

BALL STATE UNIVERSITY

ACADEMIC POSTING

2017-2018

VOLUME XLVIII – 5

March 26, 2018

This posting may contain all or part of the following: new, revised, and dropped programs, courses and prefixes. The posting period begins March 26, 2018. If no demurrer is received within ten school days, the changes will be certified for implementation. *The effective date for implementing the undergraduate and graduate materials posted after May 5, 2018 is Fall Semester 2019.*

COLLEGE OF ARCHITECTURE AND PLANNING

Department of Architecture

Revised:

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

<i>PREFIX</i>	<i>NO</i>	<i>SHORT TITLE</i>	<i>CREDITS</i>
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)

<i>PREFIX</i>	<i>NO</i>	<i>SHORT TITLE</i>	<i>CREDITS</i>
<i>Undergraduate preparatory:</i>			
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

ARCHITECTURE (ARCH)

Revised:

100 Introduction to Architecture (2) An introduction to architecture through an exploration of products of the built environment.

Open to all students.

201 Architectural Design (4) Introduction to the architectural design sequence. Projects focus on conceptual architectural design and design methodologies in small and intermediate-scale projects, introduction of architectural technology, research, analysis, and programming.

Open only to B. ARCH; BA/BS architecture; BA/BS environmental design.

202 Architectural Design (4) Conceptual architectural design and design methodologies in large-scale projects; introduction of architectural technology, research, analysis, and programming. Workshops in the exploration and development of visualization and communication skills at all stages of the design process.

Prerequisite: ARCH 201.

Open only to B. ARCH; BA/BS architecture; BA/BS environmental design.

214 Architectural Building Technology 1 (3) Methods and materials of architectural construction. Emphasizes interface of material selections and construction technology in the design, production, and construction process.

Open only to B. ARCH; BA/BS architecture; BA/BS environmental design.

218 Structural Systems 1 (3) Basic introduction to the mathematical foundations of statics--equilibrium, balance, centroids, neutral axis--with primary focus on developing a basic understanding of concepts of conditions of equilibrium and force systems.

Open only to B. ARCH; BA/BS architecture; BA/BS environmental design.

229 History of Architecture 1 (3) A survey of the major movements in Western architecture and urbanism from antiquity through the nineteenth century, and an introduction to developments in vernacular and high-style architecture outside the West in precolonial and/or post-colonial periods.

Prerequisite: ARCH 100.

Open only to B. ARCH; BA/BS architecture; BA/BS environmental design.

251 Introduction to Social and Environmental Justice in Design (3) Introduces students to the essential role that architecture plays in promoting socially and environmentally just communities by acknowledging the values of human rights, social equity, and the dignity of every human being.

Open only to B. ARCH; BA/BS architecture; BA/BS environmental design.

263 Digital Design (3) Introduction to the use of digital technology in architecture with an emphasis on design applications. Introduction to a wide range of digital programs, techniques, and skills. Development of judgment and discernment regarding the use of computers in architectural design.

Open only to B. ARCH; BA/BS architecture; BA/BS environmental design.

273 Environmental Systems 1 (3) Introduction to environmental systems in architecture with emphasis on passive interventions.

Open only to B. ARCH; BA/BS architecture; BA/BS environmental design.

301 Architectural Design (5) Integration of all facets of design including design, research, programming, technology, function, human behavior, scheduling, time management, communication, use of materials, and systems. Workshops in the further exploration and development of visualization and communication skills at all stages of the design process.

Prerequisite: ARCH 202.

Open only to B. ARCH; BA/BS architecture; BA/BS environmental design.

302 Architectural Design (5) A rigorous in-depth exploration of a selected topic in architectural design. Design studio and seminar in theories and principles related to the selected topic.

Prerequisite: ARCH 301.

Open only to B. ARCH; BA/BS architecture; BA/BS environmental design.

314 Architectural Building Technology 2 (3) Methods and materials of architectural construction. Emphasizes interface of material selections and construction technology in the design, production, and construction process. Production of construction documentation.

