

Fine Arts

MUSC	710	Teaching Internship (1-6)
MUSE	610	Music Teaching and Learning (3)
	620	Assessment Techniques (3)
	640	Adv Stds Gen Music (3)
	650	Choral Advanced Studies (3)
	660	Instrumental Advanced Studies (3)

Miller College of Business

BED	620	Improvement Instr Technology (3)
	625	Problems and Issues (3)

or equivalent courses to be determined with advisor. 6

15 crs

Certificate in Community College Leadership, 15 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDAC	634	The Adult as a Learner	3
EDCC	640	Community College	3
	698	Comm Coll Leader Seminar	3

Electives, 6 credits from

EDAC	635	Strategies for Teaching Adults (3)
	648	The Community Educator (3)
	681	Managing Community Education (3)
	699	Intern in Ad and Comm Ed (3)
EDCC	641	Community College Diversity (3)
EDHI	609	Prpng for Prof: Tch Hi Ed (3)
	610	Issues in Higher Education (3)
	611	Tchng and Curr Issues in Hi Ed (3)
	613	Admini and Fin in Higher Ed (3)
	675	Legal Issues in Hi Ed (3)
	699	Pract in Stud Aff Admin (3)
EDST	697	The Grant Process and Research (3) 6

15 crs

Certificate in Community Education, 15 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDAC	631	Adult and Community Education	3
	648	The Community Educator	3

Select two of the following

EDAC	638	Prog Planning in Comm Ad Ed (3)
	646	Work Vol Comm Agncs (3)
	681	Managing Community Education (3) 6

Select one of the following

EDAC	629	Psychology of Adult Adjustment (3)
	632	Org Ad and Comm Ed Progs (3)
	681	Managing Community Education (3)
	698	Sem in Ad and Comm Ed (3)
EDST	697	The Grant Process and Research (3) 3

15 crs

Certificate in Computer Education, 15 credits

The Certificate in Computer Education will develop technical knowledge, skills, and dispositions for educators to teach computer education courses and to become teacher-leaders with technology in the instructional contexts where they teach. The certificate program would be a 15 credit graduate program available online.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*

15 credits from

EDTE	650	Curr Integ of Lrnng Tech (3)
	655	Inq and Sim Models in Ed Comp (3)
	660	Instructi Des and Tech (3)
	665	Visual and Digital Literacies (3)
	670	Technology Policy and Pedagogy (3)
	675	Dist Ed and Distrib Lrnng Tech (3)
	685	Info Sys for Inst and Assess (3) 15

15 crs

Certificate in Curriculum, 12 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDCU	601	Princ and Proc of Curr Dev	3
	673	Curriculum Evaluation	3

Select 2 courses from the following

EDCU	610	Elem Schl Curriculum (3)
	620	Se School Curriculum (3)

	630	Jr Hi and Mid School Curr (3)	
	640	Altern School Curricula (3)	6
			12 crs

This program is offered on-line only.

Certificate in Diversity Studies, 15 credits

Students must earn a *C* (2.0) or better grade in each course and a 3.0 GPA in the program.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDMU	660	Multcl Multieth Ed in Amer Sch	3
	670	Soc and Cultl Min in Amer Ed	3
3 credits from			
EDFO	631	Philosophy of Education (3)	
	or		
	641	History of American Education (3)	
	or		
	651	Educational Sociology (3)	3
3 credits from			
EDFO	610	Women, Gender, and Education (3)	
	or		
	620	Soc, Hist, Phil Found Ed (3)	
	or		
	621	Education and Ethics (3)	3
3 credits from the list above			
Elective (3)			
	or		
EDMU	690	Ind Study in Multicul Ed (1-3)	3
			15 crs

Certificate in Middle-Level Education, 15 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDCU	630	Jr Hi and Mid School Curr	3
EDJH	512	Inst Strtgs Apprchs JH and MS	3
	534	Pract Apprchs-Stud Beh	3
EDPS	628	Adolescent Development	3
EDRD	620	Disc Integ Lit in El Classroom	3
			15 crs

Certificate in Qualitative Research in Education, 12 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDST	650	Intro to Qual Res	3
	655	Intro Mixed Methods Research	3
	660	Ethno Res in Ed	3
	670	Adv Theor Qual Rsh	3
			12 crs

EDUCATION: ADULT AND COMMUNITY (EDAC)

629 Psychology of Adult Adjustment (3) The bases for certain adult behavior patterns and the problems involved in attempts to effect behavioral changes in adults.
Open only to graduate students.

631 Adult and Community Education (3) Overview of adult and community education including the concepts, processes, and trends in both public and private programs at the local, state, national, and international levels. Provides a basis for further study in the adult and community education graduate program.

632 Organizing Adult and Community Education Programs (3) Administration and leadership of adult and community education programs and organizations. Theoretical approaches and practical skills are emphasized.

634 The Adult as a Learner (3) An overview of adult learning. Theories, approaches to learning, and current research for the effective education of adults.

635 Strategies for Teaching Adults (3) Focus on teaching strategies, techniques, and methods suitable for adult learners that are supported by research and tested in practice, including preparation of model teaching units, lesson plans, or activities; testing and evaluation procedures; and learner-assessment techniques.

638 Program Planning in Community and Adult Education (3) Various approaches and models of program planning are examined with respect to their use in the practice of adult and community education.

640 Foundations of Adult and Community Education (3) An exploration of the foundations of adult and community education with attention to key figures, issues, institutions, movements and programs, including consideration of the relationships between adult and community education's historical developments and prevailing intellectual, social, economic, and political conditions.

644 Collaborative Learning in Adult, Higher, and Community Education (3) A recursive experience of the collaborative learning process, such that the participants will learn the collaborative process in a collaborative manner. Prepares learners to serve as facilitators of collaborative learning groups in their professional practice.

646 Working with Volunteers in Community Agencies (3) An examination of the roles of volunteers within community agencies, including recent developments such as service learning and corporate volunteerism. A study of research and effective practice in working with volunteers.

648 The Community Educator (3) The structure, purpose, and processes of community education development with emphasis on the development of skills and competencies required of a community education coordinator.

655 Continuing Education for Professionals (3) A survey of the theoretical and research literature related to continuing education for professionals. A central focus includes an examination of the role of the educator in providing and managing continuing professional education.

681 Managing Community Education (3) Skills and techniques essential to the management of community education projects. Emphasizing supervision and managing community education projects.

690 Independent Study in Adult or Community Education (1-6) Exploration of a segment of adult or community education under the direction of an appropriate faculty member.

Prerequisite: permission of the program director, instructor, or department chairperson.

A total of 6 credits may be earned.

698 Seminar in Adult and Community Education (3) Group or individual investigations of problems in adult and community education such as adult basic education, education about or for the aging, development of community leadership, and learning in the work place.

Prerequisite: admission to advanced graduate degree programs or permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

699 Internship in Adult and Community Education (2-6) A field experience jointly supervised by the university and a competent practitioner in approved settings in general adult education, correctional education, social gerontology, university extension and continuing education, community services, community development, and community education.

Prerequisite: permission of the program director or department chairperson.

A total of 6 credits may be earned.

700 Seminar in Adult and Community Education (3) A forum for graduate students of advanced standing to examine contemporary issues, challenges, trends, and ambiguities in the study and effective practice of adult and community education.

Prerequisite: permission of the department chairperson or program director.

Open only to doctoral students in adult, higher, and community education and other advanced graduate students.

710 Research in Adult and Community Education (3) Develop and strengthen research competencies and critique approaches to research in adult and community education.

Prerequisite: permission of the department chairperson or program director.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

730 Practicum in Adult and Community Education (2-6) Supervised, individualized experience in adult and community education. Emphasis is on gaining experience in the application of theoretical principles to practice.

Prerequisite: admission to advanced graduate degree programs or permission of the program director or department chairperson.

A total of 6 credits may be earned.

Open only to doctoral candidates in adult, higher, and community education.

780 Seminar in Managing Lifelong Education Programs (3) Examines the cultures and climates of organizations, current leadership theories, and practices in the management of adult and community education.

Prerequisite: permission of the department chairperson or program director.

Open only to doctoral students in adult, higher, and community education; other advanced graduate students by permission.

EDUCATION: COMMUNITY COLLEGE (EDCC)

640 The Community College (3) Study of the characteristics and functions of community and junior colleges in American higher education emphasizing role, governance, faculty, curriculum, students, and finance in two-year colleges.

Open only to community college, higher education, and adult/community education students, except by permission of the department chairperson.

641 Community Colleges and Diversity (3) Designed to focus on the forms and types of diversity that shape community college environments from the perspectives of students, faculty, and administrators and to explore the implications this diversity has for pedagogical choices, organizational structures, advising strategies, and resource allocations.

Open only to community college, higher education, and adult/community education students, except by permission of the department chairperson.

698 Community College Leadership Seminar (3) Investigation of selected topics critical to practice in community college leadership.

A total of 12 credits may be earned, but no more than 3 in any one semester or term.

Open only to community college, higher education, and adult/community education students, except by permission of the department chairperson.

700 Advanced Seminar in Community College Leadership (3) An advanced seminar for doctoral students to investigate current problems and issues in community colleges, including an examination of leadership theories.

Open only to doctoral students in adult, higher, and community education majoring in community college leadership.

EDUCATION: CURRICULUM (EDCU)

601 Principles and Procedures of Curriculum Development (3) Curriculum development applicable to all levels of the school system, from early childhood through secondary education. The effect and relevance of curriculum practices; major groups and individuals influencing curriculum; trends and current curriculum changes; approaches to evaluation of curricular experiences; and the role of pupils, teachers, administrators, scholars, parents, and other groups in shaping curricula. Emphasizes current literature and research.

610 The Elementary School Curriculum (3) The formal and social school-related experiences of elementary school pupils in the light of the purposes of the school. Current elementary school curricular practices and alternatives in the light of research in child development, principles of learning, and current culture.

620 The Secondary School Curriculum (3) The cognitive, social, aesthetic, and physical experiences of secondary school students in the light of the purposes of the school. Present secondary school curricular practices and alternatives in relation to research on socialization, cognitive development, and aesthetics as they relate to current culture.

630 The Junior High and Middle School Curriculum (3) Examines several curricular practices designed to produce intended outcomes with students age ten to fifteen. Studies current research, theory, and practices. Develops curricula designed for specific student populations.

640 The Alternative School Curricula (3) Patterns, theories, practices, and research related to unusual curricular programs developed as options or alternatives to standard approaches for educating general or special groups in elementary and secondary schools. Students develop curricula for alternative programs.

673 Curriculum Evaluation (3) Students examine and apply approaches to the evaluation of various dimensions of the curriculum planning cycle in a Pre K-12 context in terms of their probable effect on learners and their ability to constrain or enable curricular decision-making for the values of democracy, equity, and diversity.

Prerequisite: EDCU 601.

675 Evaluation of Educational Personnel to Strengthen Curriculum (3) Study of the theory and practice of personnel evaluation. Students will complete evaluations of adults working in teaching/learning relationships with others. Students will use an evaluation model designed to improve performance of those evaluated. Students will also experience being evaluated.

