

## Ball State University Inventory of Sustainability Courses, 2020-21

### AC-1: Academic Courses

Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
ANTH	101	Intro to Cultural Anthropology	X		Introduces the diversity of human social life as shaped by culture, relating the origins and nature of culture to variations in such universal aspects of human experience as subsistence strategies, resource allocation, social organization, political order, belief systems and the arts.	Sciences and Humanities (SH)	Anthropology (ANTH)	UG
ANTH	105	Introduction Biological Anth	X		Introduces students to human variation over space and time; its genetic, developmental, environmental, and theoretical bases; the human life cycle; primatology; the anthropoid fossil record, and the relevance of these for an understanding of human health, adaptation, and human	Sciences and Humanities (SH)	Anthropology (ANTH)	UG
ANTH	312	Ecological Dims of Culture	X		Explores the system of relationships between human populations and their environments focusing on cultural behavior. Uses studies of societies from ancient to modern times, models and theories from ecology and anthropology, and considers both applied and theoretical perspectives. Prerequisite: any one of ANTH 101, 103, 105, 111; or	Sciences and Humanities (SH)	Anthropology (ANTH)	UG
ANTH	363	Special Topics Cultural	X		Detailed analysis of a special problem in cultural anthropology such as culture and global warming, anthropology and architecture, urban anthropology, or anthropology and food. May be repeated for different topics.  A total of 6 hours of credit may be earned.	Sciences and Humanities (SH)	Anthropology (ANTH)	UG
ANTH	455	Primatology	X		Comparative survey of nonhuman primates, their biology and behavior.  Prerequisites: ANTH 105 or BIO 112 or permission of the instructor.	Sciences and Humanities (SH)	Anthropology (ANTH)	UG
ANTH	512	Eco Dim of Culture	X		Explores the system of relationships between any human population and its environment, focusing on cultural behavior. Uses studies from ancient to modern times and models and theories from ecology and anthropology; considers both applied and theoretical perspectives.  Prerequisite: an introductory cultural anthropology course or permission of the instructor. Not open to students who have credit in ANTH 312.	Sciences and Humanities (SH)	Anthropology (ANTH)	GR
ANTH	560	Special Topics in Cult Anth	X		Detailed analysis of a special problem in cultural anthropology such as culture and global warming, anthropology and architecture, urban anthropology, or anthropology and food. May be repeated for different topics. A total of 6 credits may be earned. Not open to students who have credit in an undergraduate course covering the same topic.	Sciences and Humanities (SH)	Anthropology (ANTH)	GR
ANTH	590	Topics in Cultural Change	X		Surveys from various perspectives the major concepts and processes of culture change, including globalization and its effects on cultures and individuals. A total of 6 credits may be earned, but no more than 3 in any one semester or term. Not open to students who have credit in ANTH	Sciences and Humanities (SH)	Anthropology (ANTH)	GR

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ARCH	100	Introduction to Architecture	X		An introduction to architecture through an exploration of products of the built environment. Open to all students.	Architecture and Planning (AP)	Architecture (ARCH)	UG
ARCH	103	Architectural Design Studio	X		Introduction to architectural form manipulation skills in both green field and built environments. Focus on design moves linking concepts of site, schematic building structure, materials, and forces of human habitation. Design reasoning and spatial thinking, vocabulary, concept formulation, use of precedents, and basic investigative skills are linked to basic ways of building in both individual and collaborative design exercises. Prerequisite: graduate standing or permission of the program director.	Architecture and Planning (AP)	Architecture (ARCH)	UG
ARCH	201	Architectural Design	X		Introduction to the architectural design sequence. Projects focus on conceptual architectural design and design methodologies in small and intermediate-scale projects, introduction of architectural technology, research, analysis, and programming. Open only to B. ARCH; BA/BS architecture; BA/BS environmental design.	Architecture and Planning (AP)	Architecture (ARCH)	UG
ARCH	202	Architectural Design	X		Conceptual architectural design and design methodologies in large-scale projects; introduction of architectural technology, research, analysis, and programming. Workshops in the exploration and development of visualization and communication skills at all stages of the design process. Prerequisite: ARCH 201. Open only to B. ARCH; BA/BS architecture; BA/BS environmental design.	Architecture and Planning (AP)	Architecture (ARCH)	UG
ARCH	214	Arch Build Tech 1	X		Methods and materials of architectural construction. Emphasizes interface of material selections and construction technology in the design, production, and construction process. Open only to B. ARCH; BA/BS architecture; BA/BS environmental design.	Architecture and Planning (AP)	Architecture (ARCH)	UG
ARCH	229	History of Architecture 1	X		A survey of the major movements in western architecture and urbanism from antiquity through the nineteenth century, and an introduction to developments in vernacular and high-style architecture outside the West in precolonial and/or post-colonial periods. Prerequisite: ARCH 100. Open only to B. ARCH; BA/BS architecture; BA/BS environmental design; HP minors or permission of the department chairperson.	Architecture and Planning (AP)	Architecture (ARCH)	UG
ARCH	251	Social and Env Justice in Dsgn	X		promoting socially and environmentally just communities by acknowledging the values of human rights, social equity, and the dignity of every human being. Open only to B. ARCH; BA/BS architecture; BA/BS environmental design.	Architecture and Planning (AP)	Architecture (ARCH)	UG