Prerequisite: ARCH 214.

Open only to B. ARCH; BA/BS architecture; BA/BS environmental design.

318 Structural Systems 2 (3) Strength of materials, stress, strain, and modulus of elasticity. Introduction to steel systems and their application to the design of horizontal and vertical building systems. Introduction to lateral force systems for earthquake and wind.

Prerequisite: ARCH 218.

Open only to B. ARCH; BA/BS architecture; BA/BS environmental design.

329 History of Architecture 2 (3) Survey of the movements and major figures in architecture and design from the late nineteenth century to the present, with consideration given to the social and cultural context of design ideas.

Prerequisite: ARCH 229.

Open only to B. ARCH; BA/BS architecture; BA/BS environmental design.

340 Introduction to Historic Preservation for Architects (3) The introduction of historic preservation in the context of

architectural practice. Students will become familiar with the significant public and private Preservation agencies and organizations, along with the roles they play in the Preservation movement. The legal basis of preservation will be surveyed, as well as the process for documenting, designating, and protecting historic properties. Preservation treatment and re-use options will be discussed in light of conservation, sustainability and cultural continuity.

Not open to students who have credit in ARCH 440.

Open only to B. ARCH; BA/BS architecture; BA/BS environmental design.

373 Environmental Systems 2 (3) Application of the principles of physics to the design and engineering of environmental systems in buildings and technologies of active intervention.

Prerequisite: ARCH 273.

Open only to B. ARCH; BA/BS architecture; BA/BS environmental design.

401 Architectural Design (5) Capstone project: a design-based study in depth requiring students to reflect on and synthesize previous course work.

Prerequisite: ARCH 301.

Open only to BA/BS architecture.

402 Architectural Design (6) ARCH 402 allows students to engage in architectural design projects on or off campus providing students a high degree of self-direction. Draws on knowledge and skills of previous course work. Both ARCH 405 and 406 (two independent summer programs) must be completed to obtain substitute credit for ARCH 402.

Prerequisite: ARCH 301.

Open only to BA/BS architecture.

403 Architecture Design Studio (6) Architecture design studio investigating topical architectural problems that may have an interdisciplinary and/or applied aspect. Within this, students are expected to increasingly define their design values and effective methods for engaging and representing them.

Prerequisite: ARCH 400.

Parallel: ARCH 424.

Open only to B. ARCH.

410 Critical Practice (3) Exposure to diverse practice models in architecture and related fields (professional mentorship, case study research, analysis of diverse roles and relationships of key stakeholders in the architectural profession and allied disciplines) and application of these experiences to practice scenarios (role playing, collaborative teamwork and practice plan development/marketing proposals) providing experience with the diverse breadth of architectural practices to inform student's professional path.

Open only to B. ARCH; BA/BS architecture; BA/BS environmental design.

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.

Dropped:

261 Design Communications Media (1)

421 Topics in the History of Oriental Architecture (3)

437 Topics in the History of 19th- and 20th-Century Architecture (3)

495 Architecture History/Theory Elective (3-6)

Department of Construction Management and Interior Design

Revised:

MAJOR IN CONSTRUCTION MANAGEMENT (BA/BS), 96 credits

Students preparing for management positions in the field of construction will complete the program below with a required minor in business administration. This prepares graduates to become project managers, estimators, project planners, technical trainers, CAD technicians, safety officers, site superintendents, product marketing representatives, and purchasers.

Two required internship experiences provide students with relevant work experience in the field of construction.