690 Problems in Curriculum (1-9) Specific problems in curriculum development and evaluation are studied, usually as field study.

A total of 9 credits may be earned.

700 Seminar in Curriculum and Staff Development and Evaluation (3) Students will analyze, with faculty and other advanced graduate students, previous formal study, current research, professional publications, and their own field experiences in curriculum, staff development, and evaluation of programs and personnel. Students will develop a set of theory statements that embody their conclusions.

Prerequisite: one course from EDCU 601, 610, 620, 630; and one course from EDCU 675; EDST 671, 680; or permission of the department chairperson.

725 Curriculum Theory, Process, and Products (3) An examination of the theory of human behavior as it relates to study of the development and evaluation of curriculum in formal education. Students will examine existing divergent theories of curriculum and will practice curriculum-theory building.

798 Seminar in Curriculum Development (3-6) Development of a conceptual framework based on general systems theory for guiding, developing, and evaluating curriculum-improvement programs.

Prerequisite: EDCU 610 or 620.

A total of 6 credits may be earned.

799 Internship in Supervision and Curriculum (4) A field experience under the supervision of the university and an experienced practitioner in the duties and responsibilities of a general supervisor and curriculum specialist. The intern will be assigned full-time to a general supervisor or general curriculum specialist and will participate full-time in the activities of a school system.

Prerequisite: permission of the department chairperson.

EDUCATION: FOUNDATIONS (EDFO)

610 Women, Gender, and Education (3) Explores some of the major themes in the study of women and education and samples a variety of the methodologies used by historians, sociologists, philosophers, psychologists, anthropologists, and others conducting research in the area.

620 Social, Historical, and Philosophical Foundations of Education (3) An academic study of the complex relationship between schools and society through the disciplines of sociology, history, and philosophy of education. The goal is to develop disciplines of normative, interpretive, and critical perspectives on education.

Open only to postbaccalaureate licensing students.

621 Education and Ethics (3) Combines moral theory and applied ethics to consider various questions related to education and classroom practice: respect for student agency; the professional autonomy and responsibility of teachers; the interaction among teachers, students, and administrators; and teachers as agents for social improvement.

Prerequisite: permission of the department chairperson.

Open to all graduate students in good standing.

631 Philosophy of Education (3) School practices and educational ideas as they have been described and analyzed by philosophers of education.

632 Seminar in the Philosophy of Education (3) Specific and specialized study of philosophy of education. Conduct specialized scholarly work under the guidance of the professor, encouraging deeper understanding of the theoretical presuppositions of school practices.

Prerequisite: EDFO 631.

641 History of American Education (3) The history of American educational thought and its influence upon institutional schooling from the Puritans to the present.

642 Seminar in the History of Educational Thought (3) Interplay between central ideas in education that have stood the test of time and the broader intellectual climate. Conduct specialized scholarly work under the guidance of the professor.

Prerequisite: EDFO 641.

651 Educational Sociology (3) The effect of the larger American society upon the education of the student; the school as one setting where young persons grow into maturity; the school as a social system; the role of schools in a democratic society.

652 Seminar in Educational Sociology (3) Specific and specialized study of educational sociology. Conduct specialized scholarly work under the guidance of the professor, encouraging deeper understanding of the dynamic relationships between the institutional school and the larger society.

Prerequisite: EDFO 651.

660 Comparative Education (3) Present-day educational systems in selected nations; how they reflect historical, political, economic, and cultural differences.

699 Independent Study in Foundations of Education (1-3) Independent study and research in the foundations of education (excluding psychological foundations). Topics and activities to be chosen in consultation with an instructor competent in the topic to be studied.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

700 Critical Educational Policy Studies and Analysis (3) Explore and analyze the theoretical foundations of public policies related to education within the state, federal, non-government, not-for-profit, and philanthropic settings. Students will examine the contexts and processes (i.e., formation, adoption, and implementation) within which public educational policies arise and use meta-analysis to suggest alternative interpretations related to stated goals and outcomes.

Prerequisite: EDFO 610 or 620 or 621 or 631 or 641 or 651 or 660 or 699.

Open only to students enrolled in a doctoral program.

EDUCATION: HIGHER (EDHI)

600 Introduction to Student-Affairs Administration (3) Foundations of student affairs work, the practical functioning of the programs and services in student affairs, and the relationship of student affairs to the total college or university administration.

Open only to higher education students, except by permission of the department chairperson.

601 Theories of College Student Development: Higher Education Application (3) Introduction to the major theories of college student development, application of theoretical approaches to student needs with implications for student affairs administrators.

Open only to higher education students, except by permission of the department chairperson.

602 The American College Student (3) Characteristics and activities of contemporary college students, patterns of interaction between students and other segments of the campus and the larger society, and effects of the college experience upon students. Limited to students pursuing programs in higher education, except by permission of the department chairperson.

609 Preparing for the Professoriate: Teaching in Higher Education (3) Designed for graduate students, junior faculty, adjunct and part-time faculty in pursuit of the knowledge and skills necessary for quality undergraduate teaching. In addition, students will explore the relationship between teaching, research, and service responsibilities inherent in the professoriate.

610 Issues in Higher Education (3) A critical examination of the American system of higher education including such topics as diversity of purpose, clientele served, nature of institutions, contemporary problems of financing, organization, governance, and administration of colleges, universities, and other institutions.

611 Teaching and Curriculum Issues in Higher Education (3) Principles, issues, and rationales of curricula in higher education including relationships among general, specialized, and professional programs. A study of the varied responsibilities of faculty members in colleges with particular

emphasis on the instructional role including teaching skills and strategies.

Prerequisite: EDHI 609 or permission of the department chairperson.

613 Administration and Finance in Higher Education (3) Study of the theories and practices in administration, governance, and financing of colleges and universities in the United States.

Prerequisite: EDHI 610 or permission of the department chairperson.

659 Independent Study in Higher Education (3) Exploration of a topic in higher education under the direction of an appropriate faculty member.

A total of 12 credits may be earned, but no more than 3 in any one semester or term.

675 Legal Issues in Higher Education (3) Designed to engage students in an in-depth investigation into current legal issues and their impact on the field of higher education.

690 Seminar in Student Affairs Administration (1-3) Investigation of selected topics critical to practice in student affairs administration.

A total of 12 credits may be earned, but no more than 3 in any one semester or term.

698 Principles and Practices of Student Affairs Administration (3) Provides for the development of a personal philosophy of student affairs administration through exposure to the various roles assumed by student affairs professionals; through broadened awareness of the several trends, structures, and principles that affect student affairs work; and through the competencies considered essential to successful professional practice. Uses case studies to investigate current practices.

Open only to higher education students, except by permission of the department chairperson.

699 Practicum in Student Affairs Administration (3) Experience in one branch of student affairs (admissions, career services, dean of students, financial aid, student activities, recreation, minority related areas).

A total of 12 credits may be earned, but no more than 3 in any one semester or term.

Open only to students in the student-personnel program or by permission of the department chairperson.

700 Seminar in Higher Education (3) A forum for graduate students of advanced standing to critically examine higher education research with a special focus on policy and practice implications.

Open only to doctoral students in adult, higher, and community education and other advanced graduate students.

710 Advanced Research Seminar in Higher Education (3) Prepares doctoral students to understand the most recent published research in the field of Higher Education, to produce and disseminate high-quality research, and to understand the publishing process. Designed to elevate research methodological skills as applied to projects such as the dissertation, referenced journal articles, and book chapters.

Open only to advanced doctoral students (Adult, Higher, and Community Education Doctoral program and Higher Ed and Community College Leadership program).

EDUCATION: JUNIOR HIGH/MIDDLE SCHOOL (EDJH)

512 Instructional Strategies and Approaches in Junior High and Middle Schools (3) Circumstances affecting instruction in junior high and middle schools are analyzed. Students are encouraged to be creative and effective in structuring and developing instructional methods, techniques, units, materials, and evaluation procedures appropriate for junior high and middle school students.

534 Classroom Management: Practical Approaches to Improving Student Behavior (3) Assists secondary teachers in establishing effective systems of classroom management in middle, junior, and senior high school settings. Emphasizes practical skills and procedures for preventing or remedying disruptive behavior by secondary students and ways to create a positive environment for learning.

Not open to students who have credit in EDSE 434.

585 Principles of Teaching in the Middle School (3) Combines the theory and practice of teaching at the middle school level. Includes the study of interdisciplinary planning and instructional strategies, cooperative learning, technology, classroom management, and current curricular issues. Intensive in-school assignments, observations, participation, and direct contact with adolescents required.

Prerequisite: permission of the department chairperson.

Parallel: EDSE 580.

Open only to secondary education students in good standing.

601 Field-Based, In-service Concerns in Junior High/Middle School Education (1-3) A field-based course designed for practicing professionals and scheduled by request for a specified number of credits. Provision is made to study such professional concerns in junior high/middle school education as general classroom management, common teaching skills, organization, cultural and ethnic considerations, and interpersonal relationships. The course is not designed to address special problems in content areas.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

676 Research in Junior High/Middle School Education (3) Investigation, summary, and interpretation of research in junior high/middle school education. Each student will write and submit a research report to fulfill course requirements.

Not open to students who have credit in EDEL 676 or EDST 676.

690 Practicum in Junior High/Middle School Education (1-9) Study and analysis of specific classroom procedures in a school setting as related to a specific education problem offering perspective on the entire educational task of the junior high/middle school. Offered credit/no credit only.

Prerequisite: permission of the department chairperson.

A total of 9 credits may be earned.

699 Independent Study in Junior High/Middle School Education (1-3) Independent study and research in junior high/middle school education. Topics and activities to be chosen in consultation with an instructor competent in the topic to be studied.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

EDUCATION: MULTICULTURAL (EDMU)

502 Global and Multicultural Information and Materials: Pre K-12 (3) Emphasis on examination of cultural information, materials, and Internet sites for children and young adults. Projects useful for teachers, library media personnel, and caregivers are developed. Recent trends and applications in realistic settings are examined.

Not open to students who have credit in EDMU 302.

660 Multicultural and Multiethnic Education in American Schools (3) Analyzes cultural and ethnic influences on the total operation of American schools. Emphasizes learning and classroom environment and planning, including cultural and ethnic considerations. Teacher attitudes, administrative concerns, student perceptions, and behaviors of all school-related personnel are studied in terms of the effect of prejudicial attitudes on the learning environment.

670 Social and Cultural Minorities in American Education (3) Analysis of lifestyles of different cultural groups in terms of children's strengths useful in schools and other institutions. Emphasizes flexible attitudes, bilingualism/biculturalism, creativity, improvisation, adjustments, and family structures. A variety of approaches to instruction are considered in the study of different ethnic groups.

Prerequisite: EDMU 205 or 660.

690 Independent Study in Multicultural Education (1-3) Independent study and research in a specialized topic within the field of multicultural education.

Prerequisite: EDMU 660; permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

EDUCATION: SECONDARY (EDSE)

534 Classroom Management: Practical Approaches to Improving Student Behavior (3) Assists secondary teachers in establishing effective systems of classroom management in middle, junior, and senior high school settings. Emphasizes practical skills and procedures for preventing or remedying disruptive behavior by secondary students and ways to create a positive environment for learning.