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
ARCH	273	Environmental Systems 1	X		Introduction to environmental systems in architecture with emphasis on passive interventions. Open only to B. ARCH; BA/BS architecture; BA/BS environmental design.	Architecture and Planning (AP)	Architecture (ARCH)	UG
ARCH	301	Architectural Design	X		programming, technology, function, human behavior, scheduling, time management, communication, use of materials, and systems. Workshops in the further exploration and development of visualization and communication skills at all stages of the design process. Prerequisite: ARCH 202. Open only to B. ARCH; BA/BS architecture; BA/BS environmental design.	Architecture and Planning (AP)	Architecture (ARCH)	UG
ARCH	302	Architectural Design	X		A rigorous in-depth exploration of a selected topic in architectural design. Design studio and seminar in theories and principles related to the selected topic. Prerequisite: ARCH 301. Open only to B. ARCH; BA/BS architecture; BA/BS environmental design.	Architecture and Planning (AP)	Architecture (ARCH)	UG
ARCH	304	Architectural Design Studio	X		Design of increasingly complex projects with documentation of structure, materials, construction methods, and life safety. Continued emphasis on concept development vis-a-vis historical and contemporary architectural thought and project context in all its dimensions. Reinforcement and application of sustainability principles including passive/active systems and day-lighting. Prerequisite: graduate standing or permission of the program director.	Architecture and Planning (AP)	Architecture (ARCH)	UG
ARCH	314	Arch Build Tech 2	X		Methods and materials of architectural construction. Emphasizes interface of material selections and construction technology in the design, production, and construction process. Production of construction documentation. Prerequisite: ARCH 214. Open only to B. ARCH; BA/BS architecture; BA/BS environmental design.	Architecture and Planning (AP)	Architecture (ARCH)	UG
ARCH	329	History of Architecture 2	X		Survey of the movements and major figures in architecture and design from the late nineteenth century to the present, with consideration given to the social and cultural context of design ideas. Prerequisite: ARCH 229. Open only to B. ARCH; BA/BS architecture; BA/BS environmental design; HP minors or permission of the department chairperson.	Architecture and Planning (AP)	Architecture (ARCH)	UG

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
ARCH	340	Intro to HP for Architects	X		practice. Students will become familiar with the significant public and private Preservation agencies and organizations, along with the roles they play in the Preservation movement. The legal basis of preservation will be surveyed, as well as the process for documenting, designating, and protecting historic properties. Preservation treatment and re-use options will be discussed in light of conservation, sustainability and cultural continuity. Open only to B. ARCH; BA/BS architecture; BA/BS environmental design.	Architecture and Planning (AP)	Architecture (ARCH)	UG
ARCH	373	Environmental Systems 2	X		Application of the principles of physics to the design and engineering of environmental systems in buildings and technologies of active intervention. Prerequisite: ARCH 273. Open only to B. ARCH; BA/BS architecture; BA/BS environmental design.	Architecture and Planning (AP)	Architecture (ARCH)	UG
ARCH	400	Comprehensive Arch Studio	X		Architecture studio involves architectural design explorations requiring integrated evaluations and decision-making in the design process. Projects will demonstrate consideration and integration of environmental and structural systems, environmental stewardship, technical documentation, accessibility, site conditions, life safety, and building envelope systems and assemblies. Prerequisite: ARCH 302. Parallel: ARCH 420. Open only to B. ARCH majors.	Architecture and Planning (AP)	Architecture (ARCH)	UG
ARCH	401	Architectural Design		X	Capstone project: a design-based study in depth requiring students to reflect on and synthesize previous course work. Prerequisite: ARCH 301. Open only to BA/BS architecture.	Architecture and Planning (AP)	Architecture (ARCH)	UG
ARCH	402	Architectural Design	X		ARCH 402 allows students to engage in architectural design projects on or off campus providing students a high degree of self-direction. Draws on knowledge and skills of previous course work. Both ARCH 405 and 406 (two independent summer programs) must be completed to obtain substitute credit for ARCH 402. Prerequisite: ARCH 301. Open only to BA/BS architecture.	Architecture and Planning (AP)	Architecture (ARCH)	UG
ARCH	403	Architecture Design Studio	X		Architecture design studio investigating topical architectural problems that may have an interdisciplinary and/or applied aspect. Within this, students are expected to increasingly define their design values and effective methods for engaging and representing them. Prerequisite: ARCH 400. Parallel: ARCH 424. Open only to B. ARCH.	Architecture and Planning (AP)	Architecture (ARCH)	UG