PREFIX	NO	SHORT TITLE	CREDITS
CM	104	Introduction to Construction	3
	106	CAD for Const Management	3
	180	Construction Documents	3
	200	Site Preparation	3
	222	Technical Presentation	3
	250	Construction Methods Matls 1	3
	261	Mechanical Construction	3
	262	Electrical Construction	3
	300	Structural Mechanics	3
	310	Ethics in Construction	3
	320	Estimating	3
	355	Planning and Scheduling	3
	365	Construction Safety	3
	380	Internship in Construction Mgt (3)	6
	400	Const Proj Mngmnt	3
	420	Construction Finance and Law	3
	460	Capstone in Construction	3
ECON	201	Elementary Microeconomics	3

MATH	132	Brief Calculus	3
	181	Elementary Probability Stats (3)	
		or	
ECON	221	Business Statistics (3)	3
PHYC	110	General Physics 1	4
	112	General Physics 2 (4)	
		or	
CHEM	111	General Chemistry 1 (4)	4
NREM	211	Water Resources (3)	
		or	
NREM	221	Soil Resources (3)	3

7 credits from the following CM technical electives (or as approved by advisor)

CM	206	Building Information Modeling (3)	
	280	Construction Specifications (3)	
	299X	Special Topics in CM (1-9)	
	302	Highway Construction 1 (3)	
CM	315	Sustainable Construction (3)	
	490	Independent Study in CM (1-9)	7

81 crs

The prerequisite for MATH 132 is a C- or better in MATH 111, or an appropriate score on the SAT/ACT or on the mathematics placement test, or permission of the department chairperson. The prerequisite for ECON 221 is a C or better grade in MATH 111, or a passing grade (D- or better) in MATH 132, 161, 162, 165, or 166 and a C or higher grade in ISOM 125. Other prerequisites may be necessary for MATH 111.

CHEM 111, ECON 201, MATH 132, PHYC 110, and CM 460 are required as part of the University Core Curriculum.

Students may elect to take MATH 112, 125, and one additional science course (PHYC 112 or CHEM 112) instead of taking MATH 132 to meet accreditation, university, and program requirements. This election may take more than 120 credits for graduation.

Minor in Business Administration for Construction Management, 15 credits

ACC	201	Principles of Accounting 1	3
BL	260	Principles of Business Law	3
ISOM	251	Introductory Operations Mgt	3
MGT	300	Managing Behavior in Org	3

Business elective 3

15 crs

96 crs

Students may choose the business elective from ACC 202; ECON 202; RE 230; RMI 270; ENT 241, MGT 261; or other business elective as approved by the construction management student advisor.

MINOR IN CONSTRUCTION MANAGEMENT, 18 credits

PREFIX	NO	SHORT TITLE	CREDITS
Construction core, 15 credits			
CM	104	Introduction to Construction	3
	180	Construction Documents	3
	320	Estimating	3
	355	Planning and Scheduling	3
	400	Const Proj Mngmnt	3
			15 crs

3 credits from

CM	106	CAD for Const Management (3)	
	200	Site Preparation (3)	
	250	Construction Methods Matls 1 (3)	
	280	Construction Specifications (3)	
	300	Structural Mechanics (3)	
	310	Ethics in Construction (3)	
	315	Sustainable Construction (3)	
	365	Construction Safety (3)	
			18 crs

CONSTRUCTION MANAGEMENT (CM)

Dropped/replaced:

*Dropped courses on left; replacement courses on right.
For dropped/replaced courses that also have revisions, the old
courses are notated in parenthesis.*

TCST 104 → CM 104
 TCST 106 → CM 106
 TCST 180 → CM 180
 TCST 200 → CM 200
 TCST 206 → CM 206
 TCST 222 → CM 222
 TCST 250 → CM 250
 TCST 251 → CM 251
 TCST 252 → CM 252
 TCST 261 → CM 261
 TCST 262 → CM 262
 TCST 280 → CM 280
 TCST 299X → CM 299X
 TCST 302 → CM 302
 TCST 303 → CM 303
 TCST 310 → CM 310
 TCST 320 → CM 320
 TCST 350 → CM 350
 TCST 355 → CM 355
 TCST 365 → CM 365
 TCST 400 → CM 400
 TCST 420 → CM 420
 TCST 460 → CM 460
 TCST 490 → CM 490
 TCST 697 → CM 697

TCST 698 → CM 698

300 (TCST 300) Structural Mechanics (3) The study of static equilibrium, free-body, shear and bending-moment diagram. The computation of loads, moment, and shear for beams and trusses.