Not open to students who have credit in EDSE 434.

550 Introduction to Secondary Education (3) Educational concepts, organizational structures, and current practices in secondary schools are introduced and analyzed. The conceptual framework of the university guides the exploration of curriculum, policy, working conditions, and assessment. Students construct a digital portfolio based on Indiana professional standards. Students also develop habits of reflection, inquiry, and professional judgment.

Not open to students who have credit in EDSE 150.

560 Student Teaching: Secondary School (3-7) Required for the standard license in secondary education. Involves a full-day assignment for ten weeks in an approved secondary school. Offered credit/no credit only.

Prerequisite: admission to student teaching; permission of the department chairperson.

Parallel: EDSE 465.

A total of 7 credits may be earned.

Open only to secondary education students in good standing.

580 Principles of Teaching in the Secondary School (3) Combines theory and practice of teaching at the secondary level. Includes the study of instructional strategies, evaluation, curriculum development and organization, learning styles, technology, legal issues, and classroom management. Intensive in-school assignments, observations, participation, and direct contact with adolescents required.

Prerequisite: permission of the department chairperson.

Parallel: EDJH 585.

Not open to students who have credit in EDSE 380.

Open only to secondary education students in good standing.

600 Workshop in Secondary Education (2-6) New developments in secondary education as they arise or as they become especially significant to practicing secondary school teachers. Although flexible, each workshop will examine a predetermined common area of concern.

A total of 6 credits may be earned.

601 Field-Based, In-service Concerns in Secondary Education (1-3) A field-based course for practicing professionals, scheduled by request for a specified number of credits. Professional concerns in secondary education such as general classroom management, common teaching skills, organization, cultural and ethnic considerations, and interpersonal relationships. The course is not designed to address special problems in content areas.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

668 Development of Secondary Programs for the Gifted and Talented (3) Knowledge and competencies necessary for

the secondary teacher or program coordinator to develop, implement, and evaluate secondary programs for gifted and talented students.

689 Seminar in Contemporary Education Issues (3-6) Group or individual investigation of various problems in secondary education.

A total of 6 credits may be earned.

690 Practicum in Secondary Education (1-9) Study and analysis of specific classroom procedures in a school setting as they relate to a specific educational problem and as they provide perspective on the entire educational task of the secondary school. Offered credit/no credit only.

Prerequisite: permission of the department chairperson.

A total of 9 credits may be earned.

695 Dynamics of the Secondary School Classroom (3) Designed to promote knowledge and skill in diagnosing instructional group structures, solving urgent problems of educational practice, and developing guidance and leadership proficiency in the classroom.

699 Independent Study in Secondary Education (1-3) Independent study and research in secondary education. Topics and activities to be chosen in consultation with an instructor competent in the topic to be studied.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

EDUCATION: STUDIES (EDST)

650 Introduction to Qualitative Research (3) Overview of qualitative research methods from ethnography to hermeneutics.

655 Introduction to Mixed Methods Research (3) Examines the historical roots of mixed-methods research, its philosophical and theoretical developments, designs, and characteristics, and approaches to data analysis and interpretation. Students will collectively and individually explore emerging conceptions of mixed methods research, plan and conduct a mixed-methods class project, and write a scholarly report.

Prerequisite: EDPS 640 or EDST 650 or equivalent course or permission of the instructor.

660 Ethnographic Research in Education (3) Principles and techniques for collecting important and accurate data using methods that are systematic, intelligent, and dependable when the data or group composition do not meet the assumptions on which statistics are based.

670 Advanced Theories of Qualitative Research (3) Students will gain a comprehensive understanding of (1) the interpretive traditions, specifically, phenomenology, hermeneutics, symbolic interactionism, dramaturgy and dramatism, narrative research, ethnography, and ethnomethodology; (2) traditions of deep structure, e.g., semiotics and structuralism; (3) the critical traditions, e.g., critical theory, historical materialism, feminism; and (4) traditions of the "post," e.g., postmodernism, poststructuralism, and postcolonialism. Further, students will learn about and experience viewing qualitative data from different theoretical perspectives.

Prerequisite: EDST 650 or equivalent or permission of the instructor.

671 Evaluation of Educational Programs (3) Experience in conducting a program evaluation. Students will examine different theoretical models of evaluation and will evaluate an educational program by constructing and administering instruments, analyzing the data gathered, determining the worth of the program, writing an evaluation report, and presenting the report to the personnel of the program evaluated.

676 Research on Impacting Student Learning (3) Investigation, summary, and interpretation of research conducted to measure impact on P-12 student learning. Each student will write and submit a research report.

Not open to students who have credit in EDEL 676 or EDJH 676.

680 Staff Development to Strengthen Curriculum (3) Study of the theories, practices, and research on staff development. Students will design, conduct, and evaluate a staff development program with three or more adults working in teaching/learning situations.

697 The Grant Process and Research (3) A background for reading and writing research and related grant proposals and final reports of the type encountered by practitioners in adult education, community education, curriculum, executive development, gerontology, and related subjects. Includes information and practice in reading and evaluating research proposals and reports, finding potential sources of grant support, reading and interpreting grant program guidelines, and writing a grant or research proposal in one of the academic pursuits listed here. Individual and group instructional procedures will be used.

735 Seminar in Educational Studies (3) A forum for graduate students of advanced standing to critically examine state of the art research in the areas of curriculum, educational technology, and social foundations of education.

Open only to doctoral students in educational studies and other advanced graduate programs.

770 Advanced Evaluation of Educational Programs (3) Systematic methods for collecting data descriptive of outcomes of school programs and for assigning value to the data. Emphasizes theory and design of program evaluation, criteria for determining quality in instrumentation of program evaluation, preparing program-evaluation reports, the politics of program evaluation, and fieldwork directly in a program-evaluation project.

Prerequisite: EDST 671; EDPS 640 or 646 or the equivalent.

EDUCATION: SUPERVISION (EDSU)

650 Supervision of Instruction (3) Analyzes supervisory functions of the superintendent, supervisor, and principal. Lays the philosophical basis for supervision at all levels of the school system from early childhood through secondary education.

EDUCATION: TECHNOLOGY (EDTE)

585 School Information Infrastructures (3) Explores the core technologies and models for school information infrastructures and networks for K-12 and teacher education contexts. Examines hardware and software solutions for designing computing labs and digital media studios for K-12 teachers and students. Introduces basic local area network technologies and Web-based models relevant to educational contexts.

Prerequisite: EDTE 650 or permission of the department chairperson.

Not open to students who have credit in EDTE 485.

650 Curricular Integration of Learning Technology (3) Emphasizes the theory, design, and integration of digital media and educational computing into K-12 curricula. Students develop instructional units that integrate national and state educational technology and curriculum standards.

652 Multimedia Web Design and Development for Education (3) Emphasizes the design and development of Web-based multimedia modules into K-12 curricula. Explores the development of interactive multimedia. Introduces Web-authoring tools. Develops Web-based interactive instructional units.

Not open to students who have credit in EDTE 352.

655 Inquiry and Simulation Models in Educational Computing (3) Emphasizes the theory, design, and curricular integration of data-driven computer applications for inquiry, simulation, and problem solving. Explores construction of databases, simulations, and similar interactive applications for teaching and learning.

Prerequisite: EDTE 650 or permission of the department chairperson.

Not open to students who have credit in EDTE 355.

660 Instructional Design and Technology (3) Explores practical and experimental applications of interactive computing for teaching and learning. Introduces principles and models of instructional design. Designs and develops educational projects based on an instructional design model.

665 Visual and Digital Literacies (3) Examines the relationships of visual and digital literacy theories to instruction and learning in both formal and informal contexts. Students construct texts in the non-traditional forms, such as digital video, concept mapping, and podcasting. Critically examines alternative literacies or social contexts for learner engagement and empowerment via digital media.

670 Technology Policy and Pedagogy (3) Examines the social, ethical, legal, and human issues surrounding the use of technology in PK-12 schools and the policies that affect how technology is realized in schools and their surrounding communities. Addresses the leadership roles necessary for developing enabling conditions for technology integration.

675 Distance Education and Distributed Learning Technology (3) Examines the historical, theoretical, technological foundations of distance and flexible education. Students investigate the changing landscape of distance education as well as the increased educational and instructional opportunities for learners and teachers. Students develop instructional plans for teaching at a distance and policy recommendations for implementing distance education programs.

680 Advanced Projects in Digital Media (3) Emphasizes experience with the design and production of high-end interactive multimedia applications for education. Explores emergent digital technologies.

Prerequisite: EDTE 660 or permission of the department chairperson.

Not open to students who have credit in EDTE 480.

685 Information Systems for Instruction and Assessment (3) Examines use and integration of information systems in K-12 and higher education settings. Explores instructional and administrative technologies for assessment, curriculum management, and student information. Examines strategies for using such technologies for evidence-based curricular improvement. Defines leadership responsibilities in planning, deployment, and professional development.

Prerequisite: EDTE 670 or permission of the department chairperson.

690 Practicum in Educational Technology (2-4) Application of technology in classroom or schools with supervision involving professors, classroom teachers, and administrators as instructional mentors. Topics to be chosen in agreement with professor and teacher.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 4 in any one semester or term.

699 Independent Study in Educational Technology (1-4) Independent study in educational technology. Topic to be chosen in consultation with instructor.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned, but no more than 4 in any one semester or term.

770 Research and Evaluation in Educational Technology (3) Research seminar on educational technology. Explores literature on emergent topics in educational technology.

Students conduct empirical research on a theory-driven innovation and evaluate it in teaching and learning contexts.

Prerequisite: permission of the department chairperson.

790 Internship in Educational Technology (3-5) Supervised professional internship in K-12, higher education, government, or corporate setting.

Prerequisite: doctoral standing; permission of the department chairperson.

A total of 7 credits may be earned, but no more than 5 in any one semester or term.

FAMILY AND CONSUMER SCIENCES: EDUCATION (FCED)

692 Family and Consumer Sciences Education Program Implementation (3) Standards for and history and philosophy of family and consumer sciences education (FCED) are featured. Techniques for implementing career and technical FCED programs are included. Also incorporates strategies for developing leadership, youth organizations, public relations, and professionalism.

Not open to students who have credit in FCED 492, except by permission of the department chairperson.

693 Curriculum in Family and Consumer Sciences (3) A study of curriculum components. Features the principles of curriculum development and implementation in family and consumer sciences education. Existing curriculum standards at the state and national level are utilized in curriculum development.

Open only to students with an FCED teaching license or by permission of the department chairperson.

694 Assessment and Evaluation in Family and Consumer Sciences Education (3) Assessment used by effective teachers in FCS education. Use of forms such as checklists, rubrics, scorecards, and other measures are explored. Emphasizes ways to incorporate assessment that promotes student learning and develops student confidence. Includes means of assessment for unique students and/or teaching/learning settings.

Open only to students with an FCED teaching license or by permission of the department chairperson.

695 Contemporary Methods for Teaching Family and Consumer Sciences Education (3) Methods and techniques used by effective family and consumer sciences education teachers. Includes ways to incorporate methods that promote student directed learning, decision making, and the development of responsible citizens. Emphasizes methods that create an appropriate teaching/learning classroom and develop a community of learners.

