

Courses Related to Sustainability

ACCT 420: Government and Not-for-Profit Accounting. *Fall 2017, 2018. Spring 2018.* Accounting 420 is designed to provide a broad understanding of the unique aspects of fund accounting and financial reporting for government and not-for-profit entities. The fund structure and financial reporting for governments and not-for-profit organizations are studied. The objective is for students to comprehend the similarities and differences of various fund structures and the financial reporting requirements of various funds in both government and not-for-profit accounting. In addition, students should be able to identify the appropriate circumstances in which to use each set of requirements.

ACCT 420G: Governmental Accounting. *Fall 2018, Spring 2018.* Provide a broad understanding of fund accounting and financial reporting for various types of governmental and not for profit organizations. Examines the similarities and differences among the fund structures and financial reporting requirements of the two categories of organizations. Types of organizations typically studied include: all governmental organizations, health care organizations, colleges and universities, and voluntary health and welfare organizations.

ACCT 450: Auditing and Assurance Services. *Fall 2018, Spring 2018.* Emphasizes the work of public accountants. Topics covered include auditing standards, professional ethics, legal liabilities, auditing objectives and procedures, preparation of audit working papers, reporting considerations when rendering an opinion on financial statements, and other services provided by accountants. Internal auditing, including the concepts of operational and compliance auditing, are also considered.

ADED 510: Introduction to Adult Education. *Fall 2017.* The purpose of this course is to provide an overview of the field of adult education, its definition, a brief history, some of its philosophies and models, and some methods commonly used to educate adults. This course will help introduce adult educators to some of the common knowledge found in the field of adult education.

ADED 611: Adult Development and Learning: *Fall 2017.* Psychological factors affecting adult development, learning, and motivation. Emphasis on how diverse academic career/experiential backgrounds and objectives affect classroom environments, teaching strategies, and testing and evaluation. The course was developed: a) to help prepare future community college faculty for teaching traditional and non-traditional students through the study of student characteristics, development, interests, and motivation; b) to help students apply appropriate learning models and

strategies, using materials and texts from their respective discipline; c) to help future faculty understand how different cultures and backgrounds affect learning; d) to understand the models of adult development.

AFAM 190: Introduction to the African-American Experience. *Fall 2017,2018.* This class introduces students to the interdisciplinary field of African American Studies through an examination of major themes, topics, and events in the African American experience. Drawing from a range of primary and secondary readings, students are provided with an historical foundation for understanding the African American experience, past and present. Students will be introduced to major debates germane to the African American experience representative leadership figures and intellectuals, and institutions that have focused their energies on finding ways to survive discrimination and oppression, advocate strategies for political change, and challenge the persistent barriers of inequality in America.

AFAM 343: Communities of Struggle. *Fall 2017,2018.* This course will allow students to: understand African American attitudes toward and responses to social justice movements across the globe; probe the shifting meaning of Africa and the African Diaspora in the intellectual, political, and social lives of African Americans; identify how the African Diaspora was created and its modern manifestations attendant to identity formations and patterns of forced and voluntary migrations, settlements, and conflicts; address the similarities and differences between African American social movements, at the local and national level, as well as their relationship to social movements across Africa and the African Diaspora; and, finally, demonstrate the impact of social movements elsewhere on African American social movements.

AFAM 393: African American Literature. *Fall 2017,2018.* African American Studies/English 393 is a course that focuses on representative works in the African American literary tradition. Our goal is to understand the major concerns of the incredibly broad and varied tradition of African American literature, which include not only the sensitive and sometimes difficult topics of enslavement, violation, violence, racism, and heterosexism, but also the topics of triumph, resistance, freedom, love, and sexuality. This semester, we will engage African American literature chronologically, moving through the 1700s to the present. Our aim is to understand the ways in which African American literary texts respond to major historical events of the past. As such, our study of literature will also include the study of history. Our aim is also to connect African American literature of the past to present-day realities. All of this work will be done in the service of understanding our primary archive of African American literature. Throughout the term, we will analyze the major artistic forms and approaches African American writers have used to explore and respond to their various concerns, including

the slave narrative, call-and- response, indirection/masking, and blues aesthetics, among others.

AFAM 490: Radical Blackness. *Spring 2018.* In this interdisciplinary study of the Civil Rights, Black Nationalist, Women's and Gay Liberation in the United States from the mid-twentieth century onward, students examine the ideological and creative social and political pushes for equal rights. AFAM 490 probes the cultural ramification of the now familiar adages of "We Shall Overcome," "Black Power," "The Personal is Political," and "Out of the Bars and into the Streets," and gives students the tools to understand the evolution of Radical Blackness in American social and cultural history.

AGEC 261: Agricultural Accounting. *Fall 2017, 2018.* Agricultural Accounting class follows the Farm Financial Standards Council (FFSC) guidelines for agricultural producers to prepare and interpret agricultural financial statements. The course empowers students with techniques to understand the FFSC guidelines, agriculture-specific records, transactions, farm and ranch accounts, and bookkeeping/accounting procedures. Unlike other business accounting courses, this course addresses daily transactions, issues, and situations unique to the agricultural industry, and offers relevant examples of accounting applied to agricultural operations. The accounting procedures offered build on current practice in agriculture. Cash-basis accounting; which is prevalent in many farm operations is explained and adjusted using an accrual-adjusted accounting system to provide more accurate financial statements for farm management. To keep up with current agricultural technologies, students will learn and apply how to use an agriculture-based accounting software.

AGEC 360: Agricultural Economics. *Fall 2017, 2018, Spring 2018.* AGEC 360 provides an introduction to the private and public sector of the United States economy. Identification of the resources used in agriculture and elementary application of economic principles to resource use in agriculture. Specific topics and concepts covered will include an introduction to agricultural economics and history of the discipline, the U.S. food and fiber industry, the role of government in the economy, consumer behavior, producer behavior, market equilibrium, and a brief introduction to macroeconomic policy goals and their impact on agriculture production and the broader U.S. food and fiber industry.

AGEC 362: Agricultural Marketing. *Fall 2017, 2018.* AGEC 362 provides an introduction to agricultural commodity marketing and price analysis; institutions performing various functions in marketing agricultural commodities; analysis of agricultural markets, market prices, and market costs; agricultural marketing contracts;

marketing cooperatives; and the management of agricultural commodity prices through futures markets.

AGEC 468/468G: World Food Development. *Spring 2018.* Study of world food production problems and opportunities in feeding an increasing global population; assessment of world food production, poverty, government policies, multinational businesses, and cultures; and investigates methods of increasing production. The primary question that the course seeks to explore is, "What is our ability to feed the global population?"

AGMC 170: Agricultural Mechanics. *Fall 2017, 2018.* To introduce the students to a variety of areas within agricultural mechanics that have impact on their daily lives. Much effort will be placed on teaching through demonstration and the required laboratory activities. Areas of course emphasis include: surveying, building construction, electricity.

AGMC 176: Agricultural Safety. *Fall 2017, 2018. Winter 2018* This course will deal with the safe use and handling of hand tools, power tools, pesticides, and fertilizers. The safe operation of agricultural machinery in the production and processing of agricultural products will be covered. Safe handling of agriculture animals and safely working in their environment will be studied. Students will also be trained in CPR (not certified) and other quick response first aid that might be required on a farm.

AGMC 326: Precision Agriculture. *Spring 2018.* Precision agriculture is the practice of using remote sensing, soil sampling and information management tools to improve production. Precision agriculture is about whole farm management with the goal of optimizing returns on inputs while preserving resources. It relies on growing technologies like satellite imagery, information technology and geospatial tools.

AGMC 392: Turf Irrigation. *Fall 2017.* The purpose of this course is to provide the student with practical hands-on experiences in solving sprinkler irrigation problems, to help the student develop understanding in the area of irrigation hydraulics, piping and electrical controls, to allow the student opportunities to repair and actually install irrigation systems.

AGMC 475: Precision Agriculture. *Fall 2017.* Precision Agriculture is the practice of using remote sensing, soil sampling, and information management tools to improve production. Precision Agriculture is about whole farm management with the goal of optimizing returns on inputs while preserving resources. It relies on growing technologies like satellite imagery, information technology, and geospatial tools.

AGRI 108: Rural Sociology. *Fall 2017, 2018. Spring 2018.* The study of rural social groups and their interactions in rural and suburban America as well as in rural areas of the world. The influences of basic concepts of society and culture and the relationships of rural population, class, social institutions and groups on rural social change are stressed.

AGRI 398: Animal Science Seminar. *Fall 2017, 2018. Spring 2018.* This course introduces students to current topics of animal science research. The course will cover experimental design, statistical analysis, and implications of research findings. Each student will be expected to review current topics of animal research, show improvement in presentation skills, and properly create an abstract for a scientific journal.

AGRI 315: Water in Food Production. *Fall 2018.* A study of the role of water in food production, including availability and distribution, economics, droughts and floods, pollution, waste disposal, sustainability, political rights and regulations, and ethics. Note: A minimum of 12 hours of agriculture or other sciences or combination thereof is required.

AGRI 494: Contemporary Ag Issues. *Fall 2018. Spring 2018.* An analysis of contemporary agricultural ethical issues as viewed by consumers, advocacy groups and producers. While issues may vary, topics may include: animal welfare, biotechnology, environmental protection, food quality, food policy, land use, and tobacco.

AGRO 110: Plant Science. *Fall 2017, 2018. Spring 2018.* The goal of this class is to familiarize students with basic plant science principles including: classification, utilization, and physiology of plants. Students will also be introduced to plant and soil relationships along with plant pests.

AGRO 409: Weed Science. *Fall 2017, 2018.* To understand the characteristics that enable weed species to compete effectively with crops. To examine the nature of crop/weed interactions with a focus upon weed/crop competition. To explore various weed control methods including mechanical, biotechnological, chemical and cultural practices. To understand herbicide mode of action including the physiological basis for various modes of action and the importance of mode of action in resistance management. To explore the role of soil chemical, physical and biological factors in the efficacy and environmental fate of herbicides. To investigate various weed control strategies for important crops such as field corn, soybeans, tobacco, small grains, forages, and vegetable/fruit crops.

AGRO 352: Soil Fertility and Fertilizers. *Fall 2017, 2018.* Students will be able to list nutrients required for plant growth, relative amount present in each plant, what fertilizer forms we use to provide these nutrients, determine how much of each nutrient is needed and how to determine the best options for the producers situation; describe why soil pH is so important, how we are able to change the pH and determine the amount of lime/acid needed to give the correct pH; and be able to sample a field (through the means of GPS or traditional), read a soil test report and make recommendations based on those to the producer/landowner.

AGRO 350: Introduction to Soils. *Fall 2017, 2018. Spring 2018.* Upon successful completion of this course, students will be able to define the basic physical properties of a soil and how those relate to agricultural production, define the basic chemical properties of soil and how those relate to agricultural production, and define the basic biological properties of a soil and how those relate to agricultural production.

ASL 403: Deaf Culture and History. *Fall 2017. Spring 2018.* This course will examine and compare historical, cultural, and social relationships between deaf and hearing people. You will explore how deafness can affect an individual's development in four areas of language, communication, cognition, and psychological emotional growth. You will also perform comparison studies between Deaf World and the hearing world.