Prerequisite: MATH 112 or 132; PHYC 110.

315 (TCST 315) Sustainable Construction (3) Provides detailed knowledge related to sustainable construction. Emphasis will be on green building rating systems, and course work includes case studies, guest speakers, field trips, investigation of green materials, and a term project.

380 (TDPT 380) Internship in Construction Management (3) Emphasizes internal or external placement in a construction management workplace. Provides opportunities to integrate and apply course content to the workplace. A paid or unpaid work experience for majors in the Construction Management program.

Prerequisite: CM 104 and permission of the Construction Management Internship Coordinator.

A total of 6 credits may be earned.

Open only to construction management majors.

School of Music

MUSIC MEDIA PRODUCTION (MMP)

Dropped:

140 Computer Music 1 (3)

MUSIC HISTORY AND MUSICOLOGY (MUHI)

Dropped:

399 Collegium Musicum (1)

SCHOOL OF MUSIC (MUSC)

Dropped:

120 Jazz: A Multicultural Legacy (3)

372 Musical Theatre Workshop (2-10)

471 Musical Theatre in America (2)

MUSIC EDUCATION (MUSE)

Revised:

355 Instrumental Music Methods (String) (3) Focuses on developing the knowledge, performances, and dispositions required of school instrumental music educators in elementary, middle school, and high school string/orchestra settings. Topics include administration, curriculum development, literature selection, instructional planning, and teaching strategies. This course is limited to 2 attempts. An attempt is defined as any registration resulting in a letter grade of W.

Prerequisite: C or better grades in MUSE 100, 150, and 256; or permission of the director of the school.

Open only to music majors and minors.

375 Instrumental Music Methods (Band) (3) Focuses on developing the knowledge, performances, and dispositions required of school instrumental music educators in elementary, middle school, and high school band settings. Topics include administration, curriculum development, literature selection, instructional planning, and teaching strategies. This course is limited to 2 attempts. An attempt is defined as any registration resulting in a letter grade of W.

Prerequisite: C or better grades in MUSE 100, 150, 250, and 252; or permission of the director of the school.

Open only to music majors and minors.

Dropped:

455 Instrument Maintenance and Repair (2)

456 Principles of String Teaching: Seminar and Practicum (2)

478 Teaching Multicultural Music (2)

MUSIC PERFORMANCE (MUSP)

Dropped:

251 Jazz Styles (2)

COLLEGE OF HEALTH

School of Kinesiology

Revised:

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 physical education, 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

MASTER OF SCIENCE 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, 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 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.

Exercise Physiology, 33-38 credits

<i>PREFIX</i>	<i>NO</i>	<i>SHORT TITLE</i>	<i>CREDITS</i>
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

MINOR IN COACHING, 18 credits

Admission requirements

- Attain minimum overall GPA of 2.5 at time of application.
- Completion of PEP 231 with a C or better.
- Completion of at least 10 hours of field experience in competitive athletic coaching.
- Completion of Ball State University Coaching Minor application.

<i>PREFIX</i>	<i>NO</i>	<i>SHORT TITLE</i>	<i>CREDITS</i>
<u>Coaching Essentials</u>			
AT	240	Prevention and Care of Injury	3

PEP	231	Foundations of Coaching	3
	409	Psychological Social Issues	3
	433	Coaching Internship	3
SPTA	190	Introduction to Sport Admin	3

Coaching Electives

3 credits from

AQUA	315	Water Safety Instructor (WSI) (3)	
EXSC	147	Resistance Training Leadership (1)	
	201	Human Perform Concepts Assess (3)	
	292	Anatomy	
NUTR	340	Prin of Human Nutrition (3)	
PEP	227	Intro Adapted Physical Ed Act (3)	
	250	First Aid (2)	
	291	Motor Development and Learn (3)	3