Open only to students with an FCED teaching license or by permission of the department chairperson.

FAMILY AND CONSUMER SCIENCES: FAMILY AND CHILD (FCFC)

680 Family Problems (3) Survey of the major problems experienced by families. Emphasizes whole-family functioning rather than individual functioning. Preventive measures, treatment approaches, and appropriate agencies and services are identified.

TECHNOLOGY: DEPARTMENT (TDPT)

508 (TMFG 508) Problems in Computer-Aided Design and Drafting (3) Emphasizes two- and three-dimensional modeling applications in design and manufacturing using a CAD system.

Prerequisite: a technical drawing course or permission of the department chairperson.

530 Statistical Quality Control (3) Emphasis on application of statistics to quality control. Includes hypothesis testing, statistical process control, measurement systems analysis, tolerance analysis, multivariate analysis, sampling plans, and review of current quality standards.

563 Design of Experiments (3) Extensive study of experimentation in organizational research. Includes, but is not limited to, single-factorial, multi-factorial, robust design, and Design for Six Sigma (DFSS).

Prerequisite: TDPT 530.

585 (TMFG 585) Inquiries into 3D Prototyping (3) An introduction to an inquiry-based, iterative approach to three-dimensional laser scanning, rapid prototyping technologies, laser machining, and CNC machining; students use R & D methods to produce and refine digital 3-D product designs and manufacture prototypes.

Not open to students who have credit in TDPT 280.

595 (TMFG 595) Research into Green Prototyping and Upcycling (3) Students take a research-based approach to designing and creating prototypes that promote environmental sustainability using laser machining and 3D printing.

Not open to students who have credit in TDPT 495.

TECHNOLOGY: EDUCATION (TEDU)

510 Technology: Use and Assessment (3) Analyzes the use and assessment of technology. Topics include usability engineering, usability testing, user surveying, technology assessment techniques, environmental impact assessment, and forecasting.

564 Practicum in Technology Education for Elementary Grades (3) Study and field practice of the philosophy, psychology, and objectives of integrating technology education in the elementary and special education classes. Students develop and integrate technology-based curricula in the classroom. Strategies related to classroom organization, physical planning, and tool and material acquisition are discussed and implemented. 10 to 20 hours spent in contact with children.

600 Special Topics (1-3) The title and description are determined for each offering, allowing students to engage in relevant investigations in the changing field of technology.
Prerequisite: permission of the department chairperson.
A total of 3 credits may be earned.

635 Implementing Technology Education (3) An activity-based experience that emphasizes the implementation of technology education. Focuses on both classroom and laboratory instruction in the many STEM topics.

636 Implementing Communication Technology Education (3) A study of the concepts and strategies used in teaching communication technology classes (grades 6-12). Emphasizes graphic, electrical, visual, acoustic, and mass-communication systems and their effects on people and society.

637 Implementing Construction Technology Education (3) A study of the concepts and strategies used in teaching construction technology classes (grades 6-12). Emphasizes designing and constructing structures and community planning activities and their effects on people and society.

638 Implementing Manufacturing Technology Education (3) A study of the concepts and strategies used in teaching manufacturing technology classes (grades 6-12). Emphasizes industrial materials, processes, and management systems; their application to industrial enterprises; and their effects on people and society.

639 Implementing Transportation Technology Education (3) A study of the concepts and strategies used in teaching transportation technology classes (grades 6-12). Emphasizes the design, use, and effects of transportation systems and related energy-conversion techniques in modern society.

690 History and Philosophy of Technology Education (3) An examination of the historical development and philosophical foundations of technology education. Explores early forms of training in school and industry, up through today's STEM initiatives.
Not open to students who have credit in TEDU 568.

691 Strategies and Materials for Teaching Technology Education (3) A study of individualized and group teaching and learning strategies and the selection, production, and use of instructional materials to support STEM integration.

694 Curriculum Development in Technical Education (3) Experiences to support the informed individual and collaborative development of curriculum for technology and engineering education, career and technical education, and STEM integration.

695 Curriculum Evaluation in Technical Education (3) Serves diverse needs of online graduate students who are preparing to be K-12 teachers, administrators, trainers, or evaluators in technology education or career and technical education, or STEM fields (science, technology, mathematics, engineering). Students in these fields will find the references to technological literacy and technical settings to be especially informative.

697 Problems in Technology Education (1-3) Independent study in advanced industrial or professional techniques.
Prerequisite: permission of the department chairperson.
A total of 3 credits may be earned.

698 Seminar in Technical Education (3) An exploration of current problems, issues in technology and engineering education, career and technical education, and STEM integration.

699 Research in Technical Education (3) A review of existing research in technology education and career and technical education with reference to its scope and usefulness. Design and interpretation of individual or group research is required.

TECHNOLOGY: MANUFACTURING (TMFG)

580 Advanced Studies in Graphic Arts (3) Individual study of new developments in graphic arts. Provides opportunities to study new developments in light-sensitive materials, computer applications in graphic arts processes, and current industry trends.

ELEMENTARY EDUCATION

bsu.edu/elementaryeducation
Teachers College 305, 765-285-8560

The Department of Elementary Education offers a variety of graduate programs to help educators and other professionals concerned with the education of children from birth through elementary school achieve their educational goals. In addition, the department offers programs in reading that extend through adulthood. The faculty work closely with professionals in the field. Online courses are developed and taught by full-time faculty members, accommodating schedules of the busy professional. Special in-service programs are designed to meet staff development requests in addition to a carefully designed sequence of graduate classes.

Within the graduate programs there is ample flexibility to meet student interests and needs. The master's and doctoral programs have been designed to help professionals accomplish their personal career and professional goals.

Some post-graduate licensing opportunities are also available.

PROGRAMS

The department offers a master of arts in education (MAE) in elementary education. A transition-to-teaching license is also available. Certificates in early childhood administration, enhanced teaching practice for elementary teachers, literacy instruction, and response to intervention are also offered. Other programs include doctor of education (EdD) in elementary education and a doctor of philosophy (PhD) in elementary education.

MASTER OF ARTS IN EDUCATION, ELEMENTARY EDUCATION, 30 credits

Admission requirements
Applicants must meet the admission requirements of the Graduate School.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Required courses			
EDEL	600	Basic Concepts in Elem Educ (3)	
	or		
	640	Into to EC Education (3)	
	or		
EDRD	645	History of Reading (3)	3
EDEL	644	Education in a Diverse Society (3)	
	or		
EDRD	627	Tchg Literacy Diverse Learners (3)	3
EDRD	610	Teaching of Reading Elem Sch (3)	
	or		
	615	Early Literacy Development (3)	
	or		
	620	Disc Integ Lit in El Classroom (3)	3
Professional education core (Must include EDEL 676 Research in Elementary Educ)			9
Focus area			
Three courses approved by advisor			9
Directed elective			3
			30 crs

This program is offered on-line only.

DOCTOR OF EDUCATION IN ELEMENTARY EDUCATION, 95-102 credits

Aids the candidate in developing skills and knowledge in curriculum, evaluation, research, and teaching methodology. Educational experiences are provided through course work and fellowship assignments. Programs are individualized to meet the specific goals of students.

Admission requirements
Applicants must meet the admission requirements of the Graduate School. An applicant must also hold a master's degree from an accredited college or university with a grade-point average (GPA) of at least 3.2 on a scale of 4.0; have achieved acceptable scores on the Graduate Record Examination (GRE); submit an autobiography, philosophy of education, and five references; have two or more years of successful teaching or appropriate professional experience; and be recommended by the Advanced Graduate Studies Committee of the Department of Elementary Education.

Degree requirements
General guidelines include 95-102 graduate credits, at least 48 of which ordinarily will be completed at Ball State University. The program also requires a major of 40 credits, including 10 credits for the dissertation; cognate fields of either two 15-credit (minimum) cognates or one 24-credit (minimum) cognate. The 15-credit cognates must include a minimum of 9 Ball State University credits; the 24-credit cognate must include a minimum of 12 Ball State University credits; and two consecutive semesters of residency, (15 credits within one calendar year) which are expected to begin within two years of acceptance to the program.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Teachers College requirements			
EDPS	641	Intro Statistical Methods	3
	642	Analysis of Variance	3
ID	705	Research Colloquium (1-3)	2
(or another approved course)			
Humanistic studies			
One course from			
EDFO	631	Philosophy of Education (3)	
	641	History of American Education (3)	
	651	Educational Sociology (3)	3
Behavioral studies			
One course from			
EDPS	600	Adv Educational Psych (3)	
	603	Human Development (3)	
	627	Child Development (3)	3

Area of specialization			
(Elementary, Early Childhood, Reading)			40
Doctoral seminar (2 semesters)			
EDEL	798	Seminar in Elementary Educ (2)	
	or		
	799	Seminar in EC Education (2)	
	or		
EDRD	700	Seminar in Reading (2)	4
Research			
One course from			
EDEL	740	Research in EC and Elem Educ (3)	
	791	Seminar in Research Elem Educ (3)	
EDRD	770	Study of Reading Research (4)	3-4
Dissertation			
DISS	799	Doctoral Dissertation (1-24)	10
Cognate(s)			24 or 30
			95-102 crs

DOCTOR OF PHILOSOPHY IN ELEMENTARY EDUCATION, 92-98 credits

Designed to meet the needs of advanced graduate students who seek leadership roles in education and are dedicated to advancing the profession through their advanced research skills, teaching, and service. The program includes an intensive, in-depth study of education and various professional experiences through fellowship assignments.

Admission requirements
Applicants must meet the admission requirements of the Graduate School. An applicant must also hold a master's degree from an accredited college or university with a grade-point average (GPA) of at least 3.2 on a scale of 4.0; have achieved acceptable scores on the Graduate Record Examination (GRE); submit an autobiography, philosophy of education, and five references; have two or more years of successful teaching or appropriate professional experience; and be recommended by the Advanced Graduate Studies Committee of the Department of Elementary Education.