ANSC 140: Animal Science. *Fall 2017, 2018. Spring 2018.* This course introduces the discipline of animal science. The class will cover both food and non-food animal topics. Topics will be discussed from a scientific point of view. Topics include: nutrition, reproduction, livestock management practices, health, meat science, and industry overview. After completion of the course, students should have a basic scientific understanding of the different disciplines in animal industry.

AEC 134: Livestock Management. *Fall 2017.* General animal science course that offers information and hands-on experience with the management of beef cattle, dairy cattle, sheep, swine, and horses.

ANSC 240: Livestock Management. *Fall 2018. Spring 2018.* General animal science course that offers information and hands-on experience with the management of beef cattle, dairy cattle, sheep, swine, and horses.

ANSC 340: Meats and Meat Products. *Fall 2017, 2018.* The course will enable students to gain a broad knowledge in harvest and inspection; identification and selection of wholesale and retail cuts of meat; care and storage of meat products; palatability and consumer trends.

ANSC 345: Principles of Animal Nutrition. *Fall 2017, 2018.* An overview of nutrition in domestic animals. General science and application of nutrition in domesticated animals will be covered. Upon completion of this course, the student shall be able to: Understand principles of Nutrition, understand anatomy and technical aspects of nutrition, and develop detailed understanding of a specific area of nutrition.

ANSC 437/438: Physiology of Reproduction in Domestic Animals. *Fall 2017, 2018.* An overview of reproduction in domestic animals. General principles, anatomy, physiology, pathology and technology of reproduction in domesticated animals will be covered.

ANSC 675: Advanced Food Safety. *Fall 2017, 2018.* Advanced topics related to food safety including current issues regarding microbiological threats from food, origins of foodborne illnesses, and the mitigation of biological, chemical, and physical threats through the use of GMPs and HACCP. Food Safety regulations, such as the Food Safety and Modernization Act (FSMA) and regulatory agencies will be discussed.

ANTH 120: Introduction to Cultural Anthropology. *Fall 2017, 2018. Spring 2018.* Through a combination of lectures, discussions, and films students will learn about theories, research methods, and key concepts in cultural anthropology. Cross-cultural readings will help students appreciate the wide range of cultural practices which exist, as well as to enhance student understanding of basic methods and concepts in the discipline. Introduction to Cultural Anthropology, which is an introduction to the cross-cultural study of human behavior and society and covers topics that include language, religion, subsistence, and kinship. It will assist students in attaining the following General Education goal: an appreciation of the complexity and variety of the world's cultures.

ANTH 360: Applied Anthropology. *Fall 2017, 2018.* Applied anthropology is the use of anthropological knowledge, methods, and theories to address contemporary human problems throughout the world. This course introduces the basic issues of applied anthropology such as the history, ethics, and methods, and reviews cases in the major domains of applied anthropology.

ANTH 388: Foodways. *Fall 2017, 2018. Spring 2018.* Foodways is a critical investigation of the various intersections between food and culture. Students will examine local and global foodways topics, issues, and debates within the context of an increasingly interconnected world. This course will consider the origins and dynamics of the expanding global food system, the significance of local and regional foodways

practices on a global scale, and the contemporary cultural and ethical ramifications of food practices and traditions around the world.

ANTH 343: Anthropology of Gender. *Fall 2018. A comparative study of the role gender plays in various aspects of culture. Topics include distribution of labor, environmental impact, and ideological constraints on gender constructs in a cross-cultural concept.*

AMS 352: Food Processing Unit Operations. *Fall 2017. Spring 2018.* An overview of unit operations and processing techniques used in the food processing industry. Topics include thermal processing, low temperature preservation, dehydration, irradiation, enzyme technology, separation and concentration, evaporation and distillation, and high-pressure and minimal processing methods.

ASTR 104: Astronomy/Solar System. *Fall 2017, 2018. Spring 2018.* This course, without prerequisites, is designed to extend the awareness and comprehension of university-educated students beyond the limited perspective of one tiny planet – into the realm of the universe. As part of its purpose, the course also develops an understanding of the ongoing scientific processes by which the physical universe can be comprehended. Astronomy is the original science, and it offers clear examples of scientific practice and understanding of the universe, beginning on a fundamental level. What is our place in the universe, which would take a billion billion billion billion billion Earths to fill?

ASTR 106: Astronomy/ Stellar System. *Fall 2017, 2018. Spring 2018.* Upon completion of this course the student will: Understand the development of scientific thought and the scientific method. Understand the scientific method and its use in our understanding of stars, stellar systems and the universe. Understand the development and state of our current knowledge of the evolution, nature and structure of stars, stellar systems and the Universe. Understand the various types of stars and stellar systems present in the universe and how they combine to form the structure of the Universe. Understand the diversity of objects in the Universe. Gain perspective on Earth's place in the universe and on how understanding the other inhabitants of the universe leads to a greater understanding of Earth.

ASTR 108: Descriptive Astronomy. *Fall 2017, 2018. Spring 2018.* This course, without prerequisites, is designed to extend the awareness and comprehension of university-educated students beyond the limited perspective of one tiny planet -- into the realm of the universe. As part of its purpose, the course also develops an understanding of the ongoing scientific processes by which the physical universe can be comprehended.

ASTR 214: General Astronomy. *Fall 2017, 2018.* This course serves as an introduction to astronomy for science majors. Topics include, but are not limited to, sky and planetary motions, solar system bodies, the Sun, stellar properties and evolution, star systems, cluster, interstellar matter, Galactic Structure, external galaxies, and cosmology.

ASTR 314: Observational Astronomy. *Spring 2018.* The aim of this course is to familiarize students with astronomical concepts and skills expected and/or required for practical observational astronomy, including those required to plan observing programs, and to obtain, reduce and analyze data.

BIOL 122: BIOL CONC EVOL DIV ECOL. *Fall 2018. Spring 2018. Winter 2018.* Introductory course in biology that emphasizes evolutionary patterns and processes, diversity of life (bacteria, archaea, protists, plants, fungi, and animals), ecological principles, and conservation and management.

BIOL 212: Genome Discovery and Exploration. *Fall 2017,2018.* This course is the first semester of a two part series that will engage novice scientists in research and inquiry-based learning. This discovery-based genomics initiative will guide students from bacteriophage isolation from a soil sample through genome annotation.

BIOL 332: Principles of Wildlife Ecology. *Fall 2018.* Examination of the principles of wildlife ecology and management, including ecological theory, population regulation, habitat management, wildlife diseases, and conservation. Primarily for those interested in a career involving wildlife. Note: Consent of instructor may be required.

BIOL 330: Animal Physiology. *Fall 2017,2018.* We will examine the function of animals including major physiological systems with emphasis on vertebrates. This course takes a systems approach to physiology, examining the major organ systems, but also emphasizing the interrelatedness and interdependence of these systems. Specific examples of landmark experiments will be discussed to give the student an appreciation for the 150 years of painstaking research that has produced our current understanding of physiology.

BIOL 348: Plant Taxonomy. *Spring 2018.* Learn basic techniques of plant identification emphasizing morphological terminology. Be able to characterize and recognize ~36 major families of plants and their economically important and common taxa, and identify ~125 local species in the field. Acquire a basic understanding of relationships among flowering plants. Gain exposure to a diversity of plant communities and species.

BIOL 380: Challenges of A Changing Biosphere. *Fall 2018.* A focus on environmental issues from a biological perspective with emphasis on Habitat loss,

Invasive species, Population growth, Pollution, and Overharvesting (HIPPO) in light of climate change and extinction.

BIOL 390: Ethnobiology. *Spring 2018.* This course offers an interdisciplinary study of the relationships of plants and animals with human cultures worldwide, including past and present relationships between peoples and the environment. Students will examine emerging streams of ethnobiological studies surrounding various ethnic groups of Americas, Africa and Asia.

BIOL 456: Ichthyology. *Fall 2017.* This class will examine the biology of fishes, concentrating on freshwater fishes of Kentucky. Although a large portion of the class will be dedicated to traditional topics of Ichthyology (fish taxonomy, identification, and systematics), we will also explore topics such as anatomy and physiology, ecology and the management of fish populations.

BIOL 458: Fisheries Management. *Fall 2018.* A study of the factors affecting fish populations. Topics covered include life history traits, sampling techniques, management practices, and policies regulating the management of fish populations. Off-campus and overnight weekend field trips and a course fee are required.

BIOL 475: Medicine in Kenya. *Fall 2017,2018. Spring 2018.* At the end of this course students will have acquired basic knowledge of Kenyan culture, geography, language, biodiversity, health care, and the epidemiology of prevalent disease; gained practical training in medical assessment and rudimentary physical therapy; know the logistical information for the field course; and prepared themselves through readings and discussion for full cultural immersion during the associated field course in Kenya.

BIOL 518: Population Ecology. *Spring 2018.* This course covers the topics of: An introduction to population ecology, history of population ecology, Population growth models, density independent and dependent, Age-structured population and life tables, Matrices and projections in age-structured populations, Sensitivity and other properties of matrices, Metapopulations, Extensions of population growth models to two-species interactions: competition and predation, Extensions of population growth models to two-species interactions: Host-parasite interactions and an introduction to epidemiology, Life history strategies and evolutionary ecology as applied to populations, asexually reproducing populations, plants and variations, including selfing and polyploidy, population biogeography and evolution with an emphasis on dispersal, population ecology and conservation, role of ecology in PVA, population challenges under climate change, applied population ecology for human risk.

BIOL 675: Landscape Genetics. *Fall 2017.* Upon completion of this course, students will be able to explain the theoretical importance and practical relevance of the

multidisciplinary field of landscape genetics, perform myriad computational and analytical procedures required to generate landscape genetic data, statistically evaluate the quantitative relationships between landscape heterogeneity and the evolution of species, and find, read, and critically evaluate scientific literature

BIOL 675: Plant Genetic Transformation. *Spring 2018.* Biology 675 is a course that illustrates the concepts and experimental applications of plant genetic transformation or genetic engineering and emphasizes on the potential application in agriculture, health and environment. The course consists of two class hours each of interactive lecture as well as lab sessions per week.

BCOM 301: Mass Communication Law and Ethics. *Fall 2017, 2018. Spring 2018.* An overview of concepts basic to the freedom of expression. Consideration through case study and attention to topical problems of limits on the freedom of expression including various means of regulation: ethics, law and other social controls. Emphasis on broadcasting applications.

CHEM 120: College Chemistry I. *Fall 2017, 2018. Spring 2018.* CHEM 120 provides a basic background in the principles of chemistry. Along with CHEM 222 this provides the background in chemistry required for further study in chemistry. Broad topics include Atomic structure, Chemical equations, stoichiometry, Behavior of Gases, Energy associated with chemical reactions, Bonding theory, and Intermolecular forces. The goal of the class is to provide the student with both the basic knowledge and the critical thinking/problem solving skills required for success in higher level science classes.

CHEM 304: Biochemistry for the Health Sciences. *Fall 2017. Spring 2018.* Chemistry 304 covers a review of Organic (some) and an introduction to Biochemistry. This course is designed to emphasize the practical aspects of organic and biochemistry as related to human health. The course is offered specifically for students in the allied health programs, but is also recommended for students in physical education, recreation, institution administration, and health and safety.