18 crs

Program requirements

A Minor in Coaching is awarded to students who meet the following requirements. Students must:

- Maintain overall GPA 2.5 and coaching minor GPA of 2.75.
- Complete 18 credits of course work prescribed above.
- Students may only use three credits from their major for completion of their Coaching Minor.
- Provide proof of current CPR, First Aid, and AED certification. The completion of PEP 250 may satisfy this requirement.
- Obtain a National Federation of State High School Associations (NFHS) or an American Sport Education Program (ASEP) sport certification in one of the following: baseball, basketball, football, golf, lacrosse, soccer, softball, swimming and diving, tennis, track and field, volleyball, or wrestling.

COLLEGE OF SCIENCES AND HUMANITIES

Department of English

ENGLISH (ENG)

Revised:

350 Teaching Writing in Secondary Schools (3)

Concentrates on materials, methods, and resources used in teaching composition and the use of performance assessments in the English Language Arts classroom. Additional focus on technology and multimedia in practice, introduction to pedagogical practices and curriculum development. Required of teaching majors; may not be applied toward other departmental programs.

Prerequisite: must have completed decision point two or permission of the department chairperson.

Parallel: EDJH 385.

395 Teaching Literature and Language in Secondary Schools (3) Concentrates on materials, methods, and resources used in teaching literature, visual representation, language, speaking, and listening in the English Language Arts classroom. Advanced study of pedagogical practices related to planning, curriculum, and professional development. Required of teaching majors; may not be applied toward other departmental programs.

Prerequisite: ENG 350 or permission of the department chairperson.

Parallel: EDSE 380.

Department of History

HISTORY (HIST)

SOCIAL STUDIES (SS)

Revised:

150 Introduction to Teaching History/Social Studies in Secondary Schools (3) An introduction to the process of becoming a history/social studies teacher in secondary schools. Through coursework and targeted clinical experiences, teacher candidates will begin to form their professional identities as future educators, develop a beginning knowledge base for teaching, and engage with the integration of technology throughout the learning process. They will also observe, develop, and demonstrated initial core teaching practices.

350 Teaching History/Social Studies in Junior High/Middle School (3) Emphasizes disciplinary literacy, civic education, and methods of planning, instruction, and assessment in junior high/middle school history/social studies classrooms.

Prerequisite: junior status; completion of HIST 200 with a grade of C or better; admission to professional education program.

Parallel: EDJH 385.

395 Teaching Social Studies in Secondary Schools (3) Emphasizes discipline-specific teaching methods, civic education, deliberative discussion in the classroom, and planning, instruction, and assessment in high school history/social science classrooms.

Prerequisite: SS 350.

Parallel: EDSE 380.

Department of Mathematical Sciences

Revised:

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 Concpnts 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

TEACHING MAJOR IN MATHEMATICS (BA/BS), 92-93 credits

PREFIX	NO	SHORT TITLE	CREDITS
MATH	165	Calculus 1	4
	166	Calculus 2	4
	215	Discrete Systems	4
	217	Linear Algebra	4
	221	Probability and Statistics	3
	249	Advanced Pre-College Math I	3
	250	Advanced Pre-College Math II	3

Complete one concentration

Concentration 1: Middle school, 22 credits

MATH	201	Num Oper Alg Reas Elem Teach	4
	202	Data Geo Meas Elem Teach	3
	310	Algebra Elem Mid Scl Teach	3
	316	Num Thry Elem Mid Scl Teach	3
	360	Geometry Elem Mid Scl Teach	3
At least 6 credits from (as approved by advisor)			
MATH	251	Intro to Mathematics of Financ (2)	
	267	Calculus 3 (4)	
	311	Algebraic Structures (3)	
	335	Mathematical Models (3)	
	345	Survey of Geometries (4)	
	416	Theory of Numbers (3)	
	460	History of Mathematics (3)	
	470	Intermediate Analysis (3)	6
			<hr/>
			47 crs