Degree requirements
General guidelines include 92-98 graduate credits, at least 48 of which ordinarily will be completed at Ball State University. The program also requires a major of 40 credits, including 10 credits for the dissertation; cognate fields of either two 15-credit (minimum) cognates or one 24-credit (minimum) cognate. The 15-credit cognates must include a minimum of 9 Ball State University credits, and the 24-credit cognate must include a minimum of 12 Ball State University credits; research competence of 12 to 15 graduate credits in one of the following: foreign language, statistical methods, computer science, or research techniques; and two consecutive semesters of residence (15 credits within one academic year), which are expected to begin within two years of acceptance to the program.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
Teachers College requirements			
EDPS	641	Intro Statistical Methods	3
	642	Analysis of Variance	3
ID	705	Research Colloquium (1-3)	2
(or another approved course)			
Humanistic studies			
One course from			
EDFO	631	Philosophy of Education (3)	
	641	History of American Education (3)	
	651	Educational Sociology (3)	3
Behavioral studies			
One course from			
EDPS	600	Adv Educational Psych (3)	
	603	Human Development (3)	
	627	Child Development (3)	3
Area of specialization			
(Elementary, Early Childhood, Reading)			40
Doctoral seminar (2 semesters)			
EDEL	798	Seminar in Elementary Educ (2)	
	or		
	799	Seminar in EC Education (2)	
	or		
EDRD	700	Seminar in Reading (2)	4
Dissertation			
DISS	799	Doctoral Dissertation (1-24)	10
Research cognate			24 or 30
			92-98 crs

CERTIFICATE PROGRAMS

Certificate in Enhanced Teaching Practice for Elementary Teachers, 15 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDEL	626	Discipline and Classroom Mgt	3
	630	Sch, Fam and Com Partnerships	3
	655	Princ of Diff Elem Classroom	3
	660	Effective Use of Tech Elem Sch	3
EDRD	610	Teaching of Reading Elem Sch	3
			15 crs

Certificate in Literacy Instruction, 15 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDEL	680	Advanced Teaching Methods LA	3
EDRD	610	Teaching of Reading Elem Sch	3
	627	Tchg Literacy Diverse Learners	3
	680	Classroom Literacy Assessment	3
Electives, 3 credits from			
EDRD	545	Integrat Techn in Lit Prog (3)	
	615	Early Literacy Development (3)	
	620	Disc Integ Lit in El Classroom (3)	
	645	History of Reading (3)	
	650	Org and Supvn of Sch Rdg Prog (3)	3
			15 crs

Certificate in Response to Intervention, 15 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDEL	655	Princ of Diff Elem Classroom	3
SPCE	606	MTSS/RTI: Seminar	3
	607	MTSS/RTI: Track Stud Prog	3
Select two courses from one of the sequences listed below			
Behavior (SPCE)			
SPCE	609	Intro to App Beh Analy	3
	610	Behavioral Consultation	3
Reading (ELED)			
EDRD	690	Reading Practicum	3
	692	Clinical Diag Rdg Difficulties	3
	or		
	six credits of discipline specific course work (with permission).		
			15 crs

TRANSITION TO TEACHING, 24 credits

24-credit program will allow individuals who have an undergraduate degree in another field to become eligible for an Indiana teaching license.

Admission requirements

- Earned baccalaureate degree from regionally accredited college or university in content area of license.
- 3.0 grade-point average (GPA) or 2.5 grade-point average plus five years of work experience in related field.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDEL	600	Basic Concepts in Elem Educ	3
	626	Discipline and Classroom Mgt	3
	644	Education in a Diverse Society	3
	690	Practicum in Elementary Educ (1-8)	3
EDRD	610	Teaching of Reading Elem Sch	3
	615	Early Literacy Development	3
EDPS	627	Child Development	3
MATH	680	Special Studies Teaching Math (1-6)	3
			24 crs

EDUCATION: ELEMENTARY (EDEL)

600 Basic Concepts in Elementary Education (3) Examination of current concepts essential for successful teaching and learning in an elementary classroom. Focus will provide a foundation of knowledge to be extended in future graduate work.

626 Discipline and Classroom Management: Some Practical Approaches (3) Practical ways for experienced elementary school teachers to create and maintain effective learning environments. Emphasizes approaches to prevention and remediation of disruptive classroom behavior.

644 Education in a Diverse Society (3) A broad understanding of social, economic, cultural, and linguistic diversity, with emphasis on how teachers and schools can respond to issues that arise as our society becomes more diverse.

655 Principles of Differentiation in the Elementary Classroom (3) Examines the major components of elementary school curriculum including content standards, learning strategies, materials, and assessment. Also focuses on how to meet the needs of all students through a differentiated curriculum.

657 Development, Implementation, and Evaluation of Elementary Classroom Programs (3) Competencies necessary for the elementary teacher to develop and implement programs in today's classrooms. Emphasizes processes, techniques, materials, resources, and models appropriate for enhancing educational experiences.

660 The Effective Use of Technology in the Elementary School (3) Theoretical understanding and personal skills needed to use technology effectively in the elementary school classroom. General role of technology in education and specific applications to particular uses within the classroom as well as strategies for evaluating resources.

663 Understanding Data to Inform Teaching and Learning in Elementary Schools (3) Emphasizes the components of assessment as it pertains to the elementary school and to individual classrooms. Also introduces

important assessment tools that can be used to design and address instruction.

676 Research in Elementary Education (3) Investigation, summary, and interpretation of research in elementary education. Requires each student to write and submit a research report. Must be taken within the last 9 credits of the student's program.

Not open to students who have credit in EDST 676 or EDJH 676.

680 Advanced Teaching Methods in Language Arts (3) This course provides an understanding of the relationship of listening, speaking, reading, and writing. Identification of instructional challenges in each of these areas and explorations of possible solutions can lead to a more integrated language arts program.

690 Practicum in Elementary Education (1-8) Study and analysis of schoolroom procedures used in different schools. Offered on a credit/no credit basis.

Prerequisite: permission of the department chairperson.

A total of 8 credits may be earned.

694 Internship in Elementary Education (1-3) Field experience in selected elementary education programs or educational agencies. Offered on a credit/no credit basis.

Prerequisite: permission of the department chairperson.

A total of 3 credits may be earned.

698 Seminar in Elementary Education (1-12) Graduate students will consider group and individual investigations in elementary education.

A total of 12 credits may be earned.

699 Independent Study: Elementary Education (1-8) Independent study and research in elementary education.

Prerequisite: sponsoring instructor and permission of the department chairperson.

A total of 8 credits may be earned.

791 Seminar in Research in Elementary Education (3) Study and analysis of research in elementary education for students in advanced graduate programs. Historical and current investigations, evaluation, implications, and implementation in addition to an attempt to define questions needing further research.

Prerequisite: EDEL 676 or permission of the department chairperson.

792 Issues in Elementary Education (3) Major trends and issues in elementary education for students in advanced graduate programs. Emphasizes analysis and evaluation of applicability of current research data.

Prerequisite: EDEL 791 or permission of the department chairperson.

798 Seminar in Elementary Education (2) Doctoral candidates will consider group and individual investigations in elementary education.

Prerequisite: permission of the department chairperson.

A total of 8 credits may be earned, but no more than 2 in any one semester or term.

Open only to doctoral candidates in elementary education.

EDUCATION: READING (EDRD)

500 The Teaching of Literacy in the Elementary School (3) Designed to teach the current thinking, approaches, and methodology of literacy instruction in the elementary school.

Prerequisite: permission of the department chairperson.

501 The Teaching of Literacy in the Integrated Curriculum (3) Designed to teach the current thinking, approaches, and methodology of literacy instruction in the integrated curriculum.

Prerequisite: EDRD 500; permission of the department chairperson.

545 Integrating Technology in the Literacy Program (3) Candidates will explore many different possibilities for integrating cutting-edge technology into the literacy program and explore how technology affects the development of literacy strategies and skills.

610 The Teaching of Reading in the Elementary School (3) Appraisal of the elementary school reading program in terms of principles, practices, and problems involved in the instructional program. (This requirement may be waived by the director of reading for students with an undergraduate minor in reading.)

615 Early Literacy Development (3) Develop an understanding of early literacy development through early primary years. Explanation of theories and practical application to foster young children's reading and writing development.

620 Disciplinary and Integrated Literacy in Elementary Classrooms (3) Procedures for developing effective reading skills to be applied by teachers. Focuses on the relationship between the processes of literacy and the methods to enhance content area reading in order to meet the total range of student literacy needs.

627 Teaching Literacy to Diverse Learners (3) Addresses issues of literacy instruction for children with diverse backgrounds, including language, race, class, gender, ethnicity, and exceptionality.

630 Psychological Foundations of Reading (3) Psychological basis of the reading process. Emphasizes

psychological, cognitive, and psycholinguistic principles that underlie the reading process.
Prerequisite: EDRD 610, 615, or 620.

640 Issues in the Teaching of Literacy (3) Current approaches and recent trends in the teaching of literacy (K-12). Emphasizes present practices in the teaching of literacy and implication of research in literacy.

645 History of Reading (3) Develop an understanding of the historical aspects of a number of trends and issues in the field of literacy education. Examine how scholars have contributed to our understanding of the reading process and how it affects classroom practices.

650 The Organization and Supervision of a School Reading Program (3) Covers recent trends for the administration of a reading program. For principals, supervisors, consultants, and reading specialists.

680 Classroom Literacy Assessment (3) Provides the knowledge and skills necessary to diagnose children's literacy and to develop, plan, and organize a literacy program based on data.
Prerequisite: EDRD 610, 615, or 620.

690 Reading Practicum (3) Supervised experience in teaching persons with reading disabilities in a clinical setting. Emphasizes the use of specialized techniques and materials selected and designed in the light of extensive diagnostic information.
Prerequisite: EDRD 692.

692 Clinical Diagnosis of Reading Difficulties (3) The psychology of reading difficulties, individual diagnostic techniques, and the planning of reading programs for severely disabled readers in a clinical setting.
Prerequisite: EDRD 680.

698 Independent Study in Reading (1-9) Individual study of specific topics in reading education. Group and individual investigations are included.
A total of 9 credits may be earned.

700 Seminar in Reading (2) Selected topics in reading education. Builds on extensive background in reading, research, and theory.
Prerequisite: 8 credits in graduate reading courses or permission of the director of reading.
A total of 8 credits may be earned, but no more than 2 in any one semester or term.

701 Advanced Study in Reading (3) The application of basic research findings to the reading process and the teaching of reading.
Prerequisite: 6 graduate credits in reading.

770 Study of Reading Research (4) Emphasizes types of research that have contributed to greater understanding of the reading process.
Prerequisite: EDRD 610, 640.

799 Internship in Reading (2-6) A field assignment with opportunities to direct, coordinate, and supervise a reading program in a selected educational setting, with joint supervision by the university and an experienced director or coordinator of reading.
Prerequisite: open to doctoral-level students and other graduate students by permission of the department chairperson.
A total of 6 credits may be earned.

SPECIAL EDUCATION

bsu.edu/spced
Teachers College 705, 765-285-5700

The Department of Special Education offers programs designed to increase students' understanding of the personal, psychological, social, educational, and vocational needs of persons with disabilities and strengthen their assessment, teaching/intervention skills, and research competency.

Students are offered advanced study and research opportunities through fieldwork, internships, the TEACH Lab, which provides hands-on adaptive technology opportunities for our students. The department is also co-sponsor of the Psychoeducational Diagnostic and Intervention Clinic, which provides diagnostic services for people with disabilities. Areas of study include mild and severe/intense interventions, deaf education, early childhood special education, autism, and special education administration. In addition to the masters and doctoral degrees, the department also offers graduate certificate programs in Autism, Applied Behavior Analysis (ABA), Multi-Tier System of Supports/Response to Intervention, and Disabilities for Post-Secondary Settings with an Emphasis on Autism. The ABA certificate partially meets the requirements for becoming a Board Certified Behavior Analyst.

PROGRAMS

Master of arts (MA) in applied behavior analysis (offered online). Master of arts (MA) in special education; master of arts in education (MAE) in special education; and doctor of education (EdD) in special education in one or more of the categories of special education. Certification programs for graduate-level students are also available.