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
ARCH	404	Arch Final Project Studio	X		Conceptual and design development processes applied to a student initiated and defined architecture design final studio project. Prerequisite: ARCH 403; ARCH 424. Open only to B. ARCH majors.	Architecture and Planning (AP)	Architecture (ARCH)	UG
ARCH	408	Architects of Hope	X		A growing subset of architects situates their talents and passions in the lives of persons occupying exploding equatorial megacities and shrinking inner cities in the Rust Belt. Students will consider a range of issues engaged by the persons who remain in these places. Seminar participants will study as well as interview architects and designers whose practices are centered on those people generally considered to be at-risk or in-need. In response to this investigation, each student will formally define and articulate a more meaningful career trajectory.	Architecture and Planning (AP)	Architecture (ARCH)	UG
ARCH	420	Professional Practice	X		Overview of the essential aspects of the architectural profession. Subjects include: stakeholder roles in architecture; project management; business practices; financial considerations; legal responsibility; ethics and professional conduct. Parallel: ARCH 400. Open only to B. ARCH majors.	Architecture and Planning (AP)	Architecture (ARCH)	UG
ARCH	424	Res and Prog Methods in Arch	X		Exposure to methods and procedures of architectural research and programming, including case studies. Application of these methods to research and programming for development of individual final project proposals for the architecture final project studio. Parallel: ARCH 403. Open only to B. ARCH majors.	Architecture and Planning (AP)	Architecture (ARCH)	UG
ARCH	428	Hist of Arch Built Environment	X		The roots and development phases of American architecture and design are explored, beginning with Native American and Colonial examples, through the exploration, development, urbanization, industrialization, modernist and post-industrial epochs. Both vernacular and high style design examples are covered, with emphasis on regional and cultural diversity. Design examples are drawn from the fields of architecture, landscape architecture and urban planning. Prerequisite: permission of the program director.	Architecture and Planning (AP)	Architecture (ARCH)	UG
ARCH	429	Appl Cultl to Desgn Plng	X		Explores how to use social, cultural, technical, and economic information to establish design criteria. Examines how to apply this knowledge to create a framework for design. Prerequisite: fourth-year standing or permission of the department chairperson.	Architecture and Planning (AP)	Architecture (ARCH)	UG

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
ARCH	440	Intro to Pres	X		This course presents the history, philosophy and current practice of heritage preservation. Students examine the roles of significant public, private and non-profit preservation agencies and organizations. The legal basis of preservation is studied, as well as the process for documenting, designating and protecting heritage places. Preservation treatment and re-use options are examined in light of conservation, sustainability and cultural continuity concerns. Prerequisite: permission of the program director. Open only to HP minors or by permission of the HP director.	Architecture and Planning (AP)	Architecture (ARCH)	UG
ARCH	441	Pres Policy	X		This course examines the structure and function of international, federal, state and local laws and programs governing heritage preservation activities. Planning and economic development aspects of preservation practice are studied in the context of conservation and protection of heritage places. Prerequisite: permission of the program director. Open only to B. ARCH; BA/BS architecture; BA/BS environmental design; HP minors or permission of the HP director.	Architecture and Planning (AP)	Architecture (ARCH)	UG
ARCH	447	Pres Tech	X		An investigation of the materials and systems of construction used in historic buildings. Students examine contemporary technology used to document, analyze and diagnose building conditions as a basis to formulate interventions for the stewardship of historic structures. Open only to B. ARCH; BA/BS architecture; BA/BS environmental design; HP minors or permission of the HP director.	Architecture and Planning (AP)	Architecture (ARCH)	UG
ARCH	473	Pres Current Issues	X		This course provides an in-depth investigation of complex social, cultural and political case studies in contemporary heritage preservation. A foundation is laid for development of individual philosophies and ethics regarding preservation practice. Prerequisite: permission of the program director. Open only to B. ARCH; BA/BS architecture; BA/BS environmental design; HP minors or permission of the HP director.	Architecture and Planning (AP)	Architecture (ARCH)	UG

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
ARCH	501	Dsgn Thinking Foundations		X	Introduction to architectural design skills, principles, and processes through a series of projects that address spatial thinking, concept formulation, ordering systems, precedent research, and investigative skills. Projects focus on conditions of scale, material, tectonics, and context in both built and natural environments. Conceptualization, representation, visualization and communication skills are developed.	Architecture and Planning (AP)	Architecture (ARCH)	GR
ARCH	502	Env Dsgn Site Context Studio	X		Design projects address surrounding environmental parameters in creating strategies, programs, and buildings, while integrating multiple issues of design thinking and context characteristics in multiple, diverse sites. Sustainability principles in design are introduced and applied with emphasis on merging environmental concerns with human desires and needs.	Architecture and Planning (AP)	Architecture (ARCH)	GR
ARCH	503	Dsgn Application Wkshp	X		Design workshop focusing on the synthesis of previous course work and the application of architectural design skills in a built investigation. Introduction to collaborative design-build methods while integrating concepts and methods of material assemblies, prototyping, fabrication, stakeholder's roles, community participation, scheduling, and construction cost estimating.	Architecture and Planning (AP)	Architecture (ARCH)	GR
ARCH	508	Architects of Hope	X		A growing subset of architects situates their talents and passions in the lives of persons occupying exploding equatorial megacities and shrinking inner cities in the Rust Belt. Students will consider a range of issues engaged by the persons who remain in these places. Seminar participants will study as well as interview architects and designers whose practices are centered on those people generally considered to be at-risk or in-need. In response to this investigation, each student will formally define and articulate a more meaningful career trajectory. Prerequisite: graduate standing or permission of the program director.	Architecture and Planning (AP)	Architecture (ARCH)	GR
ARCH	509	Readings Soc and Env Justice	X		Selected readings and follow-up discussion in the topic area as guided by the course instructor. Prerequisite: graduate standing or permission of the program director. Parallel: ARCH 510 and 511.	Architecture and Planning (AP)	Architecture (ARCH)	GR
ARCH	510	Field Stud Soc and Env Justice	X		Off-campus study in the topic area as approved by the course instructor. Prerequisite: graduate standing or permission of the program director. Parallel: ARCH 509 and 511.	Architecture and Planning (AP)	Architecture (ARCH)	GR
ARCH	511	Doc in Soc and Env Justice	X		Written report resulting from a field study in the topic area. Prerequisite: graduate standing or permission of the program director. Parallel: ARCH 509 and 510.	Architecture and Planning (AP)	Architecture (ARCH)	GR

