

# BALL STATE UNIVERSITY

## ACADEMIC POSTING

2016-2017

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VOLUME XLVIII – 1

October 17, 2016

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This posting may contain all or part of the following: new, revised, and dropped programs, courses and prefixes. The posting period begins October 18, 2016. 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 9, 2016 is Fall Semester 2017.*

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### INTERDEPARTMENTAL PROGRAMS

#### International Studies

##### Correction (2016-17 Undergraduate Catalog):

MINOR IN INTERNATIONAL STUDIES, 16-17 credits

##### Added the following courses:

HIST 324, 426, 427, 471, 491, 493, 496

### COLLEGE OF APPLIED SCIENCES AND TECHNOLOGY

#### Interdepartmental Programs

#### ACADEMY FOR SUSTAINABILITY

##### **PENDING ICHE APPROVAL**

##### Correction (per Robert Koester):

Master of Arts in Sustainability, 30 credits

Master of Science in Sustainability, 30 credits

##### Degree requirements

Requires 30 credits of graduate courses. Students who completed the graduate Certificate in Sustainability can apply up to 12 credits from the certificate to the Masters in Sustainability degree, but only 6 credits can come from the one-credit sustainability courses.

### MILLER COLLEGE OF BUSINESS

### Department of Accounting

#### ACCOUNTING (ACC)

##### Revised:

**401 Introduction to Taxation (3)**

**Revise prerequisite:** minimum grade of C in ACC 201.

### Department of Economics

#### ECONOMICS (ECON)

##### Revised:

**301 Intermediate Microeconomics (3)**

**Revise prerequisite:** ECON 201 with a minimum grade of C; ECON 202.

**302 Intermediate Macroeconomics (3)**

**Revise prerequisite:** ECON 201 with a minimum grade of C; ECON 202.

**309 American Economic History/Development from Origins to the Civil War (3)**

**Revise prerequisite:** minimum grade of C in ECON 116 or 201.

**310 American Economic History/Development from the Civil War to the Present (3)**

**Revise prerequisite:** minimum grade of C in ECON 116 or 201.

**311 Environmental Economics (3)**

**Revise prerequisite:** minimum grade of C in ECON 116 or 201 or permission of the instructor.

**331 Labor Economics (3)**

**Revise prerequisite:** minimum grade of C in ECON 116 or 201.

**332 Labor Relations and Law (3)**

**Revise prerequisite:** ECON 201 with a minimum grade of C; ECON 202; or permission of the department chairperson.

**345 The Economics of Government Budgets (3)**

**Revise prerequisite:** minimum grade of C in ECON 201.

**346 Economic Analysis of Legal Issues (3)**

**Revise prerequisite:** minimum grade of C in ECON 201.

**348 Health Economics (3)**

**Revise prerequisite:** minimum grade of C in ECON 201.

**351 International Economics (3)**

**Revise prerequisite:** minimum grade of C in ECON 201.

**370 Industrial Organization (3)**

**Revise prerequisite:** minimum grade of C in ECON 201.

**380 Economic Growth (3)**

**Revise prerequisite:** ECON 201 with a minimum grade of C; ECON 202.

**381 Economics for Teachers: Content Issues and Pedagogy (3)**

**Revise prerequisite:** ECON 201 with a minimum grade of C; ECON 202.

**416 History of Economic Doctrines (3)**

**Revise prerequisite:** ECON 201 with a minimum grade of C; ECON 202.

**421 Mathematical Economics (3)**

**Revise prerequisite:** ECON 201 with a minimum grade of C; ECON 202; MATH 132 or its equivalent.

**424 Econometrics (3)**

**Revise prerequisite:** ECON 201 with a minimum grade of C; ECON 202, and either ECON 321 or MATH 321 or permission of the department chairperson.

**441 The Theory of Monetary Policy (3)**

**Revise prerequisite:** ECON 201 with a minimum grade of C; ECON 202.

**461 Comparative Economic Systems (3)**

**Revise prerequisite:** ECON 201 with a minimum grade of C; ECON 202.

**485 Urban Economics (3)**

**Revise prerequisite:** minimum grade of C in ECON 201.

**495 Seminar in Economics (1-3)**

**Revise prerequisite:** ECON 201 with a minimum grade of C; ECON 202; permission of the department chairperson.

**Department of Information Systems and Operations Management**

**BUSINESS EDUCATION (BED)**

**Revised:**

**383 Curriculum and Methods for Teaching Computer Applications and Careers (3)**

**Revise prerequisite:** ISOM 112; minimum grade of C in ISOM 125.

**387 Teaching Business in Middle and Secondary School (3)**

**Revise prerequisite:** ACC 201, ECON 201, and ISOM 125 with a minimum grade of C; EDPS 251.

*Parallel:* EDJH 385; EDSE 380.