Admission requirements
Applicants must meet the admission requirements of the Graduate School. An applicant must also have an overall grade-point average (GPA) of at least 2.75 on a scale of 4.0 in undergraduate work if applying for graduate assistantships and receive a positive recommendation from the department's advanced studies committee.

MASTER OF ARTS PROGRAMS

Master of Arts in Applied Behavior Analysis, 30 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
SPCE	609	Intro to App Beh Analy	3
	610	Behavioral Consultation	3
	611	Adv Applied Behavior Analysis	3
	619	Prof Issues in Appd Beh Analy	3
	630	Research Behavior Analysis	3
	638	Field Experience in ABA (3)	
	or		
	683	Field Experience in Autism (3)	3
	680	Intro Persons Aut Spec Dis	3
	682	Interv and Treat Persons Aut	3
	689	Verbal Behavior	3
	691	Superv Human Serv Staff in ABA	3
			30 crs

This program is offered on-line only.

Master of Arts in Special Education, 30 credits

Includes the following specializations: deaf education, emotional/behavior disorders, mild interventions, severe disabilities, early childhood special education, general special education, special education administration (Director of Exceptional Needs/Special Education), and visual impairments. Completion of one or more of these specializations may lead to employment as master teachers in such situations as resource rooms, self-contained classrooms, and local, state, and private agencies or residential schools serving children, youths, and adults with disabilities. Graduates are also prepared to serve as consultants in inclusionary settings.

Generally, special education undergraduate majors select this master's degree program option either to strengthen their bachelor's degree preparation or to acquire another area of special education licensure.

Degree requirements
The MA requires completion of at least 30 credits of graduate course work. A minimum of 15 credits must be completed in the major area of study, supplemented by a research course and 9 credits of designated courses in a second area of special education. Typically, students will follow a plan of study prescribed by special education licensure standards.

Master of Arts in Education in Special Education, 30 credits

Includes the following specializations: deaf education, emotional/behavior disorders, severe disabilities, mild interventions, early childhood special education, general special education, and visual impairments. Completion of one or more of these specializations may qualify students for employment as master teachers in such situations as resource rooms, self-contained classrooms, and local, state, and private agencies or residential schools serving children, youths, and adults with disabilities. Graduates are also prepared to serve as consultants in inclusionary settings.

This option generally is selected by students who have earned bachelor's degrees in elementary or secondary education. The MAE degree is also offered by distance education.

Degree requirements
The MAE requires completion of at least 30 credits of graduate course work. A minimum of 15 credits must be completed in the major, supplemented by a research course and at least three courses from the professional education core. Typically, students will follow a plan of study as prescribed by special education licensure standards.

DOCTOR OF EDUCATION IN SPECIAL EDUCATION, 90-96 credits

Designed to meet the needs of advanced graduate students seeking to assume leadership roles in special education in one or more of the following positions: school leadership, administration; consultation; or in higher education as a teacher educator, special education manager, curriculum specialist, and researcher/evaluator. Upon successfully completing the program, the candidate will hold a doctor of education degree in special education.

Admission requirements
Applicants must meet the admission requirements of the Graduate School. An applicant must also hold a master's degree from an accredited institution, have two years of successful appropriate professional experience, have a grade-point average (GPA) of at least 3.2 on a scale of 4.0 at the master's level, achieve acceptable composite scores on the Graduate Record Examination (GRE) general test, and be recommended by the department's advanced studies committee.

Degree requirements
The doctoral degree with a major in special education requires a minimum of 90 credits of graduate credit, 48 of which must be completed at Ball State University. The program consists of several basic required courses as well as a major of at least 40 credits, most of which must be completed at Ball State University. Two 15-credit cognates (minimum) or one 24-credit cognate (minimum) will be selected by doctoral students in consultation with their committee chairpersons to complement career and research interests. Nine credits of each 15-credit cognate or 12 credits of the 24-credit cognate must be completed at Ball State University.

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
DISS	799	Doctoral Dissertation (1-24)	10
EDPS	641	Intro Statistical Methods	3
	642	Analysis of Variance	3
ID	705	Research Colloquium (1-3)	2
SPCE	701	Sem: Pols and Issues Spec Ed	3
	702	Lrn, Beh, and Dev Dis Spec Nds	3
	706	Sem-Stratgs Int Int Nds (3)	
	or		
	707	Sem-Stratgs Mild Inter Nds (3)	
	or		
	709	Behavior and Except Person (3)	3
	764	Seminar in Special Education (3-6)	3

Cognate area (one area for 24 credits or two areas for 15 credits each) 24 or 30

Special education concentration courses 9-12
At the committee's discretion, up to 30 credits from a master's degree (or equivalent) may be included toward total doctoral credits.

Another SPCE 700-level seminar may be substituted for SPCE 764. A minimum of 40 credits must be in the major area; a minimum of 90 total credits required. SPCE 636 Research in Special Education or graduate level introduction statistics class is a prerequisite for admission to do doctoral work in special education.

Policy and Administration concentration

The Policy and Administration concentration focuses on candidates interested in policy areas related to disability public policy and laws and those interested in the administration and management of program services in special education. Candidates are immersed in laws and policies that shape disability services and organizational behavior theories and principles that are applied to the administration of service delivery systems geared toward programs for persons with disabilities. Many candidates choose to complete a cognate in the area of educational leadership and work to add the director of exceptional needs to their current IDOE professional education license.

Required courses

SPCE	637	Org and Admin of Spec Ed	3
	639	Spec Ed Admin and Org Beh	3

Directed elective requirements

SPCE	706	Sem-Stratgs Int Int Nds (3)	
	or		
	707	Sem-Stratgs Mild Inter Nds (3)	
	or		
	709	Behavior and Except Person (3)	3

SPCE 709 is the preferred seminar course.

3 credits from one of the following areas:

Policy

SPCE	677	Tch Parnts to Educate Exc Chld (3)	
	or		
	687	Educ Assessment: Mild Int (3)	

Administration

SPCE	624	Voc Prep and Trans Studs Dis (3)	
	or		
	636	Research in Special Education (3)	
	or		
	694	Intern in Spec Ed (3-9)	3

Applied Behavior Analysis (ABA) and Autism concentration

The ABA and Autism concentration focuses on principles and theories related to applied behavior analysis and their applications with persons with autism. Principles of behavior, behavior consultation techniques, and treatment/intervention strategies are core concepts and skills explored. Candidates have the opportunity to earn certifications in ABA and Autism from Ball State University as well as working toward becoming National Board Certified in ABA as program options.

Required courses

SPCE	609	Intro to App Beh Analy	3
	610	Behavioral Consultation	3

Directed elective requirements

SPCE	706	Sem-Stratgs Int Int Nds (3)	
	or		
	707	Sem-Stratgs Mild Inter Nds (3)	
	or		
	709	Behavior and Except Person (3)	3

SPCE 709 is the preferred seminar course.

3 credits from one of the following areas:

ABA

SPCE	611	Adv Applied Behavior Analysis (3)	
	or		
	660	Seminar in Special Education (3-9)	

Autism

SPCE	680	Intro Persons Aut Spec Dis (3)	
	or		
	682	Interv and Treat Persons Aut (3)	3

Low Incidence: Teaching and Learning concentration

The Low Incidence concentration focuses on specific strategies and instructional approaches that are evidence-based related to teaching and learning for persons with low incidence disabilities. Principles of behavior, communication (including alternative and augmentative systems), accommodations, and treatment/intervention strategies used with individuals with severe and moderate disabilities are key concepts and skills presented. Candidates have the opportunity to expand their teaching repertoire as they work with students with low incidence in special education settings. Teacher education preparation is also a focus on the program.

Required courses

SPCE	577	Intro to Intense Interv Needs	3
	578	Educ Meth for Int Inter Nds	3

Directed elective requirements

SPCE	706	Sem-Stratgs Int Int Nds (3)	
	or		
	709	Behavior and Except Person (3)	3

SPCE 706 is the preferred seminar course.

3 credits from one of the following areas:

Severe

SPCE	609	Intro to App Beh Analy (3)	
	or		
	631	Comp Tech and Learner Spec Nds (3)	

Autism

SPCE	680	Intro Persons Aut Spec Dis (3)	
	or		
	682	Interv and Treat Persons Aut (3)	3

High Incidence: Teaching and Learning concentration

The High Incidence concentration focuses on specific strategies and instructional approaches that are evidence-based related to teaching and learning for persons with high incidence disabilities. Principles of assessment, instructional methods, accommodations, and intervention strategies used with individuals with mild disabilities are key concepts and skills presented. Candidates have the opportunity to expand their teaching repertoire as they work with students with high incidence in special education settings. Teacher education preparation is also a focus on the program.

Required courses

SPCE	686	Intro: Mild Interventions	3
	687	Educ Assessment: Mild Int	3

Directed elective requirements

SPCE	603	Collab in Spec Educ (3)	
	or		
	631	Comp Tech and Learner Spec Nds (3)	
	or		
	688	Methods of Mild Intervention (3)	
	or		
	707	Sem-Stratgs Mild Inter Nds (3)	
	or		
	709	Behavior and Except Person (3)	3

SPCE 707 is the preferred seminar course.

Special Education General concentration

The Special Education General concentration remains the same as the current Doctor of Education in Special Education offering.

Required courses

SPCE	600	Educ of Exc Children	3
	636	Research in Special Education	3

Directed elective requirements

SPCE	706	Sem-Stratgs Int Int Nds (3)	
	or		
	707	Sem-Stratgs Mild Inter Nds (3)	
	or		
	709	Behavior and Except Person (3)	3

(SPCE 707 is the preferred seminar course.)

Open SPCE program elective	3
	90-96 crs

CERTIFICATE PROGRAMS

Certificate in Applied Behavior Analysis, 15 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
SPCE	609	Intro to App Beh Analy	3
	610	Behavioral Consultation	3
	611	Adv Applied Behavior Analysis	3
	619	Prof Issues in Appd Beh Analy	3
	689	Verbal Behavior	3
			15 crs

Certificate in Autism, 15 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
SPCE	609	Intro to App Beh Analy	3
	611	Adv Applied Behavior Analysis	3
	680	Intro Persons Aut Spec Dis	3
	682	Interv and Treat Persons Aut	3
	683	Field Experience in Autism	3
			15 crs

Certificate in Disabilities for Post-Secondary Settings with an Emphasis on Autism, 15 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
SPCE	600	Educ of Exc Children	3

	601	Intro Dis Svcs Hi Ed	3
	602	Assist Tech Hi Ed	3
	622	Intro to Law Hi Ed Issues	3
	680	Intro Persons Aut Spec Dis	3
			15 crs

This program is offered on-line only.

Certificate in Emotional and Behavioral Disorders, 15 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDPS	606	Learn Achievement Motivation	3
SPCE	604	ABA for Teachers	3
	632	Intro to Emo and Behav Dis	3
	634	Educating Emo and Behav Dis	3
	635	Advanced Studies in EBD	3
			15 crs

Certificate in Response to Intervention, 15 credits

PREFIX	*NO*	*SHORT TITLE*	*CREDITS*
EDEL	655	Princ of Diff Elem Classroom	3
SPCE	606	MTSS/RTI: Seminar	3
	607	MTSS/RTI: Track Stud Prog	3

Select two courses from one of the sequences listed below

Behavior (SPCE)			
SPCE	609	Intro to App Beh Analy	3
	610	Behavioral Consultation	3
Reading (ELED)			
EDRD	690	Reading Practicum	3
	692	Clinical Diag Rdg Difficulties	3
		or	
		six credits of discipline specific course work (with permission).	
			15 crs

SIGN LANGUAGE (SNLN)

551 American Sign Language 1 (3) Introduction to sign language systems including fingerspelling and American Sign Language (ASL). Development of receptive and expressive skills in sign language is emphasized.