CSJ 200: Introduction to Social Justice. *Fall 2017, 2018. Spring 2018.* CSJ 200 provides an introductory study of theories, concepts and strategies of social justice, including individual resistance, policy, advocacy, and collective action. Rather than assume a singular definition of social justice, this course engages with multiple perspectives, including feminist theory, critical race theory, postcolonial theory and popular media. This exploration of social justice enables the development of the analytical tools necessary to assess injustice in its multiple forms. Our focus will center on both contemporary and historical social justice issues and movements, which will allow us to study intersecting systems of oppression, methods of resistance, and transformative visions of possibility.

CSJ 301: Seminar in Social Justice. *Fall 2017, 2018. Spring 2018.* This CSJ 301: Seminar in Social Justice course is designed to support the academic, social and moral development of students seeking to become more engaged citizens in social change. This course is taught with the expectation that students will engage in readings, research, and active discussion for collaborative learning. With the focus on *Leading Social Change in the 21st Century*, students will increase their capacity for research, critical thinking, and applying leadership through the lens of social change.

COMM 263: Fundamentals of Communication & Culture. *Fall 2017. Spring 2018.* This course is designed to prepare students to adapt to a contemporary diverse society in an effective way. It provides an overview of intercultural communication – communication with individuals from different cultural backgrounds. We will examine different verbal and nonverbal communication patterns influenced by different cultural values as well as other important factors in a variety of contexts.

COMM 330: Leadership Communication. *Fall 2017 2018. Spring 2018.* Leadership Communication was designed to introduce you to professional communication, which cuts across all disciplines, and to help you become a better leader by developing your own communication abilities and by understanding the role of communication inside and outside an organization. The course will tell you how to communicate effectively with various audiences. You will have the opportunity to develop your written, oral, interpersonal and computer mediated skills while developing an understanding of leadership communication in different contexts.

COMM 362: Organizational Communication. *Fall 2017 2018. Spring 2018.* The purpose of an organizational communication course is to increase your awareness of the ways in which individuals shape and are shaped by their interactions with the organizations around them. This course surveys various theoretical approaches to management and the study of communication processes in organizations. From a variety of perspectives, you will analyze how communicative processes are utilized, coordinated, and controlled to achieve collective organizational outcomes. Communication is critical to understanding how organizations work, and a better understanding of organizational communication processes will enhance your ability to engage with all kinds of organizations.

COMM 463: Fundamentals of Culture & Communication. *Spring 2018.* This course builds on basic concepts, principles, and skills for understanding and improving communication between people from different ethnic/racial, national and co-cultural backgrounds in today's increasingly interconnected and interdependent world. Students will learn about the myriad ways cultures and their processes differ and how this in turn affects intercultural encounters and interactions in various contexts. Students will also

develop analytic tools (e.g. key terminologies, theories, and perspectives) to investigate intercultural encounters for understanding and ameliorating real-world issues. A variety of course readings, in-class discussions and activities, and assignments will broaden student knowledge, skill and ethos to become a more effective communicator in today's dynamic world.

COMM 590/365: Intercultural Communication. *Fall 2017 2018.* Intercultural communication is multifaceted phenomena which permeates our contemporary life in today's increasingly interdependent and interconnected world. This course revolves around three questions - "what?", "how?", and "so what?" - for understanding, analyzing, and evaluating culture and communication in interpersonal, organizational, and international/global contexts. First, the terrain of the phenomena will be explored, such as how history, religion, language, technology, political and economic institutions intersect with individual/group identity and relations and shape intersubjectively shared values, norms, and practices. Second, the role of epistemological tools and perspectives in shaping the focus and approach to the study of culture, (cultural) difference, and communication will be examined. Third, intercultural communication skill and ethics for addressing challenges posed by diversity, multiculturalism, and intercultural encounters in domestic and international contexts are cultivated. Last but not least, this course uses a seminar format where students are encouraged to deliver oral presentations, facilitate discussions, and actively participate in enhancing mutual learning.

CIS 205: TECHNOLOGY IN SOCIETY AND BUSINESS. *Fall 2017,2018. Spring 2018.* Examination of the impact of digital information technology on domestic and international businesses and societies, along with ethical and social impacts on professional and personal decision-making.

CNS 555: Social and Cultural Diversity in Counseling. *Fall 2017 2018.* This course focuses on the philosophical, sociological, developmental, and emotional understanding of multicultural education and counseling as they relate to working with individuals in schools, universities, and other human service settings, including the cultural context of relationships, issues, and trends in a multicultural society.

CNS 605: Social & Cultural Diversity in Higher Education. *Fall 2017 2018.* This course is designed to examine the individual and organizational issues of social and cultural diversity in U.S. higher education and to focus on the development of the awareness, knowledge, and skills necessary to be a multiculturally competent student affairs/higher education practitioner.

CRIM 548: Race, Class, and Crime. *Fall 2017.* This course employs a variety of theoretical and research readings to examine how race, ethnicity, and social class pose

differential risks for offending, victimization, and explores disparate processing by the criminal justice system. Criminological, sociological, and legal research is used to study the social construction of racial categories and identities, scrutinize class and ethnoracial differences in offending and victimization, as well as inspect consequences of class and race for justice outcomes. The emphasis of the course is on providing theoretical and evidentiary basis for a critical and systematic survey of these often controversial topics.

DANC 360: Dance in Culture. *Fall 2017. Spring 2018.* This course will offer a survey of world dance forms, emphasizing the social, cultural, and aesthetic principles defining these forms. Through reading, lectures, discussion, videos, and research; dance in societies throughout Asia, Africa, Europe, North America, South America, and Pacific will be explored. The gender, racial, political and/or religious orientations that have shaped dance history will be examined. Guest lectures, movement explorations, and demonstrations will be incorporated for a deeper understanding and experience when possible.

DCS 300: Public Problem Solving. *Fall 2017 2018. Spring 2018.* DCS 300 Public Problem Solving is an investigation of historical perspectives and theoretical dimensions of public problem solving with attention to the development of collective power, capacities, and responsibilities. The course explores the process by which problems arise and how they function within a system or series of systems.

DMT 431: Clothing and Human Behavior. *Fall 2017.* This course is a study of dress and adornment in relation to human behavior. Clothing and appearance are explored in relation to the self, to interpersonal communication, and to collective behavior in social, cultural, and historical contexts.

ECON 305: Labor Economics. *Fall 2017 2018.* Labor Economics is designed to provide students with an overview of labor economic theory and its practical applications. The course will concentrate on labor supply and labor demand and how economic conditions, both domestic and global, affect labor markets and individual labor supply and labor demand decisions. Topics of interest include: labor supply and labor demand; immigration and immigration policies; investment in human capital; wage policies of employers; minimum wage legislation; labor market discrimination; public policy; labor unions; and unemployment. Emphasis will be placed on how public policy affects labor markets and how labor markets affect public policy. This course will also focus on how economic decisions of individuals, businesses, and governments affect other individuals. After completion of the course, a student should be able to evaluate how changing economic conditions and public policy will affect the labor market, individuals and businesses

ECON 375: Moral Issues of Capitalism. *Fall 2017.* This course is designed to give students insight into the moral foundations of capitalism and the implications and consequences of government intervention in markets.

ENT 380: New Venture Business Planning. *Fall 2018.* An in-depth analysis of business planning. The purpose and components of business plans and feasibility analyses are presented. Students prepare a written plan for a venture, whether for or not-for profit. Students are strongly encouraged to enter the course with an idea for a venture.

FACS 292: Diversity in Early Childhood Programs. *Fall 2017.* This course focuses on developing and enhancing the knowledge and skills to work with children and families from diverse developmental, cultural, racial, and socio-economic backgrounds. The exploration of the challenges families face in living in a diverse society and who have a child with special needs will also be reviewed. Implications of diversity for practice with various populations are emphasized throughout the course. Influential theories and relevant research, for professionals working with young children and families, are discussed.

FLK 330: Cultural Connections and Diversity. *Fall 2017, 2018. Spring 2018.* Students will learn to recognize the contributions to American culture and society of a variety of social or cultural groups and the ways in which these groups are interrelated and interdependent. These may include, but are not limited to, ethnic or immigrant groups from many parts of the world, as well as groups defined by religion, region, social class, gender, disability, age, or sexual orientation. Students will also learn to identify ways in which one culture or group may be favored over another, including ethnocentrism, stereotyping, prejudice, discrimination, and various forms of privilege. Students will learn to recognize that people of all cultures tend to take much of their own cultures for granted, and that there is a need to examine one's own culture critically before one can understand other cultures.

FLK 388: Foodways. *Fall 2017, 2018. Spring 2018.* Foodways is a critical investigation of the various intersections between food and culture. Students will examine local and global foodways topics, issues, and debates within the context of an increasingly interconnected world. Students will apply discipline specific knowledge, theories, and research methods in their analysis of course content, including the origins and dynamics of our expanding global food system, the significance of local and regional foodways practices on an international scale, and the contemporary cultural and ethical ramifications of food practices and traditions around the world. Understanding the various connections between culture, food traditions, and our food consumption habits

helps prepare students for an active and engaged role as socially and environmentally conscious citizens.

GWS 545: Feminist Knowledge and Social Change. *Fall 2017.* Examination of both feminist knowledge and research as political practices with the goal of improving the lives of women and challenging rigid configurations of race, class, gender, and other elements of difference. The course is designed as an exploration of the relationship between theory and action. How are feminist (gender) theories related to real-world attempts to improve the lives of citizens in communities? How can theories of social action help us understand the forms that social and civic activism takes? We consider three central concerns of feminist thought—persistent over time and relevant today: gender and difference; power and sexual violence; and intersectionality and trans issues.

GWS 555: Global and Cross Cultural Perspectives on Women. *Spring 2018.* In this course, students explore global and cross-cultural perspectives on women and feminism. We will consider feminist perspectives on a range of national and international issues affecting all people, with an emphasis on the realities women face. We will also analyze the feminist debates surrounding Western concepts of feminism using a comparative perspective, including attention to women's strategic organizing in different geographic and cultural contexts.

GISC 216: Geotechnologies in a Global Society. *Fall 2017, 2018. Spring 2018.* This course has been designed to show students how to integrate spatial data into discipline-specific issues. The development of map-based data will allow you, the student, to address challenging issues that they will face as a global citizen. Students will learn to analyze, and evaluate cultural contexts, examine the variability of issues on a local and global scale. You will also understand and apply system-level approaches to the stewardship of our social and physical environments.

GISC 316: Fundamentals of GIS. *Fall 2017, 2018. Spring 2018.* Fundamentals of file management, basic GIS data management and cartographic design. Topics include file management, data organization, map projections, scale, and accuracy, understanding different map types, making maps with ArcGIS.

GISC 317: Geographic Information Systems. *Fall 2017, 2018. Spring 2018.* This four credit hour course is an introduction to the principles and applications of computer based geographic information systems. Spatial information sources, data encoding, storage, management, analysis, and display are highlighted through the application of GIS techniques to problems in a variety of fields, including land use and natural resource management, transportation, and urban and regional planning. Students will become acquainted with both raster and vector models using ArcGIS.

GISC 414: Remote Sensing. *Spring 2018.* This four credit hour advance course is on the techniques of satellite remote sensing. Remote sensing offers new datasets that are unparalleled in human history in terms of scale, detail, and regularity. Geographic Information Systems utilization is extremely constrained without the data value of remote sensing. This course will introduce the uses of various remote data sets and sensors for earth research. We will study the various land surface characteristics and their respective electromagnetic signatures. The course will not focus primarily on the physics of remote sensing although electromagnetic principles will be discussed. The course will primarily examine visible and infrared areas of the spectrum and will focus on satellite systems. However the principles are applicable to the newer air-photo data as well. The number of disciplines that utilize remotely sensed data continues to increase. Geologists, geographers, climatologists, and ecologists have all adapted remote sensing techniques to their respective research. We will briefly discuss many different uses of remotely sensed data, but focus on natural resources management and ecological applications.