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
ARCH	520	Intro to Pro Practice	X		Survey of the role of the architectural profession from its beginning to present. Exploration of how design excellence is fostered and delivered through professional practice. Exposure to diverse business practice models in architecture and allied disciplines. Investigation of the architect's professional, ethical, and legal responsibilities to stakeholders (client, contractor, user groups, community, architect, and allied professionals) in design and practice.	Architecture and Planning (AP)	Architecture (ARCH)	GR
ARCH	540	Intro to Pres	X		This course presents the history, philosophy and current practice of heritage preservation. Students examine the roles of significant public, private and non-profit preservation agencies and organizations. The legal basis of preservation is studied, as well as the process for documenting, designating and protecting heritage places. Preservation treatment and re-use options are examined in light of conservation, sustainability and cultural continuity concerns. Prerequisite: permission of the program director. Not open to students who have credit in ARCH 440. Open only to MSHP and HP certificate students or by permission of the HP director.	Architecture and Planning (AP)	Architecture (ARCH)	GR
ARCH	541	Pres Policy	X		This course examines the structure and function of international, federal, state and local laws and programs governing heritage preservation activities. Planning and economic development aspects of preservation practice are studied in the context of conservation and protection of heritage places. Prerequisite: permission of the program director. Not open to students who have credit in ARCH 441. Open only to MSHP and HP certificate students or by permission of the HP director.	Architecture and Planning (AP)	Architecture (ARCH)	GR
ARCH	547	Pres Tech	X		An investigation of the materials and systems of construction used in historic buildings. Students examine contemporary technology used to document, analyze and diagnose building conditions as a basis to formulate interventions for the stewardship of historic structures. Not open to students who have credit in ARCH 447. Open only to MSHP and HP certificate students or by permission of the HP director.	Architecture and Planning (AP)	Architecture (ARCH)	GR

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ARCH	551	Contemporary Issues in Arch	X		Introduction to the essential role that architecture plays in promoting socially and environmentally just communities by acknowledging the values of human rights, social equity, and the dignity of every human being. Exploration of contemporary, social, cultural, political, and economic discourse in establishing design criteria and creating frameworks for design interventions. Understand the ethical issues involved in the exercise of professional judgment in architectural design.	Architecture and Planning (AP)	Architecture (ARCH)	GR
ARCH	570	Intro Environmental Systems	X		Fundamentals of passive and active building environmental systems (heating, cooling, ventilating, lighting, acoustics, fire protection, plumbing, electrical/communications, circulation). An overview of environmental forces and human and material/assembly responses to such forces with consideration of historical context and current concerns and a focus on energy, water, and material resource utilization.	Architecture and Planning (AP)	Architecture (ARCH)	GR
ARCH	571	App Environmental Systems	X		Application of passive and active building environmental systems (heating, cooling, ventilating, lighting, acoustics, fire protection, plumbing, electrical/communications, circulation). Systems, equipment, and assemblies that mitigate/enhance environmental forces with consideration of historical context and current concerns and a focus on energy, water, and material resource utilization.	Architecture and Planning (AP)	Architecture (ARCH)	GR
ARCH	573	Pres Current Issues	X		This course provides an in-depth investigation of complex social, cultural and political case studies in contemporary heritage preservation. A foundation is laid for development of individual philosophies and ethics regarding preservation practice. Prerequisite: permission of the program director. Not open to students who have credit in ARCH 473. Open only to MSHP and HP certificate students or by permission of the HP director.	Architecture and Planning (AP)	Architecture (ARCH)	GR
ARCH	598	Spec Proj in Arch	X		Special and timely architectural projects undertaken by groups of students. Prerequisite: graduate standing or permission of the program director. A total of 12 credits may be earned, but no more than 6 in any one semester or term.	Architecture and Planning (AP)	Architecture (ARCH)	GR
ARCH	600	Architecture Workshop	X		Graduate architecture workshop involves short exploratory architectural exercises or projects. Prerequisite: graduate standing or permission of the program director.	Architecture and Planning (AP)	Architecture (ARCH)	GR

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ARCH	602	Integrated Arch Dsgn Studio	X		Synthesis of a wide range of variables from diverse and complex systems into an integrated architectural solution. Students demonstrate their ability to comprehend site conditions, structural, environmental, and building systems and assemblies, accessibility and life safety, environmental stewardship, and technical documentation. Scope and type of project will require applied research methodologies and an integrated evaluation and decision-making process across multiple systems to inform the design process.	Architecture and Planning (AP)	Architecture (ARCH)	GR
ARCH	618	Applied Systems Thinking	X		Advanced course in the selection, design, and integrated application of structural systems, environmental systems, building systems, and project assemblies in architecture. Emphasis on whole building thinking from site evaluation to building performance. Exploration and application of advanced technologies and inventive building systems, while committed to research and development of sustainable, affordable and equitable practices.	Architecture and Planning (AP)	Architecture (ARCH)	GR
ARCH	624	Applied Arch Bldg Tech	X		Exploration of methods and materials of architectural construction with a focus on applied learning, combining theoretical knowledge with practical skills and technical training. Practical applications in construction drawing, building material selection and assembly, building envelope systems, estimating techniques, and computer applications. Production of technical documentation related to design studio project. Exploration of critical topics for the future of the built environment and natural resources to use design and technology to create architecture that contributes to a more humane and environmentally responsible built world.	Architecture and Planning (AP)	Architecture (ARCH)	GR
ARCH	632	WELL Bldg Rating System		X	A detailed exploration of the WELL building rating system, with support for students interested in becoming WELL accredited professionals. Prerequisite: Graduate standing; permission of graduate program director	Architecture and Planning (AP)	Architecture (ARCH)	GR
ARCH	633	PHIUS Passive Bldg Rating Syst		X	A detailed exploration of the PHIUS passive building rating system, with support for students interested in becoming Certified Passive House Consultants. Prerequisite: graduate standing; permission of graduate program director.	Architecture and Planning (AP)	Architecture (ARCH)	GR