552 American Sign Language 2 (3) Designed to improve conversational skills in American Sign Language to a functional level for expressive and receptive use in educational and other settings. Introduction to issues related to deaf culture.

Prerequisite: SNLN 251 or 551; permission of the department chairperson.

Not open to students who have credit in SNLN 252.

553 American Sign Language 3 (3) Emphasizes the development of conversational skills in American Sign Language. Stress is placed on vocabulary building and interpretation of culturally related cues.

Prerequisite: SNLN 252 or 552; permission of the department chairperson.

Not open to students who have credit in SNLN 253.

554 American Sign Language 4 (3) Advanced development of American Sign Language fluency in occupational and professional settings. Special emphasis is placed on sign dialects and related deaf-cultural issues.

Prerequisite: SNLN 253 or 553; permission of the department chairperson.

Not open to students who have credit in SNLN 254.

SPECIAL EDUCATION (SPCE)

540 History of Education of Deaf Students and Psychology of Deafness (3) Analysis and discussion of the historical, geographical, cultural, educational, and economic forces affecting deaf people and patterns of social change and oppression during the nineteenth and twentieth centuries. Introduces specific cultural and historical experiences and literature in the field.

Not open to students who have credit in SPCE 240.

546 Teaching Strategies for Speech/Social Communication for Deaf Students (3) Various methods of teaching communication skills used by deaf/hard-of-hearing students. Emphasis on oral, facial, and body language for social communication. Developing instructional objectives and individual education plans related to social communication will be included.

Prerequisite: SPCE 540 or permission of the department chairperson.

Not open to students who have credit in SPCE 246.

548 Practicum in Deaf Education (3) Includes experience with deaf/hard-of-hearing students from various age ranges. Participants will practice the planning, writing, and implementation of relevant instructional objectives.

Prerequisite: SPCE 546 or permission of the department chairperson.

Not open to students who have credit in SPCE 248.

554 Introduction to Language for Deaf/Hard-of-Hearing Students (3) Philosophy underlying various methods of language teaching will be reviewed. Students will compare and contrast various communication strategies. Topics included are interactive language, written language, and reading.

Prerequisite: SPCE 540.

Not open to students who have credit in SPCE 454.

556 Language Methods for Deaf/Hard-of-Hearing Students (3) In-depth view of various methods of teaching language to deaf/hard-of-hearing students, including bilingual approaches. Emphasizes the forming of taxonomies through

analysis of language samples. Includes writing instructional objectives in the language areas of form and content.
Prerequisite: SPCE 554.
Not open to students who have credit in SPCE 456.

558 Teaching Reading and School Subjects to Deaf/Hard-of-Hearing Students (3) Explores methods of teaching reading with deaf/hard-of-hearing students. Reading assessment for deaf children will be reviewed as well as reading in other school subjects. Writing instructional objectives and individual education plans will be included.
Prerequisite: SPCE 556.
Not open to students who have credit in SPCE 458.

566 Introduction to Students with Orthopedic, Sensory and Multiple Disabilities (3) For educators and therapeutic service providers who will work with students with physical/orthopedic, sensory, health, and multiple impairments. Etiology, characteristics, and educational implications are addressed within a transdisciplinary, collaborative team approach.
Prerequisite: SPCE 600 or equivalent.
Not open to students who have credit in SPCE 366.

575 Trends and Issues in Special Education (3) Explores best practices and issues in classroom planning, management, and instructional strategies for adolescents through young adults with exceptional needs.
Prerequisite: SPCE 600 or equivalent; permission of the department chairperson.

577 Introduction to Students with Intense Intervention Needs (3) For teachers of students with moderate, severe, and profound intellectual impairment as well as those with significant multiple impairments. Introduces concepts of functional curriculum, systematic instruction, data-driven decision making, and positive behavior supports within a transdisciplinary team model.
Prerequisite: SPCE 600 or equivalent.
Not open to students who have credit in SPCE 377.

578 Educational Methods for Students with Intense Intervention Needs (3) Evidence-based practices for assessment and intervention methods among students with moderate, severe, and profound intellectual impairment as well as those with significant multiple impairments. Development and application of systematic instruction, augmentative and alternative communication, and positive behavior support plans are emphasized.
Prerequisite: SPCE 577.
Not open to students who have credit in SPCE 378.

579 Educational Methods for Students with Orthopedic-Sensory-Multiple Disabilities (3) Evidence-based practices for curricular adaptations; implementation of assistive technology and augmentative and alternative communication; and literacy assessment and instruction for students with orthopedic, sensory, health, and multiple impairments. Development and application of academic instruction is emphasized.
Prerequisite: SPCE 566.
Not open to students who have credit in SPCE 379.

580 Educating High School Students with Intense Intervention Needs (3) Evidence-based practices in assessment, intervention, and monitoring for adolescents and young adults with intense intervention needs. Topics include laws concerning transition, career planning, vocational rehabilitation resources, job training, and employment outcomes within a transdisciplinary team model.
Prerequisite: SPCE 600 or equivalent.
Not open to students who have credit in SPCE 380.

600 Education of Exceptional Children (3) The basic course in the graduate sequence for teachers who wish to specialize in any one of the branches of special education. Stresses findings concerning the unique psychological and educational problems of exceptional children.

601 Introduction to Disability Services in the Post-Secondary Setting (3) Offers an in-depth view of various processes to create or expand high quality, inclusive model comprehensive post-secondary programs for students with disabilities in pursuit of higher education. Includes an examination and exposure to various roles through a broadened awareness of services, needs, and opportunities available at the post-secondary institution. Critical examination of exposure to and implications for various support roles in the post-secondary education process.
Prerequisite: SPCE 600.

602 Accommodations and Assistive Technology for Post-Secondary Students with Disabilities (3) Emphasizes the theory, design, and integration of assistive technologies related to students with disabilities including psychological disabilities, learning disabilities, and physical disabilities in the post-secondary higher education institution. Addresses the leadership roles necessary for developing enabling conditions for successful technology acquisition and implementation for students with disabilities in higher education.
Prerequisite: SPCE 600.

603 Collaboration in Special Education (3) Roles and competencies of special education personnel as they function in collaborative planning, implementation, and improvement of instruction for the various areas of special education.

604 Applied Behavior Analysis for Teachers (3) Intended to equip teachers serving students with disabilities with the knowledge and skills to systematically alter students' academic, functional, or problem behaviors. Although the emphasis will be on the use of the methodology of applied behavior analysis, other behavioral interventions such as School-Wide Positive Behavior Intervention Supports (SW-PBIS) will be discussed. Teachers learn to apply the tactics and strategies of behavior-change technology to socially significant problems.

Prerequisite: SPCE 201 or 600 or permission of the graduate advisor.

605 Independent Study (1-6) Designed to meet the needs of students who wish to conduct independent study and research in special education.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned.

606 Multi-Tier System of Supports/Response to Intervention: Seminar (3) Provides the framework for the implementation of MTSS/RTI. The components of MTSS/RTI implementation and the role of school personnel in that system will be investigated. Course will assist school personnel in exploring answers to key questions facing educators who are implementing MTSS/RTI in their respective districts.

607 Multi-Tier System of Supports/Response to Intervention: Tracking Student Progress (3) Students will study and practice the components of MTSS (RTI, PBIS) models that track student progress. Methods of progress monitoring will be explored. Course will direct students through the process of data-based decision-making across tiers of services. Models of implementation will be discussed.

608 Inservice Workshop (1-6) For inservice teachers and administrators who wish to work on special learning problems in their own schools.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned.

609 Introduction to Applied Behavior Analysis (3) Introduces behavioral principles and their applications in schools, developmental centers, and other human service settings. Includes functional behavioral assessments; selecting, defining, measuring, and graphing behavior; developing ethical behavioral intervention plans; implementing and assuring the fidelity of behavioral-change procedures; and evaluating behavioral outcomes for maintenance, generalization, and social validity.

Not open to students who have credit in SPCE 309.

610 Behavioral Consultation (3) Training and supervised experience in providing behavioral consultation. Emphasizes the design and implementation of interventions for improving behavior and promoting adaptive skills in a variety of applied settings. Focuses on the analysis of consultant-consultee interactions in problem identification, problem solving, and outcome evaluation.

Prerequisite: grade of *B* or better in SPCE 609 or equivalent.

611 Advanced Applied Behavior Analysis (3) Building upon an introduction to applied behavior analysis, provides an in-depth treatment of behaviorological principles and advanced coverage of special topics including antecedent interventions, behavioral fluency, development of verbal behavior, and planning and evaluating applied behavioral research. Content aligns with the task list for Board Certified Behavior Analysts.

Prerequisite: grade of *B* or better in SPCE 609 or equivalent.

612 Theory and Practice in Early Childhood Special Education (3) Foundations of lice will be discussed, as well as issues related to legislation, service delivery models, family involvement, transition, and typical/atypical development.

613 Assessment Strategies in Early Childhood Special Education (3) Discussion of different techniques for identification and assessment of infants, toddlers, and preschoolers with special needs. Covers widely used norm and criterion-referenced tests, play-based assessment, transdisciplinary assessment, family assessment, and writing reports.

Prerequisite: SPCE 612.

Not open to students who have credit in SPCE 215.

614 Developmental Methods for Infants and Toddlers with Special Needs (3) Examines developmental strategies and curricular practices for serving infants and toddlers with special needs and their families. Emphasizes the application of research findings to the development of best intervention practices.

Prerequisite: SPCE 613.

Not open to students who have credit in SPCE 311.

616 Developmental Methods for Preschool Children with Special Needs (3) Examines instructional methodology and curricular practices for serving preschoolers with special needs and their families. Best practices are presented within the context of recent research.

Prerequisite: SPCE 614.

Not open to students who have credit in SPCE 312.

617 Practicum: Infants, Toddlers, and Preschoolers with Special Needs (1-12) Work with young children with special needs or disabilities in a supervised teaching practicum. Acquire practical skills for planning and organizing activities to meet the needs of young children and their families.

Prerequisite: SPCE 612, 613, 614, 616; permission of the department chairperson.

A total of 12 credits may be earned.

Not open to students who have credit in SPCE 417.

619 Professional Issues in Applied Behavior Analysis (3) The synthesis and refinement of the student's personal philosophy of applied behavior analysis and its practice in schools, hospitals, residential settings and out patient settings is emphasized. Individual study of current literature on issues, ethics, current problems, and research in applied behavior analysis.

Prerequisite: permission of the department chairperson.