**INFORMATION SYSTEMS AND OPERATIONS MANAGEMENT (ISOM)**

**Revised:**

**228 Advanced Microcomputer Applications for Business (3)**

**Revise prerequisite:** minimum grade of C in ISOM 125 or equivalent or permission of the department chairperson.

**255 Introduction to Business Information Technology (3)**

**Revise prerequisite:** minimum grade of C in ISOM 125.

**313 Databases and Information Resource Management (3)**

**Revise prerequisite:** ISOM 125 with a minimum grade of C; or CS 104 or proficiency test or permission of the department chairperson.

**340 Multimedia and Web Publishing for Business (3)**

**Revise prerequisite:** minimum grade of C in ISOM 125.

**Department of Management**

**MANAGEMENT (MGT)**

**Correction (2016-17 Undergraduate Catalog):**

**MGT 300 Managing Behavior in Organizations (3)**

**Revise prerequisite:** sophomore standing; C or better grade in ECON 116 or 201.

**Revised:**

**342 Marketing for New Ventures (3)**

**Revise prerequisite:** ECON 116 or 201 or ACC 201 with a minimum grade of C; MGT 241.

**343 Venture Leadership (3)**

**Revise prerequisite:** ECON 116 or 201 or ACC 201 with a minimum grade of C; MGT 241.

**345 Management for New Ventures (3)**

**Revise prerequisite:** ECON 116 or 201 or ACC 201 with a minimum grade of C; MGT 241, 342.

*Prerequisite or parallel:* MGT 343.

## Department of Marketing

### MARKETING (MKG)

#### Revised:

#### 325 Professional Selling (3)

**Revise prerequisite:** minimum grade of C in ECON 116 or 201.

*Prerequisite or parallel:* MKG 300.

## COLLEGE OF COMMUNICATION, INFORMATION, AND MEDIA

## Department of Journalism

### JOURNALISM (JOUR)

#### Revised:

**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.

## COLLEGE OF HEALTH

## School of Kinesiology

### Correction (2016-17 Undergraduate Catalog):

#### EXERCISE SCIENCE MAJOR IN PHYSICAL EDUCATION (BA/BS), 59-82 credits

Exercise Science: Health and Fitness concentration,  
15 credits from

**Add:** Directed electives (2)

#### PHYSICAL EDUCATION: PROFESSIONAL (PEP)

#### Dropped:

391 Motor Learning (3)

## Department of Social Work

## PENDING ICHE APPROVAL

#### New:

### 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 Privilge	3
	560	Soc Wk Field Pract 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)

**New:**

**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.

**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.

## **COLLEGE OF SCIENCES AND HUMANITIES**

### **Department of Biology**

#### **BIOLOGY (BIO)**

##### **Dropped:**

##### **344 Immunology (4)**

##### **New:**

**419 Biogeography (3)** Understanding of principles of biogeography including plant and animal distributions.

*Prerequisite:* BIO 111 and 112 or permission of the department chairperson.

**519 Biogeography (3)** Understanding of principles of biogeography including plant and animal distributions.

*Prerequisite:* BIO 111 and 112 or permission of the department chairperson.

**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 and 313.

##### **Revised:**

**215 Cell Biology (3)** An introduction to the biology of the cell, including cell differentiation and growth, the nature of the

organization of the cell, basic bioenergetics and enzyme function, cell environment, membrane structure and function, cell metabolism, and the work performed by cells. Practical approaches to experimental design will be emphasized.

*Prerequisite:* BIO 111 and 112.

**444 (344) 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.

### **Department of Geography**

#### **GEOGRAPHY (GEOG)**

##### **Dropped:**

##### **230 Elementary Meteorology (3)**

##### **330 Weather Analysis (3)**

##### **331 Global Climatology (3)**

##### **332 Climate Change and Modification (3)**

##### **334 Atmospheric Hazards (3)**

##### **410 Broadcast Meteorology (3)**

##### **425 Physical Meteorology (3)**

##### **435 Satellite, Radar, and Forecasting (3)**

##### **447 Thermodynamic Meteorology (3)**

##### **449 Synoptic Meteorology (3)**

##### **450 Mesoscale Meteorology (3)**

##### **451 Dynamic Meteorology (3)**

##### **490 Field Observation of Severe Local Storms (6)**

##### **525 Physical Meteorology (3)**

##### **530 Weather Analysis (3)**

##### **531 Global Climate (3)**

##### **532 Climate Change and Modification (3)**

##### **534 Atmospheric Hazards (3)**

##### **535 Satellite and Radar Forecasting (3)**

**547 Thermodynamic Meteorology (3)**

**549 Synoptic Meteorology (3)**

**550 Mesoscale Meteorology (3)**

**551 Dynamic Meteorology (3)**

**590 Field Observation of Severe Local Storms (6)**

## **METEOROLOGY AND CLIMATOLOGY (METC)**

### **Revised:**

**230 (GEOG 230) Elementary Meteorology (3)** Introductory presentation of basic meteorological processes with a focus on applying theory to the analysis and forecasting of local weather conditions.