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ARCH	636	Arch Research Methods	X		Introduction to research methods applicable to architectural practice. Enables students to study and apply a variety of research methods and tools. Exposure to methods and procedures of architectural research, investigative skills, and integrated design decision-making frameworks provides support for the development of individual final creative project proposal.	Architecture and Planning (AP)	Architecture (ARCH)	GR
ARCH	637	Final Project Prep	X		Students define, investigate, and articulate a question for their individual final creative project. Through guided independent work, students prepare a proposal that documents their research from project identification, to articulating appropriate design methodologies, to analyzing and synthesizing data, to defining a schedule and framework for their project, to creating final project assessment criteria. Prerequisite: ARCH 636.	Architecture and Planning (AP)	Architecture (ARCH)	GR
ARCH	639	Contemp Hist Theory of Arch	X		Introduction to the historical and theoretical movements, technologies, and practices in architecture and urbanism from the advent of the Industrial Revolution up to and including the 21st century. Consideration given to the social and cultural context of design ideas with a focus on global developments in vernacular and high style architecture.	Architecture and Planning (AP)	Architecture (ARCH)	GR
ARCH	644	Theories of Sustainability		X	Students explore ideas and assumptions behind green building and sustainable design. Philosophies and concepts of nature, design and technology are investigated and discussed. Students develop and share their understanding of sustainability and green building grounded in both current and established theories. Prerequisite: graduate standing or permission of the program director.	Architecture and Planning (AP)	Architecture (ARCH)	GR
ARCH	646	Urban Dsgn Hist Theory Prac	X		Introduces the principles, practices, and theory of urban design. Considers the history of urban form, exploring the design of major cities and urban centers. Students develop an understanding of significant case studies while systematically studying physical form, regional influences, and how the public realm is shaped by social, economic, political, and cultural forces. Focus on issues of equity, identity, sense of place, smart growth, and sustainable place making.	Architecture and Planning (AP)	Architecture (ARCH)	GR

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ARCH	653	Intro to Social Environ Just	X		Introduces students to social and environmental justice issues in the design of the built environment as related to human rights, social equity, dignity, status, stigma, marginalization, discrimination and several other aspects of justice. Students focus on how these issues are embodied in the environment, reflecting and reinforcing the nature of power relations in society.	Architecture and Planning (AP)	Architecture (ARCH)	GR
ARCH	670	Elements of Hi-Perf Bldgs	X		An overview of high-performance building characteristics, including: thermal, visual, and acoustic comfort; indoor air quality; energy consumption; water consumptions; material impacts; greenhouse gas emissions; and resilience.  Prerequisite: graduate standing; permission of graduate program director.	Architecture and Planning (AP)	Architecture (ARCH)	GR
ARCH	671	LEED Green Bldg Rating System	X		A detailed exploration of the LEED BD&C green building rating system, with support for students interested in becoming LEED accredited professionals.  Prerequisite: graduate standing; permission of graduate program director.	Architecture and Planning (AP)	Architecture (ARCH)	GR
BIO	100	Biology for a Modern Society	X		Considers biological issues related to the environment, genetics and biotechnology, human reproduction and development, and population biology. Historical, contemporary, and future implications of these issues are discussed. Not open to students who have credit in BIO 102, 111, or 112.	Sciences and Humanities (SH)	Biology (BIOL)	UG
BIO	102	Biol Concepts for Teachers	X		Principles of biology as they relate to energy requirements and reproductive processes of living organisms, including the study of plants and conservation with emphasis on the human role in the environment. Designed primarily for students in elementary education programs.	Sciences and Humanities (SH)	Biology (BIOL)	UG
BIO	112	Principles of Biology 2	X		Examines the diversity, evolutionary relationships, ecology, and physiology of organisms in the animal kingdom with an introduction to the protozoans. Emphasizes structure and function at the organismal level, classification, and phylogenetic relationships. Lecture and laboratory.	Sciences and Humanities (SH)	Biology (BIOL)	UG
BIO	216	Ecology	X		Effects of physical and biotic conditions on the distribution, abundance, and diversity of plants and animals. Dynamics of ecological systems at population, community, ecosystem, landscape, and global levels, and from an evolutionary perspective. Practical applications of ecological knowledge to environmental problems. Prerequisite: BIO 112.	Sciences and Humanities (SH)	Biology (BIOL)	UG