GISC 417: GIS Analysis and Modeling. *Fall 2017,2018.* This course develops expertise with a broad range of spatial analysis and modeling functions using geographic information systems. A problem-oriented approach stresses the utility of GIS analysis to a variety of fields such as agriculture, business, climate, geology, natural resource management, weather, urban planning, etc. Students will become acquainted with both raster and vector analysis techniques using ArcGIS for Desktop (ArcInfo (Advanced) license).

GISC 419/GEOS 576: Custom Geoprocessing and GIS Programming. *Spring 2018.* GIS can be applied into many real-world fields, such as environmental management, market research, urban planning, transportation management, water resource management, utility planning and management, etc. Different application domains may have different requirements and needs for GIS. However, most commercial GIS software are targeted to general applications and very few deliver exactly what users require 'out of the box'. Thus it is very essential to learn the process of expanding the capability of any GIS system. In this course, you will learn that ArcGIS is considerably more than a desktop computer program, and that to access the additional flexibility available, you need to become an advanced user conversant with a range of technologies and methods, including customization and computer programming. In this course, topics related to custom geoprocessing will be covered, particularly ModelBuilder and Python scripting in ArcGIS desktop.

GISC423/GEOS 523: Geoprocessing and GIS Applications. *Fall 2017,2018.* In this course, we will explore some selected issues related to urban applications of GIS. We will mainly explore the relationships between the organization of space economy and

transportation in urban areas as well as the mobility & accessibility issues in every-day life of urbanized areas. Students will develop analytical capabilities, including data collection, data analysis, and mapping, by using a number of GIS techniques for transportation, urban management, locational analysis and business geographics.

GEOG 110: World Regional Geography. *Fall 2017, 2018. Spring 2018.* After completing this course, a student should be able to: understand the global geography framework and the concepts geographers use to explain interdependence among world regions and how those relationships change over time, be familiar with fundamental physical processes of weather, climate, geomorphology and biogeography and the environmental patterns they create, have a working knowledge of the processes of globalization and how global and local processes interact to affect particular places, understand the current political, social, and economic configuration of the world system in a historical perspective, and apply fundamental concepts of geography, such as place, scale, region, and diffusion, that make up the “geographer’s toolkit” for analyzing patterns of human activity around the world.

GEOG 200: Latin America: Past and Present. *Fall 2017, 2018.* This course, which is jointly credited by the Geography, History, and Spanish departments, is intended to provide an interdisciplinary introduction to the study of the cultures and societies of Latin America. Students will gain an understanding of the major processes that have shaped Latin America in the past and continue to affect the region today. The different disciplinary perspectives provide a variety of approaches to the development of Latin America from the Pre-Columbian past to the present day.

GEOG 330: Intro to Cultural Geography. *Fall 2017.* The learning outcomes for GEOG 330 are framed by the “Five Themes of Cultural Geography,” which include region, mobility, globalization, nature-culture, and cultural landscape. By the conclusion of the semester, students enrolled in this course will: have a deeper understanding of cultural interrelationships and the geographic linkages that connect them to global society, have the intellectual tools to examine the complexities of social and cultural diversity and the critical thinking skills that are essential for effective civic engagement as an informed member of society, and be able to engage in meaningful discussions, based in evidence and argument, about complex and nuanced real- world social and cultural problems in a geographic context.

GEOG 352: Geography of Kentucky. *Fall 2017 2018. Spring 2018.* This course focuses on the human and natural resources in the Commonwealth of Kentucky. We will examine Kentucky’s cultural and physical landscapes, demographics, environmental issues, urban and rural geography, as well as economic and historical geography. We will also explore Kentucky within its regional, national and international contexts. You

will be challenged to view Kentucky in new and innovative ways and to think critically about current geographical issues in the Commonwealth.

GEOG 360: Geography of North America. *Fall 2017. Spring 2018.* The approach of the course will be a regional review of the geography of the United States and Canada.

GEOG 386: Geography of Potent Potables. *Fall 2017.* Students explore the geographies of alcoholic beverages, including the patterns of production, distribution, and consumption of beer, distilled spirits, and wine, and associated cultural and environmental impacts. Breweries, wineries, and distilleries are important elements of many diverse cultural and economic landscapes and reflect local geographies and global influences. The role of location is explored as it relates to such topics as access to raw materials, terroir, the rise of craft breweries and distilleries, sustainability, and cultural attitudes toward the production and consumption of alcoholic beverages.

GEOG 391: Spatial Data Analysis. *Fall 2017 2018. Spring 2018.* Statistical concepts and methods emphasizing their applications in a spatial context. Statistical description and hypothesis testing. Visualization and analysis of spatial patterns and relationships.

GEOG 465: Geography of East Asia. *Fall 2017 2018.* This is an upper division course covering broad topics and regions in the geography of East Asia. The course introduces major sub-disciplines of geomorphology, climatology, demographics, agriculture, industry, economics, social issues, politics, languages, religions, and other pertinent fields in East Asia. Students need to understand that each of the sub-disciplines could be an individual course, depending on the depth of the contents. Students should not only understand the general characteristics and phenomena related to the contents from these sub-disciplines, but also need to analyze why certain phenomena take place in certain places. The goal of the course is to help students understand WHAT, WHERE, WHEN, HOW, and WHY geographic elements help shape the physical, economic, social, and environmental characteristics and patterns of the area. The course emphasizes both physical and human geography and their close relationships. But more attention will be given to human geography, and how the diverse economic, cultural, religious, and ethnic elements help form the increasingly important role of East Asia in the world.

GEOL 270: Analytical Techniques in Geology. *Fall 2017 2018.* This course is an introduction to an array of different techniques employed in the routine (and sometimes esoteric) analysis of geological materials. Includes sample preparation techniques, theory of various analytical techniques, and use of equipment available on campus. Techniques covered will include thin section preparation, analysis of thin sections, specific gravity, magnetic separation, X-Ray Fluorescence, X-Ray Diffraction, Scanning Electron Microscopy, and others as time allows.

GEOL 305: Earth System Science for Teachers. *Fall 2017.* This course is a web-based course in Earth System Science and problem based learning. Portions of the course have been developed by the Earth System Science Education Alliance (ESSEA). The course is primarily designed for undergraduate students who plan to become middle and high school teachers; however, any teacher or student with interests in Earth Science education and problem based learning is welcome to take the course. Students will learn about climate change, drought, pollution, and other topics from an Earth System Science perspective. Segments of the course are structured as collaborative, problem-based learning (PBL) experiences and are designed to enhance students' understanding of PBL and Earth System Science.

GEOL 360/L: Sedimentation and Stratigraphy. *Spring 2018.* Geology 360 provides an overview of the formation, transportation, and deposition of sediment and sedimentary rock and the correlation of those sediments and rocks within and between depositional basins. Topics include weathering, sediment transportation, sediment texture, sedimentary structures, clastic and carbonate rocks, facies and depositional environments, lithostratigraphy, and other stratigraphic approaches.

GEOL 408: STRUCTURAL GEOLOGY. *Spring 2018.* Structural Geology (GEOL 308) satisfies the core course requirement for students majoring in Geology with Professional Geology Major, Earth and Space Science and General Geoscience concentrations and elective for students minoring in geology, earth science, geography that prepares them for advanced geology courses such as tectonics, geodynamics, petroleum geology, geophysics, advanced structural geology and related courses. This course provides two significant components: lecture and laboratory. The lecture part is designed to provide fundamental understanding of brittle and ductile deformation such as fold, fault, joints and foliation on the Earth's crust and upper mantle. This course also explores the development, geometry, pattern, timing and kinematics of deformation at all scales starting from atoms in crystals to collision in mountain belts. The laboratory component is designed to complement technical aspects and critical thinking skills through comprehensive hands-on- experience including problem solving, geometrical construction, interpretation, observation and industry application (e.g. topographic and structure contours, geologic cross-section, fold, fault and fracture analysis, stereonet, structural restoration, stress & strain analyses, seismic interpretation, etc.). Specifically, this course will introduce various concepts and tools of structural geology that will help students gain valuable experience for their future geoscience career.

GEOL 440G: Hydrogeology. *Spring 2018.* This course is a qualitative and quantitative introduction to the behavior of groundwater. The physical and chemical processes that affect underground water will be studied, and with this information we will develop an understanding of why groundwater behaves as it does.

GEOL 465: Geophysics. *Fall 2017 2018.* The course is designed to provide students the background necessary to understand the basic physics principles that can be applied in either shallow or deep settings to provide recognition of anomalies of various types that can be mapped. Geophysical mapping in turn provides a documentation of Earth's subsurface in the context of physics parameters such as gravity, magnetics, electrical and similar that focuses exploration or remediation efforts in the subsurface. Economic geology in all its forms such as traditional metallic or non-metallic ore bodies, oil and gas, uranium, groundwater resource supply and protection as well as environmental assessment and remediation is greatly aided by the use of geophysics. Geology is a physical science primarily and it stands to reason that basic physics principles provide the tools needed to generate extremely valuable predictive models.

GEOL 475 (& GEOS 510): Sequence Stratigraphy. *Spring 2018.* After successfully completing this course, students will appraise the dynamic nature of physical stratigraphy and their base-level controls that will help them to better exploit earth's natural resources. Students will also gain deeper understanding of global challenges like past and future changes of sea-level.

GERO 481: Global Aging. *Fall 2017.* This course will serve as an introduction to population aging around the world. Throughout the semester, you will become familiar with how people age differently in various cultures and how individuals, governments, and organizations are and will need to change policies and programs to meet the needs of the increasing number of older adults.

HCA 347: International Healthcare. *Fall 2017 2018. Spring 2018.* Historically, health concerns have been known to cross borders. As the world is increasingly becoming a global village, with ease in communication, traveling and sharing of goods and services, health and health care have become among the most important aspects of globalization. Students in healthcare administration and other health sciences need to be familiar with international perspectives of healthcare in order to understand the dynamics of the changes within and outside their countries. Some students have taken this course during study abroad programs in Tanzania, Sweden, Dublin, and London where they got firsthand experience on the health systems of the respective countries and observed some of the key differences between these countries and the U.S.

HIST 325: Blacks in the Civil War. *Fall 2017.* This course examines black experiences during the Civil War and Reconstruction era. It attempts to understand the meaning of these events in regard to both national and black history. Topics such as black soldiers, emancipation, postwar labor struggles, political challenges, and the experiences of women will be explored.

HIST 379: Gandhi: Creation of a Global Legacy. *Fall 2017 2018.* This course will focus on Gandhi's role as a critic of modern, industrial civilization. Gandhi's criticisms of modern civilization grew out of his political activism in South Africa and later in India. Although he developed a world-wide reputation, almost all of Gandhi's activism focused on local concerns. Witnessing the impact of the British Empire and industrial civilization on his fellow Indians led Gandhi to question much of the modern world. In the process he raised issues that remain of fundamental importance: sustainability, the impact of economic globalization, stewardship of the environment, and non-violent resistance to political and economic oppression.