Concentration 2: Secondary school, 23 credits

MATH	267	Calculus 3	4
	311	Algebraic Structures	3
	335	Mathematical Models	3
	345	Survey of Geometries	4
	460	History of Mathematics	3
	470	Intermediate Analysis	3

At least 3 credits from (as approved by advisor)

MATH	251	Intro to Mathematics of Financ (2)	
	320	Probability (4)	
	362	Numerical Analysis 1 (3)	
	374	Differential Equations (3)	
	377	Complex Analysis (3)	
	411	Abstract Algebra 1 (3)	
	415	Coding and Communication (3)	
	416	Theory of Numbers (3)	
	441	Geometry and Topology (3)	
	445	Differential Geometry (3)	
	456	Intro Operations Research (3)	
	471	Real Analysis 1 (4)	
	473	Boundary Value Problems (3)	
	475	Topics Partial Dif Equations (3)	
	497	Student Faculty Colloquium (1-6)	3
			<hr/>
			48 crs

Students are encouraged to take CS 120 and PHYC 120. PHYC 120 satisfies the TIER 1 natural science requirement in the University Core Curriculum. All students will be required to take a comprehensive exam designated by the department.

SENIOR HIGH, JUNIOR HIGH/MIDDLE SCHOOL EDUCATION PROGRAM

PREFIX	NO	SHORT TITLE	CREDITS
<i>Professional education sequence, 45 credits</i>			
EDFO	420	Soc, Hist, Phil Found of Ed	3
EDJH	385	Theory into Prac Mid Lev Schls	3
EDMU	205	Intro to Multicul Ed	3
EDPS	251	Development Secondary	3
	390	Educational Psychology	3
EDSE	320	Read Div Sec Cont Class	3

	380	Theory into Prac Second Schls	3
MATH	150	Intro Tchng Math in Sec School	3
	331	Technology Teach Assess Math	3
	393	Teach Mathematics Middle Schl	3
	395	Teach Mathematics Secondary	3
Student teaching			12
			<hr/>
			45 crs
			<hr/>
			92-93 crs

See Professional Education Assessment/Decision Points, p. 395, for additional information.

LICENSE IN MIDDLE SCHOOL/JUNIOR HIGH MATHEMATICS, 24-31 credits

Students follow the elementary education Decision Points.

Only open to candidates who currently hold or who are pursuing a license in elementary: intermediate education. Middle school/junior high licensure in mathematics will be granted when the following criteria are met:

- all requirements for the elementary intermediate license;
- completion of the following mathematics content courses with a C- or better grade;
- completion of the following mathematics content courses with a 2.5 minimum grade-point average;
- completion of the professional education courses with a 2.5 minimum grade-point average;
- passing score on the exam for middle school mathematics.

Decision Point 2 - Students must complete the following before registering for MATH 393:

- Meet with a MJH Mathematics advisor to declare interest in the program and to review progress.
- Complete all Decision Point 1 and 2 requirements for Elementary Education.
- Complete the following mathematics content courses with a grade of C- or better and a grade-point average of 2.5 or better; MATH 161 or 165, 181, and 310.
- A Calculus Presentation delivered to faculty members in the Department of Mathematical Sciences and receiving a score of "basic" or better.
- In the digital portfolio, include a reflective artifact addressing what was learned in the above courses and the need for acquiring knowledge beyond the level taught in the middle grades.
- In the digital portfolio, include a reflective artifact addressing what was learned about mathematics and teaching mathematics from the experience of preparing and delivering the Calculus Presentation.

Decision Point 4 - Students must complete the following to receive recommendation for licensure in middle school/junior high mathematics:

- Meet with a MJH Mathematics advisor to review progress.
- Complete all Decision Point 3 and 4 requirements for Elementary Education.