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BIO	220	Ecological Issues 21st Century	X		Fundamental concepts of ecology, including interactions between organisms and their environment, population/community dynamics, and structure/ function of ecosystems. Application of concepts to current ecological issues (e.g., species extinction, human population dynamics, human food production systems, natural resource depletion, and global environmental change). Intended for non-biology majors. Not open to students who have credit in BIO 216. Open only to non-biology majors.	Sciences and Humanities (SH)	Biology (BIOL)	UG
BIO	254	Biology in the Social Context	X		Designed to foster understanding of the interactions between and among human biological and social systems. Emphasizes biological concepts as they relate to health and behavior. Prerequisite recommended: college level introductory biology. Open only to social work or family and consumer sciences majors, or by permission of the department chairperson.	Sciences and Humanities (SH)	Biology (BIOL)	UG
BIO	316	Methods in Ecology	X		Introduction to scientific study designs, measurements, data analysis, and the logic of inference as applied to ecological research. Focuses on a field research project that culminates in a written report and an oral presentation. Prerequisite or parallel: BIO 216.	Sciences and Humanities (SH)	Biology (BIOL)	UG
BIO	416	Population Ecology	X		Presents fundamental principles of population growth and regulation, including both within-species and between-species interactions. Implications for over-population, endangered species, and pest and game management are discussed. Laboratory includes both experimental studies and computer simulation exercises. Prerequisite: BIO 216.	Sciences and Humanities (SH)	Biology (BIOL)	UG
BIO	418	Comm and Ecos Ecol	X		Principles of ecological organization at the community and ecosystems levels. Emphasizes the processes that influence the structure and function of communities and ecosystems. Laboratory includes field and lab studies of plant and animal systems. Prerequisite: BIO 216.	Sciences and Humanities (SH)	Biology (BIOL)	UG
BIO	420	Field Biology of Distant Areas	X		Includes study of the sciences peculiar to selected geographic areas. Ecology, flora, and fauna. Travel may be by air. Seminars may be scheduled regularly throughout the course. Registration fee may include travel charges as well as the general fee. Prerequisite: permission of the department chairperson. A total of 12 credits may be earned.	Sciences and Humanities (SH)	Biology (BIOL)	UG
BIO	480	Limnology	X		The physical, chemical, and biological characteristics of inland waters. Laboratory and several field trips will be devoted to exploring techniques for the evaluation of representative aquatic ecosystems. Prerequisite: BIO 216 or permission of the department chairperson.	Sciences and Humanities (SH)	Biology (BIOL)	UG

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BIO	482	Aquatic Microbiology	X		Microorganisms indigenous to nonpolluted and polluted aquatic ecosystems. Emphasizes nutrient cycling and use of microorganisms as indicators of pollution. Morphology, physiology, and ecology of specific organisms. Lecture and laboratory. Prerequisite: BIO 313.	Sciences and Humanities (SH)	Biology (BIOL)	UG
BIO	483	Marine Biology	X		Introduction to marine environments. Properties of seawater, hydrodynamics. Phytoplankton and benthic plants. Primary production, nutrient cycles. Marine animals, surveys of major taxa. Adaptations for life on the bottom, open water, intertidal zones, estuaries, and abyssal regions.	Sciences and Humanities (SH)	Biology (BIOL)	UG
BIO	520	Field Biology of Distant Areas	X		The species peculiar to selected geographic areas. Ecology, flora, and fauna. Travel may be by air. Seminars may be scheduled regularly throughout the course. Registration fee may include travel charges as well as the general fee. Prerequisite: permission of the department chairperson. A total of 12 credits may be earned.	Sciences and Humanities (SH)	Biology (BIOL)	GR
BIO	582	Aquatic Microbiology	X		Microorganisms indigenous to nonpolluted and polluted aquatic ecosystems. Emphasizes nutrient cycling and the use of microorganisms as indicators of pollution. Morphology, physiology, and ecology of specific organisms. Lecture and laboratory. Prerequisite: BIO 313. Not open to students who have credit in BIO 482.	Sciences and Humanities (SH)	Biology (BIOL)	GR
BIO	616	Population-Community Ecology	X		Fundamental principles of population growth and regulation, community structure and diversity, focusing on intra- and interspecific interactions. Implications for over-population, endangered species, and pest and game management are explored. Principles of ecological organization are evaluated at the community level with an emphasis on the processes that influence community structure and function. The laboratory will use computer simulations and analysis of ecological data to test hypotheses, critically review research results/theories and formulate new questions.  Prerequisites: BIO 216 or equivalent introductory ecology course.	Sciences and Humanities (SH)	Biology (BIOL)	GR
BIO	656	Ecosystem Ecology	X		Principles and application of ecosystem ecology. Provides students with an understanding of concepts in modern ecosystem ecology and with an in-depth analysis of ecosystem components, processes, and factors that control them. Prerequisite: BIO 216 or equivalent, or permission of the instructor.	Sciences and Humanities (SH)	Biology (BIOL)	GR