HIST 447: Popular Culture and the Making of Modern America. *Spring 2018.* This course is an introduction to the central role popular culture has played in late nineteenth and twentieth century American history and consciousness. Through readings, class discussions, lectures, and a wide variety of supplemental materials we will examine the relationship between American popular culture and the transformation of America from a Victorian to a modern to a post-modern society as well as the historical debates over the definition and nature of modern popular culture and its effect on audiences and society.

HIST 457: The Old South. *Fall 2017.* This course examines the South's Own claims of exceptionalism and its rich history from its founding in the seventeenth century to the establishment of the Confederate States of America in 1861. The principal goal of the course is to acquaint students with the intellectual, cultural, political, economic, and racial ideologies of the American South, with a particular focus on the period between 1800 and the outbreak of the Civil War. The lectures, readings, and films cover a variety of topics, including myths and facts about Southern society, the rise and spread of slavery, Southern cultural continuity, race relations, gender, the strengthening of Southern distinctiveness over time, and the political events that led to secession. The course also takes a close look at the growth of Southern identity, nationalism, and diversity.

HON 251: Citizen and Self. *Fall 2017 2018. Spring 2018.* This course is an interdisciplinary Honors College course grounded in the public humanities and civic studies. We focus on democracy, citizenship, and the self. The public humanities aspect of the course means that we study how people make sense of the world (now and historically) through philosophy, literature, religion, art, history, language, and culture. An important part of this is reflexive – that means, we study not only how *others* do this, but also how *we* do this. After taking this course, you should be able to evaluate the significance of human expression and experience in shaping larger social, cultural, and historical contexts, and evaluate enduring and contemporary issues of human experience.

HMD 211: Human Nutrition. *Fall 2017 2018. Spring 2018.* Study of nutrients essential to human life and well-being. Nutrients are studied relative to their function in metabolism, sources in food, and relationship to health. Students will be able to critically assess nutrition information in the media, evaluate their food choices for appropriate nutrient and calorie content, and relate food choices to chronic disease risk.

HMD 465: Community Nutrition. *Fall 2017 2018.* Review of community resources, delivery of nutrition education, and counseling in diverse populations. Students are responsible for any field experience expenses and transportation.

HMD 584 Community Nutrition. *Fall 2017. Spring 2018.* This is a combined didactic and supervised practice course in community nutrition. Special attention is given to the assessment, planning, intervention, and evaluation of programs targeted to populations with high nutritional risk and diverse backgrounds. Students have the opportunity to apply principles of nutrition theory in a variety of functional settings. It also includes an introduction to the programs, policies, and institutions that influence nutrition services at the local, state, and national levels.

IDST 399: An Interdisciplinary Approach to the decades of the 20's, 40's, & 60's. *Fall 2017.* The purpose of this upper-level, 3 credit hour Interdisciplinary Studies course is to analyze, examine and investigate three decades in American history (20's, 40's, and 60's) as to their Interdisciplinary nature. Our inquiry into these decades will be to explore the significant events; historical, social, political, economic and aesthetic forces and their influence upon American attitudes, beliefs, expectations, hopes and concerns.

IDFM 321: Professional Ethics and Issues Seminar. *Fall 2017. Spring 2018.* Interdisciplinary study of social trends, professional issues, and professional ethics impacting careers. Focus is on professional development strategies and resolution of ethical dilemmas both in the job search and within the workplace.

IDFM 436: Global Apparel Merchandising. *Fall 2017. Spring 2018.* Evaluation of the key issues facing textiles and apparel businesses operating supply chains and sourcing in the global economy considering economic, political, and social perspectives and professional implications

JOUR 301: Press Law and Ethics. *Fall 2017 2018. Spring 2018.* The study of concepts basic to freedom of expression with emphasis on First Amendment protection for the media, prior restraint, libel, privacy, and fair-trial guidelines, access to government information and obscenity. Attention is given to attendant ethical considerations.

KIN 508: Adaptive Physical Education. *Fall 2017. Spring 2018.* This class has been designed to provide students a better understanding of the nature, behavioral characteristics, and motor limitations of various disabilities and basic skills necessary to prepare meaningful individualized movement experiences of individuals with special needs functioning in an integrated, segregated, community, or home environment.

LEAD 450: Leadership in a Global Context. *Fall 2017 2018. Spring 2018.* The study and analysis of culture impacts on successful leadership and various geographical areas. This class focuses on cultural theories and models that influence leadership across contexts.

MGT 333: Managing Non-Profit Organizations. *Fall 2017. Spring 2018.* Provides an overview of nonprofit organizations; examines key business areas including budgeting, finance, marketing, communication, board of directors, volunteers and strategic planning.

METR 121: Meteorology. *Fall 2017 2018. Spring 2018.* This course provides a basic understanding of the sciences of the atmosphere. Course content includes atmospheric composition and structure, clouds, precipitation, and atmospheric motion and winds. The course content also includes organized weather systems, including air masses, fronts, and severe weather. Ultimately, the purpose of this course is for you to have a comfortable understanding of the foundational elements of the field of meteorology.

METR 322: Global Climate Systems. *Fall 2017.* Students in METR 322 – Global Climate Systems will understand the interactions between the climate system components, including the atmosphere, hydrosphere, lithosphere, and biosphere. Through the global energy balance and water cycle, spatial and temporal dimensions of global climate are linked through processes, patterns, and teleconnections. Based on climate controlling factors, climatic classification systems will be introduced with discussions of regional climates. Finally, global climate systems, their changes, and their interactions with human activities will be discussed from a systematic perspective.

METR 324: Weather Analysis & Forecasting. *Spring 2018.* In essence, this course represents the foyer in the house of meteorology. In this course you will become familiar with incorporating your fundamental knowledge of meteorological principles with the collection and application of various meteorological data and tools that will allow you develop a comprehensive understanding of the evolving state of the atmosphere. Weather analysis and forecasting is a scientific art that that can be highly rewarding with diligent practice. However, this art and practice can also be extremely frustrating with the expectation that anyone should just be able to predict the weather. This course merely serves as the stepping- stone to learning how to forecast various meteorological events, with a thorough understanding of the atmosphere and the tools used to interpret

atmospheric data. By the end of the semester, you should feel comfortable finding and interpreting the necessary data to put together an intelligible, meaningful forecast.

METR 335: Satellite and Radar Meteorology. *Fall 2017.* The purpose of this course is to provide you with a fundamental understanding of various past, current, and future remote sensing technologies, how these systems operate, and how to utilize them for meteorological interpretation, analysis, and forecasting.

METR 422: Physical Climatology. *Fall 2017.* In this course we will examine key aspects of the boundary layer atmosphere and related processes. Primarily we will focus on energy partitioning and energy transfer within the boundary layer earth-atmosphere system. Measurement and modeling of various quantities of energy within the earth-atmosphere system will be explored. We will approach the study of the above from micro-, meso- and large-scale perspectives.

METR 431/GEOS 531: Dynamic Meteorology I. *Fall 2017.* Provide an introduction to large scale dynamics of the earth's troposphere. This semester will focus on fundamental topics, the equations of motion, basic conservation laws, scale analysis, and dry thermodynamics.

METR 433: Dynamic Meteorology II. *Spring 2018.* Analysis of phenomena related to large scale dynamics of the Earth's troposphere including moist thermodynamics, elementary applications of the basic equations, and circulation and vorticity.

METR 438/538: Physical Meteorology. *Spring 2018.* In this course, we will address the fundamental principles of atmospheric physics as they relate radiation and radiative transfer, dry and moist thermodynamics, and the microphysical processes related to warm and cold-cloud dynamics and resulting precipitation formation. This course is designed to give you an in-depth physical perspective of various aspects of meteorology. While much of the material includes discussions of familiar topics, the material will likely be presented in ways that introduce new concepts and theories.

PHIL 212: Gender Theory and Philosophy. *Fall 2017.* This course will examine how contemporary gender theory understands the relationship between—and the making of—sex and gender. Is gender something we perform, and hence can transform? If gender is made, can it be unmade? What does our sex and race have to do with how we express our gender? We will examine a range of philosophical positions provoked by these questions, including liberal feminism, postmodern feminism, black feminism, and queer theory. Is there a stable category of “woman” that feminists should continue embracing?

PHIL/RELS 323: Social Ethics. *Fall 2018, Spring 2018.* This course looks at perspectives and issues involved in the public pursuit of justice in a religiously and philosophically diverse society. The primary focus will be on American culture and the Western tradition and issues which cause political and social divisions (often along religious lines). We will explore avenues of public policy that best respect our increasingly diverse views, while maintaining a peaceful and just society.

PHIL 350: Ethical Theory. *Fall 2017.* A study of the major normative systems in the history of ethics, and of selected problems in contemporary metaethics, including moral reasoning, scepticism, obligation, and theories of justice.

PE 100: Life Fitness and Wellness. *Fall 2017. Spring 2018.* This class is designed to help students understand the components of Health Related Fitness and Wellness, increase their knowledge of healthy lifestyle choices, access their own fitness/wellness levels, design and implement a program that will help the student meet his/her goals, identify health risk factors and understand preventable disease risk management, and to have a better understanding of physical activity and be able to select appropriate activities for personal development.

PS 338: Government & Ethics. *Fall 2017 2018.* After completing this course, you should be able to: define public service ethics and describe the importance of ethics to good public governance; identify and describe the basic theoretical approaches to understanding ethics; differentiate between individual, organizational, and societal perspectives on ethics and discuss the relevance of each to understanding ethical dilemmas; describe what is meant by ethical culture and how it relates to professionalism in public and nonprofit organizations; and apply concepts learned in class to facilitate ethical decisions on public issues.

PS 374 Women and Politics. *Fall 2017 2018.* This course includes an examination of the political, economic and social status of American women from an historical and contemporary perspective; explores issues of concern to women in a political context. This course explores the political implications of gender. The course focuses on women's participation in political life, looking at their role as citizens, activists, and then at their role as elected or appointed officeholders. We will explore the barriers facing women who seek political careers and the efforts that have been made to circumvent these barriers. Also, the extent to which men and women govern differently will be examined.

PSYS 350: Social Psychology. *Fall 2017 2018. Spring 2018.* This course provides a detailed overview of classic and contemporary topics in social psychology. Social psychology explores human behavior as it occurs in a social context. It is the scientific study of how people's thoughts, feelings, and behavior are influenced by the actual,

imagined, or implied presence of other people (Allport, 1985). It involves understanding how people influence, and are influenced by, others around them. It is my hope that at the completion of this class you will have a greater awareness of how your own actions and the actions of those around you are influenced by social factors.

PSYC 355: Cross-Cultural Psychology. *Fall 2017 2018.* The main goals of psychology are to increase our understanding of human behavior and mental processes, and to use this information to make people's lives better. Cross-cultural psychology is the branch of psychology that studies the ways in which culture shapes human thought and behavior. This course is designed to explore the impact of culture on some of the major principles, theories, and applications of psychology.

PH 100: Personal Health. *Fall 2017,2018. Spring 2018.* Examines behaviors and environmental conditions that enhance or hinder an individual's health status. In addition to exploring social and environmental factors, students are encouraged to think critically about behavioral choices that impact ones' health. Students assess their individual behavior in the light of current scientific knowledge concerning mental health; drugs, alcohol and tobacco; health care; selection of health products; prevention of disease; nutrition; exercise, and stress management.