**330 (GEOG 330) 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.

*Prerequisite:* METC 230.

**331 (GEOG 331) 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.

**332 (GEOG 332) 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.

**334 (GEOG 334) 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.

**410 (GEOG 410) Broadcast Meteorology (3)** Survey of weathercasting including history, current practice, and presentation techniques. Also examines methods for communicating scientific information to non-scientists. Includes a practicum where students present forecasts.

*Prerequisite:* METC 330.

**425 (GEOG 425) 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 and MATH 165 and PHYC 120.

**435 (GEOG 435) 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.

**447 (GEOG 447) 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 and MATH 165 and 166 and PHYC 120 and 122.

**449 (GEOG 449) 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 and MATH 165 and PHYC 120.

**450 (GEOG 450) 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.

**451 (GEOG 451) 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 and MATH 165 and 166 and PHYC 120 and 122.

**490 (GEOG 490) 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.

**525 (GEOG 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 (GEOG 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 (GEOG 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 (GEOG 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 (GEOG 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 (GEOG 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 (GEOG 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 convective 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 (GEOG 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 (GEOG 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 (GEOG 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 MATH 166 and PHYC 120 and PHYC 122.  
*Not open to students who have credit in METC 451.*

**590 (GEOG 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.

## Department of Geological Sciences

### GEOLOGY (GEOL)

#### Correction (2016-17 Undergraduate Catalog):

##### **GEOL 105 Laboratory in Physical Geology (1)**

Practical study of minerals, rock, planimetric and topographic maps, fold and fault structures, geological maps, climate change, earthquakes, flooding, sustainability; local field trip. An introductory high school or college earth science course.

*Prerequisite:* an introductory high school or college earth science course; permission of the department chairperson.

## Department of Philosophy and Religious Studies

### PHILOSOPHY (PHIL)

#### Dropped:

##### **313 Philosophy of Science (3)**

#### New:

**235 Bioethics (3)** An examination of ethical concepts and theories in biological sciences and health care fields. Topics may include distributive justice, autonomy, privacy, informed consent, research ethics, ethics and reproductive technologies, end of life decisions, and genetic ethics.

**370 Existentialism (3)** An exploration of existentialism, the philosophical movement that takes as its starting point the lived experience of the human being. Topics may include responsibility, angst, authenticity, freedom, ambiguity, the

"absurd," existence and essence, among others.

**380 Justice (3)** An investigation of philosophical questions about justice. Topics may include: intergenerational justice; economic justice; justice within families; what justice demands on behalf of people who have been marginalized because of disability, sexual orientation, race, citizenship, gender, etc.; justice as a virtuous character trait; and activist strategies for creating justice.

**RELIGIOUS STUDIES (RELS)**

**Dropped:**

**385 Paul and the Developing Church (3)**

**TEACHERS COLLEGE**

**Department of Educational Psychology**

**EDUCATIONAL PSYCHOLOGY (EDPS)**

**Correction (2016-17 Undergraduate Catalog):**

**EDPS 499 Independent Study: Educational Psychology (1-12)**

Individually planned experiences, extensive independent research in educational psychology.

*Prerequisite:* permission of the department chairperson.  
A total of 12 credits may be earned.

**Department of Special Education**

**Revised:**

**MINOR IN APPLIED BEHAVIOR ANALYSIS, 15 credits**

<i>PREFIX</i>	<i>NO</i>	<i>SHORT TITLE</i>	<i>CREDITS</i>
SPCE	280	Beh Analy Prin, Proc, and Phil	3
	307	Ethical, Prof Prac Beh Analy	3
	310	Application Consultation ABA	3
	315	Advanced Behavior Analysis	3
	316	Single Subj Res Design and App	3

15 crs

This program is offered on-line only. *Not open to* students with a Major in Applied Behavior Analysis or Certificate in Behavioral Studies.

**MINOR IN AUTISM SPECTRUM DISORDERS, 15 credits**

<i>PREFIX</i>	<i>NO</i>	<i>SHORT TITLE</i>	<i>CREDITS</i>
EDPS	270	Lifespan Development	3
SPCE	200	Exc Children Adults	3
	290	Intro Autism Spectrum Disorder	3
	292	Treatment and Intervention ASD	3
	320	Advanced Interventions for ASD	3

15 crs

This program is offered on-line only. *Not open to* students with a Major in Applied Behavior Analysis.

Laura Helms, Director  
Office of Academic Systems