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
BIO	657	Multiv Analy and Envir Data	X		Introduction to multivariate statistical techniques and technological tools necessary to evaluate the literature and to carry out original research in the environmental sciences. Prerequisite: BIO 448 or 548 or equivalent, or permission of the instructor.	Sciences and Humanities (SH)	Biology (BIOL)	GR
BOT	380	Forestry	X		General course in forestry with emphasis on forest policy, ecology, and management. Current issues are discussed with particular reference to their social, political, and environmental implications. Lecture and laboratory.	Sciences and Humanities (SH)	Biology (BIOL)	UG
BOT	440	Taxonomy of Vascular Plants	X		Identification, use, and care of native and ornamental trees, shrubs, vines, and herbaceous plant material. The use of botanical keys, manuals, and texts in the identification of the plant taxa. Prerequisite: BIO 210 or permission of the instructor.	Sciences and Humanities (SH)	Biology (BIOL)	UG
BOT	442	Economic Botany	X		The cultivation, processing, environmental requirements, and use of plants and plant derivatives for food, drugs, dwellings, clothing, and power.	Sciences and Humanities (SH)	Biology (BIOL)	UG
BOT	470	Dendrology	X		The identification and site characterization of woody plants with an emphasis on midwestern tree species. Use of botanical features and keys in field identification. Correlation of species with site conditions, plant diseases, climatic parameters, associate species, and geographical distribution.	Sciences and Humanities (SH)	Biology (BIOL)	UG
BOT	480	Plant Ecology	X		Factors affecting the distribution and abundance of plants. Patterns, structure, and development of plants at the individual, population, and community level. Laboratory provides experience with ecological experimentation at the physiological, population, and community levels. Prerequisite: BIO 216 or permission of the instructor.	Sciences and Humanities (SH)	Biology (BIOL)	UG
BOT	481	Aquatic Botany	X		The collection and identification of nonvascular and vascular plants from freshwater ecosystems. Emphasizes the morphology, physiology, and ecology of these plants to explain their distribution in nature. Class project and field trips may be used to demonstrate ecological relationships. Two Saturday field trips required. Prerequisite: BIO 210 or permission of the instructor.	Sciences and Humanities (SH)	Biology (BIOL)	UG
BOT	540	Taxonomy of Vascular Plants	X		Identification, use, and care of native and ornamental trees, shrubs, vines, and herbaceous plant material. The use of botanical keys, manuals, and texts in the identification of plant taxa. Prerequisite: BIO 112 or permission of the department chairperson. Not open to students who have credit in BOT 440.	Sciences and Humanities (SH)	Biology (BIOL)	GR

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
BOT	544	Plant Prop and Mgt	X		Practical experience in the different methods of plant propagation, care, and cultivation for use in the home, school, garden, and greenhouse. Diseases, pathogens, and pests of the plant.	Sciences and Humanities (SH)	Biology (BIOL)	GR
BOT	570	Dendrology	X		The identification and site characterization of woody plants with emphasis on midwestern tree species. Use of botanical features and keys in field identification. Correlation of species with site conditions, plant diseases, climatic parameters, associate species, and geographical distribution. Prerequisite: BIO 112 or permission of the department chairperson. Not open to students who have credit in BOT 470.	Sciences and Humanities (SH)	Biology (BIOL)	GR
BOT	581	Aquatic Botany	X		The collection and identification of nonvascular and vascular plants from fresh water ecosystems. Emphasizes morphology, physiology, and ecology of these plants to explain their distribution in nature. Class project and field trips may be used to demonstrate ecological relationships. Prerequisite: BIO 112 or permission of the department chairperson. Not open to students who have credit in BOT 481.	Sciences and Humanities (SH)	Biology (BIOL)	GR
BUSA	300	Int Sustainability in Business		X	Offers interdisciplinary perspectives on issues forming the environmental context for business. The life-cycle concept frames the discussion of environmental management systems and standards, pollution prevention, and product and market issues. Includes lectures, readings, case studies, and student projects. Prerequisite: sophomore standing.	Miller College of Business (CB)	Miller College of Business (MCOB)	UG
CAP	101	Environment Design and Plan 1	X		Basic problem solving related to abstract and historical and contemporary problems in environmental design. Elements of space, form, function, and human use as they affect the natural and built environments.	Architecture and Planning (AP)	Coll of Architecture & Plan (COAP)	UG
CAP	102	Environment Design and Plan 2	X		Basic problem solving related to abstract and historical and contemporary problems in environmental design. Elements of space, form, function, and human use as they affect the natural and built environments. Methods for environmental design communications in a variety of media. Prerequisite: CAP 101.	Architecture and Planning (AP)	Coll of Architecture & Plan (COAP)	UG
CAP	200	Design Thinking	X		Introduction to the fundamental characteristics and practice of design thinking. Students will become aware, understand, and learn to use design methods to match people's needs with what is feasible and viable in a creative framework that challenges conventional problem-solving and/or decision-making strategies and provides alternatives.	Architecture and Planning (AP)	Coll of Architecture & Plan (COAP)	UG