PH 165: Drug Abuse. *Fall 2017 2018. Spring 2018.* This course is an introduction to students in the issues of societal and personal attitudes towards drug use, misuse, and abuse. This course will provide the student a variety of approaches to drugs and drug use in the behavioral, pharmacological, historical, social, legal and clinical perspectives. This course meets the category F General Education requirement and helps students understand the factors that enhance health, wellbeing, and quality of life.

PH 365: Human Sexuality. *Fall 2017 2018. Spring 2018.* Includes sociological, physiological, and psychological aspects of human sexuality in relation to family life, relationships, marriage, reproduction, education, and aging. Includes information on sexual assault, sexually transmitted infections (STI), and HIV/AIDS.

PH 381: Community Health. *Fall 2017 2018. Spring 2018.* Study of international, national, state, and local health problems, and the governmental, voluntary and private sectors of the healthcare system. Emphasis is placed upon preventative strategies appropriate for contemporary public health concerns.

PH 447: Human Values and the Health Sciences. *Fall 2017 2018.* An analysis of the difficult ethical, legal, and social dilemmas confronting the health care delivery system,

patients, medical practitioners and other health care professionals in contemporary American society.

PH 464: Women's Health. *Fall 2017. Spring 2018.* This course analyzes the major health problems of contemporary women, with a special emphasis on health promotion, disease prevention, and consumer health concerns. It is a web based class. Thus all coursework, including exams, will be completed on-line.

PH 468: Sexuality Education. *Fall 2017. Spring 2018.* A critical review of programs designed to promote sexuality education in community and school settings. Forces that impact the adoption of various curricula and the development of new curricula are examined. Students are taught to utilize scientific and cultural considerations in preparing and adopting curricula for different populations.

PH 580: Introduction to Public Health. *Fall 2017. Spring 2018.* This course provides a comprehensive introduction to public health concepts and practice by examining the philosophy, purpose, history, organization, functions, tools, activities and results of public health practice at the national, state and community levels. The course also addresses important health issues and problems facing the public health system. Case studies and a variety of practice-related exercises serve as a basis for learner participation in real world public health problem-solving simulations. The various components of the course aim to stimulate interactions among learners and instructors around important problems and issues facing public health.

REC 220: Understanding Nonprofit Sector. *Fall 2017 2018.* Survey of nonprofit organizations emphasizing history, ethics, personnel and volunteer management, human development, program development, risk management, customer service, and career development.

REC 302: Recreation Leadership. *Fall 2017 2018. Spring 2018.* Students shall be able to demonstrate the ability to design, implement, and evaluate services that facilitate targeted human experiences and that embrace personal and cultural dimensions of diversity. Specifically, students will learn various leadership techniques to enhance individual, group, and community experiences.

REC 306: Program Planning and Evaluation. *Fall 2017 2018. Spring 2018.* Methodologies, skills, and materials needed for designing, planning, implementing, and evaluation recreation programs for diverse populations in multiple settings. Includes the application of concepts and theories and an exploration of recreation trends.

RSA 560: Issues in Nonprofit Administration. *Fall 2017.* RSA 560 provides a historical, philosophical, and theoretical examination of the nonprofit sector, voluntary

action, and philanthropy; including comparative perspectives, scope, and significance of the sector; as well as critical issues related to nonprofit governance, leadership, and board/ committee development.

RSA 565: Grant Writing and Fundraising. *Fall 2017. Spring 2018.* RSA 565 provides an opportunity for students to learn about the principles, practices, techniques, and ethics of nonprofit grant writing and fundraising, including philanthropy, relationship building, and comprehensive fund development processes. Special emphasis is placed on developing fundraising strategies and writing grants.

SRSC 510: Perspectives on Social Justice. *Fall 2017.* This course provides an in-depth consideration of major perspectives concerning social justice issues. It serves as a theoretical foundation for other core courses, electives, and the community-based learning that is central to the program.

SRSC 520: Community Based Research Methods. *Fall 2017.* Community Based Research Methods is more commonly called Community-based participatory research (CBPR). CBPR is an applied collaborative approach that enables community residents to more actively participate in the full spectrum of research (from conception – design – conduct – analysis –interpretation – conclusions – communication of results). Ideally, the research questions originate from communities (the non "experts") and the process involves meaningful participation by all partners in every stage of the research.

SRSC 540: Community-Building for Sustainability. *Spring 2018.* After completing this course, students will be able to: examine how communities navigate and resist systems of oppression in order to build socially just and sustainable communities; analyze the intersections between community-building, sustainability, and social justice; synthesize connections between course material and an organization that students choose to study over the course of the semester; and adapt and apply course material to analyze and assess a gap or problem within an organization.

SWRK 101: Foundations of Human Services. *Fall 2017 2018. Spring 2018.* Students explore the human experience using theories of the social and behavioral sciences with an emphasis on values and ethics that form the foundation for the social work profession. This course requires students to analyze various social problems and conceptualize the ways in which individual and societal values, economic forces, and political influences impact social welfare policy development and service delivery. Through classroom interaction and service learning, students increase knowledge and self-awareness related to many aspects of diversity as it relates to social policy development, intervention and delivery of services.

SWRK 205: Introduction to Social Work. *Fall 2017 2018. Spring 2018.* An introduction to the social work profession and its value, skill, and knowledge bases. The history, mission, and current status of the social work profession are explored. This introductory course emphasizes appreciation of and respect for human diversity as a core concern of professional social work practice.

SWRK 300: Diversity and Social Welfare. *Fall 2017 2018. Spring 2018.* This course engages students in the analysis of the nature and impact of economics, political and social ideologies, and cultural forces that shape the development of social welfare policies impacting diverse populations in the United States and abroad. The course emphasizes comparative approaches to the analysis of welfare policies influencing service delivery locally and globally. Policies covered include those that address: poverty, public assistance, health and behavioral health care, criminal justice, child welfare, food insecurity, and homelessness. Specific attention will be paid to the implications of social welfare policies for economic, environmental, and social justice issues and their impact on marginalized populations.

SWRK 330: Human Behavior and the Social Environment I. *Fall 2017 2018. Spring 2018.* Using a *bio-psycho-social theoretical framework*, basic concepts of human development are introduced, with the life cycle serving as an organizational focus. Using a multi-theoretical framework, we consider how *spirituality/religion, age, culture, race, ethnicity, social class, sexual orientation, gender, spirituality, biology, and the social environment impact human development*. We additionally consider how our theoretical frameworks empower social workers to advocate for *economic and social justice*. These frameworks are also used to understand the functioning of individuals as members of families, groups, communities, and larger social organizations, in order to intervene effectively at various system levels.

SWRK 331: Human Behavior in the Social Environment II. *Fall 2017 2018. Spring 2018.* A continuation of SWRK 330, this course focuses on human behavior in the social environment with an emphasis on the mezzo and macro levels, including families, groups, organizations, communities, and cultures. The importance of diversity and the environment as factors in influencing human behavior will be highlighted. Additionally, students will examine the forms and mechanisms of oppression and discrimination and learn how apply strategies of advocacy and social change that advance social, economic, and environmental justice.

SWRK 501: Cultural Competency in Social Work. *Fall 2019.* This course employs the framework for cultural competence as a method of probing for understanding the range of issues surrounding culturally competent practice, the realities of social contexts and the scope of human rights and social and economic justice. Culture is central to the

social work profession and cultural competence is essential to social work education and practice.

SWRK 612: Social Work in Diverse Rural Communities. *Fall 2017.* The purpose of this course is to introduce students to select diversity related issues encountered by rural social work practitioners. Often, the experiences of diverse clients serviced by rural social work practitioners are underrepresented in the social work research literature. Therefore this course is designed to augment students' knowledge and understanding of applying advanced generalist skills to promote ethical and responsible social work practice behaviors with diverse rural populations. A broad definition of diversity will be applied in this course including but not limited to race, gender, class, religion, nationality, geographic setting, age, sexual orientation, language, disability, country of origin, and political orientation.

SOCL 240:Global Social Problems. *Fall 2018. Spring 2018.* Examines causes of and responses to critical social problems in different world regions, with a focus on the dimensions and impacts of globalizations. Diverse social theories are applied to interpret problems such as environmental degradation, AIDS, family violence, racism, migration, international poverty, and crime.

Sustainability Courses

AGEC 160: Introduction to Agribusiness and Entrepreneurship. *Fall 2017 2018.*

AGEC 160 presents the scope of agribusiness system and career opportunities therein. The course introduces students to various aspects of agribusiness and agricultural economics with emphasis on entrepreneurial skills. Specifically, students will be introduced to economics, marketing, sales, financial accounting and management as they apply to agriculture. Students will discover how agribusiness entrepreneurship and agricultural economics relate to and complement other areas of agriculture. Lastly, this course will introduce students to global food markets and the role of USDA Foreign Agricultural Service.

AGRI 101: Science of Agriculture. *Fall 2017.* Introduction to the Science of Agriculture aim to give students an appreciation and understanding of the scientific method and a knowledge of natural science and its relevance in our lives and an understanding of factors that enhance health, well-being, and quality of life. AGRI 101 achieves these goals and objectives by studying a variety of contemporary texts in agriculture that expose students to basic disciplinary areas such as all the areas of plant sciences (horticulture, turfgrass management, agronomy), animal sciences (dairy science, beef cattle, swine production, equine), soil science, agricultural economics, world famine, and local production.

AGRI 280: Introduction to Environmental Science. *Fall 2017.* This course will introduce the student to the concept of environmental science and how the environment affects many aspects of *your life*. Specifically, you will take a detailed view of your own life and what affect you are having on the environment and how it affects you. Various pollutants (land, water, air) will be examined but we will also delve into food distribution and production, pest management with regard to the environment and even human disease and toxicology. Global warming, sustainable energy and environmental policy will be evaluated as well. Students will use critical thinking skills to evaluate causes of environmental problems and feasibility of solutions. This class covers a very broad range of topics that are sure to challenge your thinking.

AGRI 493: Sustainable Agriculture. *Fall 2017.* This course will focus on agriculture's dependence upon limited resources and agriculture's contribution to environmental degradation. It will encourage students to consider ways of managing crops, livestock, soils, water, and other farm resources for sustained agricultural production; to examine the principles of reducing and recycling products, to explore opportunities for lessening agriculture's dependence upon non-renewable energy, mineral, and chemical resources, to study conditions resulting in contamination of water, land, and air with agriculture soil, nutrients, pesticides, and waste products; to consider the balance of

diversity resulting from the loss of biodiversity and the potential of genetic engineering of food crops and livestock; to review the roles of agricultural agencies, institutions, and special interest groups in promoting sustainable agriculture; and to explain impacts of global warming on agriculture.

AGRI 494: Contemporary Agricultural Issues. *Fall 2017 2018. Spring 2018.* Analyses of contemporary agricultural issues as viewed by consumers, advocacy groups, and producers. While issues may vary, topics include: animal welfare/animal rights, biotechnology, food safety, privacy issues, hemp, environmental issues, and population growth & sustainability.

AGRO 320: Crop Physiology. *Fall 2017 2018. Spring 2018.* Cell structures, photosynthesis, respiration, plant hormones, water movement, and mineral nutrition are discussed.

AGRO 452: Soil Microbiology. *Spring 2018.* Soil microbial populations and systems and their influence on plant nutrition, soil organic matter, its decomposition and other soil microbial biochemical processes are presented.