622 Introduction to the Law and Higher Education Issues for Students with Autism (3) Introduces students to disability-related legislation and the range of issues impacting students with autism in higher education. Offers an in-depth analysis of the governance and administration of academic and

nonacademic organizations and the Americans with Disabilities Act (ADA), and other disability-related legislation, with a focus on the individual needs of students with autism and their families. Gives students and practitioners the professional knowledge and leadership skills to facilitate the development, implementation, and evaluation of institutional policies to create and maintain an inclusive post-secondary educational environment.

Prerequisite: SPCE 600.

624 Vocational Preparation and Transition for Students with Disabilities (3) Curricular sequences and organizational patterns in the education of adolescents and young adults with disabilities as they contribute to vocational readiness. Emphasis is on program implementation and professional roles that will maximize the transition of individuals with disabilities from education to post-secondary outcomes.

630 Research Methods for Behavior Analysis (3) This course will introduce students to various methodologies used in special education with an emphasis in single case research as a quantitative method of analysis. Students will learn about the use of single case research to explore interventions and impact on behavior with a focus on people with disabilities and autism.

Prerequisite: SPCE 604 or 609 or permission of the department chairperson.

631 Computer Technology and the Learner with Special Needs (3) Study of computers hardware and software as it relates to learners with special needs. Topics include using adaptive hardware and software to enable computer access, customizing curriculum content, and making assistive technology decisions.

632 Introduction to Emotional and Behavioral Disorders (3) Introduction to the history of educating children and youth with emotional and behavioral disorders, problems of defining, assessing, and treating emotional and behavioral disorders; and types and causes of behavior and learning problems.

Prerequisite: SPCE 201 or 600.

634 Educating Students with Emotional and Behavioral Disorders (3) For future teachers of students with emotional and behavioral disorders. Addresses educational assessment, materials, and programs for students with emotional and behavioral disorders.

Prerequisite: SPCE 201 or 600 and 632.

635 Advanced Studies in Emotional and Behavioral Disorders (3) Analyses of the trends and issues facing educators of students identified with, and at-risk for, emotional/behavioral disorders. Topics will include risk factors, vulnerable populations, and disproportionality; the school-to-prison pipeline; behavioral approaches in schools; suspension and alternative placements; and youth- and family-centered approaches.

Prerequisite: B or better grade in SPCE 632.

636 Research in Special Education (3) Investigation, summary, and interpretation of research in special education. Each student will write and submit a research report to fulfill course requirements.

Prerequisite: SPCE 600 or equivalent.

637 Organization and Administration of Special Education (3) Programs of special education in Indiana and other states. Special inquiry into Indiana law and current practices pertaining to the establishment and supervision of special education programs.

638 Field-Based Experience in Applied Behavioral Analysis (3) Provides practical experiences for students in applied behavior analysis or the behavior disorders teaching concentration; supervised by Board Certified Behavior Analysts or qualified special education teachers, respectively. Includes planning, implementing, and evaluating behavioral interventions.

Prerequisite: grade of *B* or better in SPCE 609 and 610.

639 Special Education Administration and Organizational Behavior (3) This course prepares students to effectively manage and organize the administration of special education. Course content enables students to make informed decisions concerning organizational behavior within special education programs and services. Systems approaches to best practice and application of organizational theory related to public policy and educational administration are explored.

Prerequisite: SPCE 600; permission of the department chairperson.

651 The Eye: Its Functions and Health (3) Provides initial experience in working with students who are visually impaired. Topics include reading and interpreting optometric and ophthalmological reports for educational planning and working with families at various stages of the acceptance process.

652 Programs and Services for Individuals with Visual Impairment (3) Background knowledge of the field of blindness including history, developmental impact of visual disabilities, creating interdisciplinary learning experiences, and continuum of services.

Prerequisite: SPCE 651.

653 Communication Skills for Individuals with Visual Impairments (3) Learn to read, write, and teach Braille to students with visual impairments. Topics include conducting functional literacy assessments and matching learning medium (i.e., Braille, text) to student learning capabilities.

Prerequisite: SPCE 652.

654 Instructional Accommodations for Individuals with Visual Impairment (3) Strategies for teaching and adapting curriculum in content areas, collegial collaboration, and assessment of students with visual impairments. Includes discussion of low- and high-end technology.

Prerequisite: SPCE 653.

655 Principles of Orientation and Mobility (3) Basic indoor orientation and mobility techniques and sighted guide strategies. Emphasis on acquisition of prerequisite skills for orientation and mobility. Includes assessment and utilization of low vision and appropriate use of mobility aids.

Prerequisite: SPCE 654.

656 Practicum in Teaching Students (3) Opportunity to practice program skills in a school setting. Program cohort students will pair with experienced teachers at the Indiana School for the Blind (ISB) during the ISB's summer school program.

Prerequisite: SPCE 655; permission of the department chairperson.

660 Seminar in Special Education (3-9) Group or individual investigation of a selected topic in special education.

A total of 9 credits may be earned.

670 Practicum in Special Education: Deaf (1-6) Teaching and other laboratory experiences with deaf or severely hearing-impaired children in public, private, and residential schools or other educational settings under the supervision of local professional and college supervisors. Meets teaching licensure requirements.

Prerequisite: permission of the department chairperson.

A total of 6 credits may be earned.

677 Teaching Parents to Educate Their Exceptional Child (3) Interpersonal skills required by teachers as they work with parents of exceptional children; surveys child management systems that teachers may teach parents; surveys problems that affect families with exceptional children. Specific training in the acquisition of these competencies offered through required practicum and simulation modules.

680 Introduction to Persons with Autism Spectrum Disorders (3) Provides an overview of autism spectrum disorders. Emphasizes etiology and assessment of disorders in the autism spectrum. The various nomenclatures used to identify autism spectrum disorders are reviewed.

Prerequisite: permission of the department chairperson.

682 Interventions and Treatments for Persons with Autism (3) Overviews specific interventions and treatments used with persons with autism spectrum disorders. Emphasis is placed on evidenced-based approaches used within the home, school, and other settings.

Prerequisite: permission of the department chairperson.

683 Field-Based Experience in Autism (3) Covers a variety of settings including schools, residential treatment centers, hospitals, day-cares, public and private clinics, and other settings. Intensive supervision given through individual supervisory meetings. Offered on-line only.

Prerequisite: grade of *B* or better in SPCE 609 and 680 and 682.

686 Introduction: Mild Interventions (3) Characteristics, state and federal laws, informal assessment, and effective teaching techniques for students needing mild interventions.

Prerequisite: SPCE 600; admission to the teacher education program; Teachers College professional education requirements.

687 Educational Assessment: Mild Interventions (3) Academic assessment of learning problems using standardized and informal techniques. Requires assessment of individual pupils and written report of findings.

Prerequisite: SPCE 686 with a grade of *B* or better; admission into the teacher education program, Teachers College selective retention standards.

688 Methods of Mild Intervention (3) Effective teaching strategies for learners requiring mild interventions in inclusive and other settings. Specific emphasis is placed on evidence-based practices and current directions in special education.

Prerequisite: SPCE 687 with a grade of *B* or better; admission to teacher education program; Teachers College selective retention standards; permission of the department chairperson.

689 Verbal Behavior (3) Covers the operant analysis of verbal behavior. Students will learn the functional analysis of complex verbal relations (e.g., composition, private events, conditions affecting stimulus control) and practical applications (e.g., assessment, curriculum development, intervention methods). Verbal behavior principles and techniques, relational frame theory, and current research are considered. Offered on-line only.

Prerequisite: grade of *B* or better in SPCE 609 and 611.

690 Student Teaching in Exceptional Needs (1-12) Graduate-level student teaching experience for post-bachelor's students completing requirements for an initial teaching license in special education. Offered credit/no credit only.

Prerequisite: Teachers College professional education requirements; permission of the department chairperson.

A total of 12 credits may be earned.

691 Supervising Human Service Staff in ABA (3) Prepares students to serve as supervisors, trainers, mentors, and coaches to human service staff. Creating motivating work environments that maximize performance and minimize problems/absenteeism as well as integrating basic behavior analytic concepts into training plans that are client centered and that involve translating research into practice is emphasized. Offered on-line only.

Prerequisite: grade of *B* or better in SPCE 609 and 610 and 611.

693 Practicum in Special Education: Physical Impairment (1-9) Required for licensure in Exceptional Needs: Intense Intervention. A minimum of three credits of practicum must be taken in this specialty area for licensure.

Prerequisite: permission of the department chairperson.

A total of 9 credits may be earned.

694 Internship in Special Education (3-9) Assignment to professional settings for advanced-degree students performing jobs under the direction of local and college supervisors. Settings include single or multi-categorical exceptionalities and instructional, supervisory, and administrative roles in special schools, clinics, agencies, and public schools.

Prerequisite: permission of the department chairperson.

A total of 9 credits may be earned.

697 Practicum: Mild Interventions (1-9) Supervised teaching experiences with individuals who need mild interventions in public schools, clinics, or other educational settings.

Prerequisite: SPCE 688; admission to teacher education program; Teachers College professional education requirements; permission of the department chairperson.

A total of 9 credits may be earned.

698 Practicum in Special Education: Intense Intervention (1-9) Required for licensure in Exceptional Needs: Intense Intervention. A minimum of three credits must be taken in this specialty area for licensure.

Prerequisite: permission of the department chairperson.

A total of 9 credits may be earned.

701 Seminar: Policies and Issues in Special Education (3) Provides an in-depth examination of policies and issues that impact the special education profession. Topics can include legal issues and mandates, psycho-social aspects of disabilities, community-agency-parent partnerships, and related issues and developments.

Prerequisite: permission of the department chairperson.

702 Learning, Behavioral, and Developmental Disabilities and Special Needs (3) Examines the instructional and curricular concerns for students with various disabilities and special needs. The particular disability or special needs group to be emphasized (e.g., autism) will vary based on the instructor.

Prerequisite: permission of the department chairperson.

703 Advanced Methods, Technologies, and Instructional Systems in Special Education (3) Surveys advanced methods and technology systems that facilitate special education instruction. Special emphasis on research related to instructional methods. The specific content will vary contingent on the instructor.

Prerequisite: permission of the department chairperson.

706 Seminar-Instructional Strategies for Students with Intense Intervention Needs (3) Addresses curriculum-related problems associated with programming for students with intense intervention needs restrictive educational environment. Focuses on specific instructional strategies useful in implementing evidence-based practices among students with intense intervention needs.

Prerequisite: SPCE 701 or permission of the department chairperson.

707 Seminar-Instructional Strategies for Students with Mild Intervention Needs (3) Addresses curriculum-related problems associated with programming for students with mild intervention needs restrictive educational environment. Focuses on specific instructional strategies useful in implementing evidence-based practices among students with mild intervention needs.

Prerequisite: SPCE 687 and 701; or permission of the department chairperson.

709 Behaviorology and the Exceptional Person (3) Examines experimental and theoretical foundations of the science of behavior in relation to the needs of exceptional persons. Emphasizes the experimental analysis of behavioral processes underlying the production of effective behavior-change technology currently applied in special education.

Prerequisite: SPCE 609 or permission of the department chairperson.

764 Seminar in Special Education (3-6) A critical study of current issues, problems, and research in special education by individuals or groups.

A total of 6 credits may be earned.