- Complete student teaching in a middle school/junior high mathematics classroom or in a grade 5 or 6 elementary school classroom.
- Complete all required mathematics content courses with a grade of C- or better and a grade-point average of 2.5 or better: MATH 161 or 165, 181, 310, 316, 331, and 360.
- Complete professional education courses with a grade of C or better and a grade-point average of 2.5 or better; EDJH 385 and MATH 393.
- In the digital portfolio, include one new artifact for each of seven of the ten INTASC principles, each with an accompanying rationale clearly labeled “DP3,” that addresses knowledge, performances, or dispositions related to teaching middle school mathematics.
- Earn a passing score on the exam for Middle School Mathematics.

<i>PREFIX NO</i>	<i>SHORT TITLE</i>	<i>CREDITS</i>
Middle school/junior high content area, mathematics, 24-31 credits		
MATH 161	Applied Calculus 1 (3)	
	or	
165	Calculus 1 (4)	3-4
181	Elementary Probability Stats	3
310	Algebra Elem Mid Scl Teach	3
316	Num Thry Elem Mid Scl Teach	3
331	Technology Teach Assess Math	3
360	Geometry Elem Mid Scl Teach	3

18-19 crs		
Professional education, 6-12 credits		
EDJH 385	Theory into Prac Mid Lev Schls	3
MATH 393	Teach Mathematics Middle Schl	3
Additional student teaching		0-6

6-12 crs		

24-31 crs		
Additional student teaching may be waived if elementary student teaching is in grade 5 or grade 6.		

Department of Modern Languages and Classics

JAPANESE (JAPA)

New:

205 Japanese Popular Culture (3) Examines contemporary Japanese popular culture with topics including: anime, comics,

games (ACG), J-POP, fashion, idols and fan communities from historical and theoretical perspectives. Taught in English.

Department of Psychological Science

PSYCHOLOGICAL SCIENCE (PSYS)

Dropped/replaced:

*Dropped courses on left; replacement courses on right.
For dropped/replaced courses that also have revisions, the old courses are notated in parenthesis.*

PSYS 213 → PSYS 313

PSYS 342 → PSYS 441

285 (385) Professional Ethics in Psychology (1) Introduces selected ethical issues in psychological research and practice. Offered only online through Online and Distance Education. Offered credit/no credit only.

Prerequisite: PSYS 241.

Open only to psychological science majors.

318 (432) Psychopathology (3) Systematic study of behavior pathology. Primary emphasis on the use of theoretical perspectives and empirical data to understand the description, etiology, prognosis, treatment, and prevention of abnormal behavior. Core Transfer Library: Behavioral Sciences/Humanities (ISH 1023).

Prerequisite: PSYS 100.

326 (424) Psychology of Diversity (3) Presents current knowledge and research concerning the psychological study of diversity. Consideration may be given to ethnicity, sexual orientation, gender, disability, aging, and other aspects of cultural diversity; the intersection of these dimensions; and issues of societal privilege and disadvantage.

Prerequisite: PSYS 100.

363 (416) Cognitive Psychology (3) Survey of theories and research about human thought and memory. Topics include attention, memory, problem solving, and language.

Prerequisite: PSYS 100.

368 (412) Sensation and Perception (3) Survey of theories, methods, and knowledge concerning sensory physiology, sensation, and perception. Emphasizes studies of people.

Prerequisite: PSYS 100.

477 (396) Seminar for Teaching Assistants (1) Designed for students who are serving as first-time teaching assistants for psychological science courses. Helps them integrate their teaching assistantship duties with the pedagogy of the teaching of psychology, including ethical issues and working with a diverse student body. Offered credit/no credit only.

Prerequisite: PSYS 100 and permission of the instructor.

Revised:

295 Career Planning in Psychology (1) Helps develop an awareness of psychology courses, minors, internships, research and teaching assistantships, and other opportunities; learn about career options and graduate school selection processes; and explore personal strengths and weaknesses with regard to long term goals.

Prerequisite: PSYS 100.

Open only to psychological science majors.