AGRO 454– Soil Management and Conservation. *Spring 2018.*

AGRO 457/458: Soil Formation, Classification and Mapping. *Fall 2017.* Students will be able to do a complete physical description of a soil profile including texture, structure, redox features, etc. After collecting the complete physical description of the soil profile, the student will be able to classify the soil using the rules of Soil Taxonomy. Students will be able to use the Web Soil Survey to find information and make decisions about land capability & productivity based on the information provided. Students will learn about soils in Cookeville, TN and how they differ from soils in the area. After a week of practicing on these soils, they will compete in a regional contest and do their best to represent the WKU Agriculture Department. (unless not making the field trip)

ANTH 125: Biological Anthropology. *Fall 2017.* Introduction to Biological Anthropology provides students with an overview of biological anthropology, one of the four subdisciplines of anthropology. The course emphasizes human biological adaptations to various environments, past and present, within the framework of evolutionary theory. Course foci are primatology, paleoanthropology, and modern human biological variation. The course gives students the background needed to pursue advanced studies in biological anthropology.

BIOL 113: General Biology: *Fall 2017 2018. Spring 2018.* This course is designed to provide basic information on scientific process and method, to develop knowledge of

natural science and its relevance in our lives, to explain microbial structures, life cycles and processes, to explore diseases caused by pathogens, and to differentiate between viruses and bacteria

BIOL 122: Biological Concepts: Evolution, Diversity, and Ecology. *Fall 2017 2018. Spring 2018.* Introductory course in biology that emphasizes evolutionary patterns and processes, diversity of life (bacteria, archaea, protists, fungi, and animals), ecological principles, and conservation and management.

BIOL 222: Plant Biology and Diversity. *Fall 2017 2018.* To become familiar with the origin, diversification, basic morphology, anatomy, adaptations, and evolutionary relationships of oxygenic photoautotrophic organisms (cyanobacteria, algae, and plants), with an emphasis on flowering plants.

BIOL 224: Animal Biology and Diversity. *Fall 2017 2018. Spring 2018.* Survey of animal phyla and major classes with emphasis upon morphological adaptations and biological systems that have evolved to maintain organismal and population homeostasis.

BIOL 226: Microbial Biology and Diversity. *Fall 2017,2018.* The purpose of this course is to strengthen your understanding and appreciation of important groups of bacteria by studying their morphological, biochemical and growth characteristics. The course will provide a survey of the overall scope of microbiology. Students who successfully complete this course should be able to identify and define relationships between microbiology, public health, the environment and society.

BIOL 315: Ecology. *Fall 2017 2018. Spring 2018.* Ecology is an integrative and holistic science that embraces aspects of the biological and physical sciences; some branches also involve mathematics, philosophy, engineering, or economics. In this course we will focus on the physical and biological aspects of ecology. We will attempt to place this within a historical context because it is a philosophical assumption of this course that history matters. This course also assumes that context matters and causation exists.

BIOL 325: Insect Biodiversity. *Fall 2017 2018.* This course examines the diversity of one of the most fascinating groups of organisms on the planet- the insects. Their evolution, basic structure, and growth are covered as well as lifestyles, particularly in groups with unusual behaviors or effects on humans. Students will gain an appreciation for and a broad understanding of these incredibly diverse animals, and will be able to recognize all of the orders and most of the most important or common families on a global scale.

BIOL 332: Principles of Wildlife Ecology and Management. *Fall 2017 2018.*

Learning objectives: 1. You will learn the meaning of wildlife and its management. 2. You will learn the history of wildlife management in the U.S. 3. You will learn the role wildlife plays in ecology at different levels of organization. 4. You will learn how different elements of wildlife habitat are managed and why. 5. You will learn how humans interact with wildlife, good and bad, and about the phenomena that contribute to depletion of wildlife populations. 6. You will learn about the economics of wildlife ecology and management. 7. You will learn how to assess management models and the basic harvest models currently in use.

BIOL 372/SOCL 372: Human Wildlife Conflict. *Fall 2017.* This course examines human-wildlife conflict across the globe and the different ecological and social realities that exist on different continents. The course also examines how human-wildlife conflict at a local level shapes, and is shaped by culture and by transnational, governmental, and non-governmental efforts to curb poaching, preserve valuable habitat, and address issues of extreme poverty in the developing world.

BIOL 532: Behavioral Ecology. *Fall 2017.* An investigation of the actions of animals in reference to their evolution, environment and interactions with other organisms emphasizing the behavior of animals most directly related to their survival and reproduction in a natural ecological context.

BIOL 675: Plant Genetic Transformation. *Fall 2017. Spring 2018.* Biology 675 is a course that illustrates the concepts and experimental applications of plant genetic transformation or genetic engineering and emphasizes on the potential application in agriculture, health and environment.

BA 545: Survey of Business Sustainability. *Fall 2017.* This course explores business strategies in response to (and anticipation of) threats and opportunities created by the sustainability movement. The overarching goal of this course is to provide a comprehensive overview of the core concepts, strategies, and practices of sustainable business.

BA 546: Sustainable Business Operations. *Spring 2018.* In this course, we will explore and develop definitions of sustainability in general and *sustainable operations* in particular. We will also investigate how companies can evaluate and implement sustainability measures, and different motivations for firms to engage or invest in sustainable efforts. We will approach *sustainable supply chains* from the *value chain perspective*, by identifying opportunities for sustainable actions and policies at different phases in the product life cycle. These phases range from research and development to the point where products are discarded by the consumer, for potential reuse or

recycling. We will use quantitative operations models and techniques to analyze and evaluate the viability of these sustainable opportunities.

CE 300: Floodplain Management. *Fall 2017, 2018.* At the end of this course, students should be able to assess flood risk to properties, formulate methods of funding flood mitigation projects, determine whether a property is in compliance with national floodplain management regulations, describe emergency procedures and operations prior to, during, and following floods, describe the behavior of flood sources in response to the hydrologic cycle and climate change, describe flood mitigation approaches, pass the Certified Floodplain Manager (CFM) exam

CE 352: Intro to Environmental Engineering. *Fall 2017, 2018.* At the end of the course, each student should be able to describe the basics of environmental chemistry, apply mass and energy transfer to solve environmental engineering problems, apply simple mathematical models to assess population growth, calculate incremental risks for exposure to pollutants through various routes, describe the types, sources, and health effects of surface and groundwater pollutants, analyze the DO in streams with the classic Streeter-Phelps oxygen sag equation, identify the functions of different processes comprising water and wastewater treatment systems, describe solid waste management as related to resource recovery and sustainable engineering, describes the types and sources of air pollutants and describe current air quality standards, and calculate air pollution concentrations using basic Gaussian models.

CE 410: Soil Mechanics. *Fall 2017, 2018.* A study of soils and their properties. Stress-strain analysis, horizontal and vertical stress distribution, consolidation and settlement, soil classification, static and dynamic lateral earth pressure, permeability and flow nets, bearing capacity and slope stability.

CE 342: Fluid Thermal Science. *Fall 2018.* Conservation of fluid mass and momentum, forces in fluids, pipe flow, fluid measurements, pump systems, hydrodynamic drag, open channel flow, and introduction to thermodynamics. Students may not earn credit for both CE 341 and CE 342.

CRIM 572: Green Criminology. *Fall 2017.* Green criminology has become a world-wide movement within criminology since its introduction in 1990. The relevance of green criminology expands as humans continue to harm the natural environment and the systems that underpin it. This course is intended to address various forms of environmental harm--both legal and illegal. The focus will be on how harm is conceptualized, criminalized (or not), enforced (or not), and punished (or not). That is, the course critically examines the mechanisms which cause some of these harms to be

legal while others are criminalized. We also examine the role of consumerism and capitalism as drivers in these processes.

DCS 360: Place, Community, and Resilience. *Fall 2017.* This course is designed to assist students in ALL fields to understand and apply concepts of resilience for building the capacity of place and communities to (a) understand the impacts of climate change, global pandemics, interruptions in global trade and food supply, sharp increases in the cost of energy, and environmental degradation; and (b) nurture the development of alternative spaces (economic arrangements, networks, etc.) that support the emergence of life - sustaining structures and practices (economic, social, etc.) to replace the unsustainable industrial growth society whose accelerated unravelling we are currently witnessing on many levels.

ECON 430: Environmental and Resource Economics. *Spring 2018.* Ordinary economic activity affects the quality and availability of natural resources. The use of those resources in ordinary economic activity can have local to global impacts on the environment. The main objective of this course is for you to learn how to think critically about issues relating to environmental and resource economics from the local, regional, state, federal, and international levels. Upon completion of this course, you should be able to identify the role of nature as the provider of raw materials, discuss the impact of economic activity on the quality of the natural environment, explain the economic rationale for government involvement in environmental and resource sustainability issues, evaluate alternative policies, and discuss what the impact of such involvement will be.

EOHS 510: Watershed Management and Science. *Fall 2017 2018.* Students will apply methods to analyze, summarize, and report water quality data, including the use of descriptive and statistical techniques, critique methodologies, research, and results based on water quality and watershed principles presented in the course materials, when given case studies and journal articles, and describe and evaluate methods for assessing, preventing, and controlling the risks of stormwater to human and ecosystem health.

EOHS 560: Environmental Management and Risk Assessment. *Fall 2017.* Students will: utilize computer tools to evaluate environmental permit, program, and or management plan; design a study to evaluate an environmental management or risk assessment problem; describe principles of environmental management and risk assessment through discussions; and develop and compare environmental management risk assessment strategies for a specific problem or case studies.

EOHS 570: Industrial Hygiene. *Fall 2017 2018.* By the end of the course, students should be able to: develop an understanding of the fundamental concepts and methods

of industrial hygiene; recognize the potential hazardous substances and exposure scenarios for specific chemical, physical, and biological agents in occupational environments; scientifically evaluate and discuss the contemporary industrial hygiene issue through a scientific literature; develop strategies for evaluation and controlling chemical, physical, and biological agents; apply and identify appropriate sampling strategies for the assessment of occupational exposures; and gain knowledge about hazards associated with industrial establishments and processes.

EOHS 577 - Environmental Toxicology. *Spring 2018.* Toxicological principles and environmental risk assessment with emphasis on routes of exposure, biokinetics, and response to chemical stressors.

ENV 120: Introduction to Occupational Safety & Health. *Fall 2017. Spring 2018.* This course is an introduction to the principles of occupational safety and health. It is a survey course covering the basic principles and techniques of accident investigation and prevention. This course will cover a variety of hazards that may be experienced in the workplace including those related to slips, trips and falls, pressure, electrical, radiation, noise and bloodborne pathogens. This is an introductory course intended for environmental health science majors and those wanting to work in the occupational safety and health field.

ENV 280: Introduction to Environmental Science. *Fall 2017. Spring 2018.* An introductory course to the study of environmental issues. This course gives you a general understanding of the application of science to the solution of contemporary environmental problems. This course surveys all aspects including the traditional, emerging and controversial issues associated with environmental issues, while focusing on issues most relevant today.

ENV 360: Air Pollution Control. *Fall 2017.* Examines air pollution sources, nature and behavior of air pollutants, air sampling and analysis, dispersion and diffusion in the atmosphere, air pollution meteorology, and methods and equipment for community air pollution control. Topics in indoor air quality (IAQ), modeling, and prediction, air quality control regulations, control strategies for stationary and mobile sources.

ENV 410: Water Treatment Processes. *Spring 2018.* The Water Treatment Processes course will explain the basis of rules and regulations related to water treatment and quality. This course will give students a basic understanding of water quality parameters, water treatment systems and processes, and mathematical calculations related to water quality measurements. Students will gain hands-on experience using water quality equipment in the accompanying laboratory and will use this to give recommendations and results related to the water quality measurements that are collected.

ENV 423: Safety Program Management. *Fall 2017.* This course will allow you to become familiar with the concepts of Safety and Health Program Management. Knowledge should be learned in the following areas: The safety and health manager, program development and implementation, concept of hazard avoidance, impact of federal regulations, disaster preparedness, ergonomics, environmental control and noise, personal protection and first aid, fire protection, machine guarding, classification of medical treatment, and construction safety.

ENV 460: Environmental Management. *Fall 2017.* Provides students with a working knowledge of environmental management techniques, standards, permitting and programs that used to protect our air, water, and land resources. Off-campus travel is required. Students are responsible for arranging their own transportation to designated sites.

ENV 480: Hazardous & Solid Waste. *Spring 2018.* Hazardous and Solid Wastes emphasizes the identification and management of solid and hazardous wastes in the environment. Emphasis is on regulatory compliance, control and remediation technologies, and environmental pathways. It compromises those aspects of human health that are determined by interactions with solid and hazardous wastes of the global environment. This course surveys all aspects including the traditional, emerging and controversial issues associated with solid and hazardous wastes, while focusing on issues most relevant today.

GEOG 103: Our Dynamic Planet. *Fall 2017 2018. Spring 2018.* Our Dynamic Planet will introduce the spatial dimension of Earth's dynamic systems with a special emphasis on how their many interrelationships affect humans and their environment. These systems include air, water, weather, climate, tectonics, landforms, and ecosystems.

GEOG 210: Environmental and Ecological Policy. *Fall 2017.* A survey of the geography, history, and current conditions of environment and ecological policy development and decision-making, particularly in the U.S., with an examination of the human element as a functional variable within the natural environment.

GEOG 226: Our Dangerous Planet. *Fall 2017,2018. Spring 2018.* Introduction to how normal Earth processes concentrate their energies to create devastating impacts. Students will understand the physical processes behind and the spatial dimension of Earth's natural hazards and disasters with a special emphasis on surviving them. These disasters include tectonic, oceanic, and atmospheric hazards. The semester will include a discussion of how climate change may affect the risk and severity of some of these hazards.

GEOG 227: Our Vulnerable Planet. *Fall 2017,2018. Spring 2018.* This course will explore how anthropogenic processes such as pollution, urban sprawl, deforestation, and desertification impact the Earth and its ecosystems.

GEOG 280: Environmental Science and Sustainability. *Fall 2017,2018. Spring 2018.* GEOG 280 Environmental Science and Sustainability will introduce the study of environmental science and the interrelationship between humans and their environment in contemporary ecological issues. Specifically, students will gain a general understanding of the principles of environmental science, functions of ecological systems, contemporary environmental conditions and problems, and theories on humanity's place in the world's ecosystems.

GEOG 310: Global Hydrology. *Fall 2017,2018.* This course is a qualitative and quantitative introduction to the Earth's hydrologic cycle. The course will cover components of atmospheric, surface, and ground waters. The physical and chemical processes that affect water will be studied, and with this information we will develop an understanding of why water in the natural world behaves as it does.

GEOG 378: Food, Culture, and Environment. *Spring 2018.* After completing this course, a student should be able to: apply fundamental concepts of geography, such as place, region, diffusion, and cultural ecology to explain patterns of food production and consumption around the world. Explore local connections between environment and culture to understand why certain farm systems and foodways thrive in various regions and why they differ around the world; understand and be able to describe key cultural developments that accompanied and fostered human development of agriculture and demonstrate an understanding of the origins and spread of the major crop and livestock complexes; understand the changes in technology and social organization that accompanied the rise of industrialized agriculture; understand the environmental and social impacts of various phases of food globalization, including the Columbian Exchange, the Green Revolution, and the reaction to globalization represented by local food movements, explain the types of commodity chains that bring food to their plates and explore and contrast the social and environmental implications of commodity chains that are primarily industrial, that involve fair trade principles, and that emphasize eating locally; illustrate links between cultural identity and food, e.g. through symbolic foods and cultural capital.

GEOG 385: Society, Resources, and Climate. *Fall 2017.* Global climate change is affected by multiple variables, many involving humans. This course will analyze global climate change through examination of how humans affect global climate change by such items as population size, natural resource use, policy, and personal behavior and choices. Human action can influence global climate change, which in turn impacts local

resource availability and compels change in cultural norms and values. The content of this course will address these interrelationships between humans, natural resources, and culture, and encourages students to become civically engaged and informed members of society.

GEOG 380: Global Sustainability. *Spring 2018.*

GEOG 474: Environmental Planning Applications. *Fall 2017.* Integrative topics in environmental science, sustainability, and planning. Emphasis on sustainable community planning and development in urban and rural settings. Students study current models and policies from around the globe.

GEOG 475: Water Chemistry Principles. *Spring 2018.*

GEOG 486: Seminar in Environmental Science and Sustainability. *Spring 2018.* Current issues related to sustainability and/or environmental science discussed via invited lecturers, community engagements, and/or department and university-wide seminars. Students are expected to participate in assigned seminar activities throughout the duration of the course.

GEOG 487: Environmental Management and Law. *Fall 2017.* This is an introductory course on environmental management and law. Environmental Law is comprised of a vast body of legislation and common law and we will examine major concepts so that more focused study on a particular subject can be understood in context. Management and law dominates all aspects of society and it is important for students to understand that it isn't designed to determine what is 'right or moral' but to enforce what is expedient for society's optimal functioning. This course will include a thorough examination of major legislative, administrative, and judicial management approaches to addressing current environmental conditions related, but not limited to, natural resource consumption and air, water, and hazardous pollutants, in the United States and abroad.

GEOG 480/GEOS 580: Urban Geography. *Spring 2018.* We will examine the nature and evolution of cities and engage in critical analyses of urbanization from a variety of perspectives---environmental, cultural, economic, and social. During the semester we will also consider cities in their geographic contexts, their relationships to suburban and non-metropolitan areas, from local to global scales. This semester, our focus will be on tourism and economic redevelopment in the Rustbelt. We will also use the city of Bowling Green as our urban geography laboratory and research site.

GEOG 495: Managing Parks, Carbon Footprinting, Ecoleader Certification, Environmental Education, Applied Water Resource Science. *Spring 2018.*

GEOL 111: The Earth. *Fall 2017 2018. Spring 2018.* This course fosters the skills that lead to an understanding of natural aspects and environments of the Earth, scientific methods and basic geological principles. In particular, this course explores the interaction among geology, people and environment including Earth materials, internal and external physical, chemical and bio-geological processes that are responsible for forming and shaping the Earth, and Earth's evolution through deep times and present geologic time.

GEOL 112: Earth History. *Fall 2017 2018. Spring 2018.* This course is designed to introduce students to the science of interpreting Earth from the geologic record. We will begin by reviewing processes and the principles underlying geological investigations. We will then focus on utilizing these concepts to interpret the 4.5 billion years of geologic record and the changes that our unique planet has undergone. We will also discuss the future of our planet and the human race.

GEOL 315: Energy Climate and Carbon. *Fall 2018.* Energy, Climate and Carbon investigates our current reliance upon carbon-based sources of energy, the effect of fossil-fuel emissions on the environment and climate at local-to-global scales, and current efforts to limit fossil-fuel emissions and global climate change. The course is particularly focused on carbon-capture technologies, geological carbon sequestration and renewable energy resources.

GEOL 330: Mineralogy. *Fall 2017,2018.* This course is an introduction to the systematic study of minerals. Includes crystallography, crystal chemistry, mineral stability, the classification of minerals, and the origin, characteristics and occurrences of the major mineral groups. Laboratory work includes crystal symmetry, mineral identification, and an introduction to the optical microscope.

GEOL 415: Environmental Geology. *Fall 2017 2018.* Near-surface stratigraphy & sedimentation interpretative techniques as related to unconsolidated and bedrock hydrogeologic systems, understanding contaminant sources and basic contaminant hydrogeology including software application, discussion of techniques/tools for environmental geology consulting, and exposure to processes responsible for geologic hazards and mitigating geohazards and humans interacting with the geological environment. Case studies and interactive computer exercises will provide the student with hands on experience in integration of scientific methodologies, decision making, and also environmental ethics and resource management. A significant objective of the course is to show students the relationship between human activity and Earth including sustainability as well as to teach students the multidisciplinary nature of environmental geology.

GEOS 522: Seminar in Physical Climatology. *Fall 2017.* In this course we will examine key aspects of the boundary layer atmosphere and related processes. Primarily we will focus on energy partitioning and energy transfer within the boundary layer earth-atmosphere system. Measurement and modeling of various quantities of energy within the earth-atmosphere system will be explored. We will approach the study of the above from micro-, meso- and large-scale perspectives.

HORT 301/302 Intro to Landscape Plants/Lab. *Fall 2017,2018.* Students learn how to reduce environmental and economic costs by the careful selection of trees and shrubs for landscapes and then maintaining those landscapes.

HORT 316/317 Greenhouse Maintenance and Operation/Lab. *Fall 2017,2018.* Greenhouse Production and Commercial Flower Production has become a multi- billion dollar industry. Commercial production and sales of greenhouse crops play an important role in the dynamics of modern agribusiness. This industry has a need for personnel trained in sound business practice and production practices. Students will explore the production aspect of the industry with major emphasis on greenhouse structures, maintenance, and operation of the facilities. Through hands-on activities as well as readings, lectures, and research students will become familiar with the greenhouse as a production facility.

HORT 340: Commercial Floriculture Production. *Spring 2018.* This course deals with commercial greenhouse production. During this semester we will focus on the production of bulb plants, bedding plants, foliage plants, potted flowering plants, perennial plants, and vegetable plants.

PH 385: Environmental Health. *Fall 2017. Spring 2018.* This course examines the environment and its relationship to health status. Areas of emphasis include air, water and land pollution, hazardous wastes, and noise and radiation hazards.

PH 584: Principles of Environmental Health. *Fall 2017 2018. Spring 2018.* This course will examine traditional, emerging, and controversial issues pertaining to environmental health. We will consider the various perspectives and implementations of initiatives on all administrative levels.

ME 497: Energy Conservation & Sustainability *Winter 2018.* Advanced special topics delivered in the spring semester by WKU faculty to acquaint the undergraduate student with significant problems and developments of current interest in mechanical engineering. Course is repeatable (with different topics) two times. Note: Permission of instructor is required.

SUST 514: Environmental Justice and Public Spaces. *Fall 2017.* examines the concepts of public space and environmental justice through interdisciplinary lenses, including feminist theory, geography, rural sociology, postcolonial theory and critical race studies. The course explores different ways of defining environmental justice in order to analyze environmental issues and connections to public space and sustainability. The course considers historical and contemporary environmental justice movements to illustrate intersecting systems of oppression, methods of resistance, and transformative visions of possibility.

SRSC 590: Sustainability Symposium. *Spring 2018.* SRSC 590 outcomes for students: analyze power differentials surrounding issues of social justice, environment, and community; evaluate ways in which social justice, environment, and community intersect; and synthesize individualized scholarly materials relevant to social justice, environment, and community.