447 Tests and Measures in Psychological Science (3)

Theoretical and practical foundations underlying the construction, use, interpretation of standardized psychological tests and inventories, and development of a psychological measure.

Prerequisite: PSYS 284.

478 Teaching Assistantship (1-3) Under the supervision of the instructor of a course, students will carry out course-related duties assigned by the instructor. Students taking this course for the first time must have completed PSYS 477 or be currently enrolled in that course. Offered credit/no credit only. No more than 3 credits may be used to meet the requirements of the psychological science major.

Prerequisite: PSYS 100; permission of the instructor

Prerequisite or parallel: PSYS 477.

A total of 6 credits may be earned, but not more than 3 in any one semester or term.

492 Research Seminar (3) Students conduct research in which they pose and answer one or more meaningful questions about a topic of interest and relevance to them. All students are expected to complete a literature review, to collect and analyze data, and to interpret and publicly report their findings.

Prerequisite: PSYS 284 and 285 and a minimum of 12 additional credits in psychology.

Open only to psychological science majors with senior status.

499 Department Honors in Psychology (1-2) Regular meetings devoted to presentation, discussion, and writing associated with completing departmental honors. This includes active participation in original research completed under the supervision of department faculty.

Prerequisite: PSYS 284 and 285; a minimum of 12 additional credits in psychology; permission of the department chairperson.

A total of 3 credits may be earned, but no more than 2 in any one semester or term.

Open only to psychological science majors with senior status.

TEACHERS COLLEGE

Department of Educational Studies

Revised:

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 Lrng Tech (3)	
		or equivalent course to be determined with advisor	6
			<hr/>
			15 crs

Department of Family, Consumer, and Technology Education

New:

MINOR IN FAMILY ENGAGEMENT, 15 credits

PREFIX	NO	SHORT TITLE	CREDITS
FCFC	250	Family Relations	3
	380	Parenting	3
	393	Present Practice Tech Fam Educ	3
	394	Family Services Administration	3
	484	Family Stressors and Crises	3
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			15 crs

This minor is not open to Family and Child majors.

MINOR IN INFANT AND TODDLER SPECIALIZATION, 15 credits

PREFIX	NO	SHORT TITLE	CREDITS
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FCFC	202	Child and Family Wellness	3
	310	Promot Prosocial Behav Child	3
	315	Infant Toddler Curr Envir	3
	320	Leadership Mgt Child Dev Prog	3
	380	Parenting	3

15 crs

This program is offered online only. Students cannot earn both a Minor in Infant and Toddler Specialization and Certificate in Infant and Toddler Specialization. Not open to Family and Child majors.

Revised:

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
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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
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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.

FAMILY AND CONSUMER SCIENCES: EDUCATION (FCED)

Revised:

150 Introduction to Teaching Family and Consumer Sciences Education in Secondary Schools (3)

An introduction to the process of becoming a Family and Consumer Sciences teacher in secondary schools. Through coursework and targeted clinical experiences, teacher candidates will begin to form their professional identities as future educators, develop a beginning knowledge base for teaching, and engage with the integration of technology throughout the learning process. They will observe, develop, and demonstrate initial core teaching practices.

492 Implementation of Family and Consumer Sciences Education Programs (3)

Emphasizes techniques for implementing Family and Consumer Science education programs, including applications for learning styles, teaching methods, lesson plans, student clubs (FCCLA) and technology.

Prerequisite: FCED 261 or program approval.

493 Coordination of Family and Consumer Science

Programs (3) Coordination and implementation of programs relating to the mission of Family and Consumer Sciences. Includes recruiting, selecting, and evaluating individuals; working with an advisory committee, role of the coordinator, selecting, creating and evaluating resources/curriculum for a variety of audiences, and implementing programs to a variety of audiences. Involves presentations in the community outside of class time.

Prerequisite: FCED 261 or program approval.

Laura Helms

Executive Director of Academic Services
Associate Dean, University College