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
CAP	498	Spec Projects in CAP	X		Special projects in the College of Architecture and Planning undertaken by groups of students directed by faculty. A total of 9 credits may be earned.	Architecture and Planning (AP)	Coll of Architecture & Plan (COAP)	UG
CAP	598	Special Projects in CAP	X		Special projects in the College of Architecture and Planning undertaken by groups of students directed by faculty. A total of 9 credits may be earned.	Architecture and Planning (AP)	Coll of Architecture & Plan (COAP)	GR
CAP	651	Research Methods	X		Introduction to methods and techniques in the design, preparation, and execution of urban design research. Emphasis will be on procedures and techniques for the development of critical evidence-based urban design. Prerequisite: graduate status and permission of the MUD program coordinator.	Architecture and Planning (AP)	Coll of Architecture & Plan (COAP)	GR
CHEM	627	Environmental Chemistry	X		Designed to provide graduate students from Biology, Chemistry, and Environment, Geology, and Natural Resources with in-depth understanding of the different types of environmental contaminants and the range of analytical methods available to detect and monitor their levels in different media. This includes fundamental and applied chemistry topics relevant to the environmental sciences. Knowledge of college level general and organic chemistry is recommended. Prerequisite: permission from the chair of the Department of Chemistry is required.	Sciences and Humanities (SH)	Chemistry (CHEM)	GR
CM	303	Highway Construction 2	X		Highway construction methods and economic applications. Team development of construction scheduling and cost estimates for highway construction projects under closely simulated conditions. Prerequisite: CM 302 and 355.	Architecture and Planning (AP)	Construction Mgt & Int Design (CMID)	UG
CM	315	Sustainable Construction		X	Provides detailed knowledge related to sustainable construction. Emphasis will be on green building rating systems, and course work includes case studies, guest speakers, field trips, investigation of green materials, and a term project.	Architecture and Planning (AP)	Construction Mgt & Int Design (CMID)	UG
CT	300	Sustainability in Info Tech		X	A study of sustainability issues related to the field of information technology. Explores the environmental, economic, and human impact of information technology. Prerequisite: sophomore standing.	Commun., Info. and Media (CM)	Info, Comm Sciences (INCS)	UG
DSCI	607	Data Analytics for Environ Sci	X		Examination of techniques in data analytics relevant to the environmental sciences. Course delivery includes both guided instruction and applied problem-solving using common analytical approaches.	Sciences and Humanities (SH)	Coll of Sciences & Humanities (COSH)	GR

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
ECON	311	Environmental Economics		X	Application of economic analysis to pollution, natural resource usage, and sustainability. "Sustainability" expands the concepts of economic growth and optimization to include a balanced set of goals that include environmental carrying capacity, social and intergenerational equity, and community values. Prerequisite: minimum grade of C in ECON 116 or 201 or permission of the instructor.	Miller College of Business (CB)	Economics (ECON)	UG
ECON	351	International Economics	X		Examines international trade, finance, and commercial policy. Prerequisite: minimum grade of C in ECON 201.	Miller College of Business (CB)	Economics (ECON)	UG
ECON	485	Urban Economics	X		The systematic economic structure of cities and the component parts of that structure. Attention is given to the ways in which the economic structure of cities and regions obstructs or facilitates the attainment of the goals of the community. Prerequisite: minimum grade of C in ECON 201.	Miller College of Business (CB)	Economics (ECON)	UG
ECON	511	Environmental Economics	X		The application of economic principles to environmental problems. Emphasizes application of the economist's decision-making model to environmental issues and the advantages and shortcomings of the economist's analysis. Prerequisite: ECON 201 or 509; 6 credits in natural resources and environmental management, NREM 101, or permission of the department chairperson. Not open to students who have credit in ECON 311; NREM 203.	Miller College of Business (CB)	Economics (ECON)	GR
ECON	585	Urban Economics	X		The systematic economic structure of the city and its component parts. The ways in which the economic structures of cities and regions obstruct or facilitate the attainment of the goals of the communities. Prerequisite: ECON 201, 202. Not open to students who have credit in ECON 485.	Miller College of Business (CB)	Economics (ECON)	GR
ECON	615	International Economics	X		Classical and modern theories of exchange rates, gains from trade, factor movements, international money markets, and barriers to trade. Includes analysis of international commercial policy. Prerequisite: ECON 201, 202 or equivalent, or permission of the department chairperson. Open only to students who have been admitted to a university graduate program.	Miller College of Business (CB)	Economics (ECON)	GR
ECYF	202	Child and Family Wellness	X		Explore the concepts of wellness, emphasizing nutrition, health and safety as it applies to children and families. Increase awareness of the need for healthy environments and use of sustainable and age appropriate practices in environments with families and children.	Teachers College (TC)	Early Childh, Youth, Family St (ECFS)	UG

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
EDAD	688	Schl Bldings, Grnds, and Equip	X		roles and responsibilities of the educational administrator and procedures that contribute to effective planning of new or remodeled educational facilities. Gives special attention to such matters as school surveys, development of educational specifications, standards and guidelines for instructional and service areas, site requirements, financing, construction patterns, equipment needs, and community involvement.	Teachers College (TC)	Educational Leadership (EDLP)	GR
EMDD	660	Applied Research Lab	X		Conduct research that addresses projects developed in the Creative Projects and Development lab and supports EMDD faculty research endeavors. Research may include iterative usability studies during design and development phases and/or summative research that generates new knowledge in fields related to those with an emphasis on strategic information and communication design. Students work closely with the Applied Research Lab director to determine appropriate research methods for projects, develop and submit research protocols for IRB approval, recruit participants for and conduct user studies, analyze and report results, and write and submit research papers for publication in academic journals and/or trade publications focused on innovative content dissemination strategies and communication design. A total of 9 credits may be earned. Open only to CCIM graduate students or with graduate director permission.	Commun., Info. and Media (CM)	Journalism (JOUR)	GR
EMDD	670	Creative Project Lab	X		Design and develop novel story forms, interactive systems, news platforms, multimedia apps, and other digital assets in the field of emerging media and communication design. Projects follow accepted communication design models and will use contextual design and inquiry, human factors research, and user-centered design models as applied to communication design. All projects adhere to a research-informed process, in collaboration with EMDD 660 Applied Research Lab, that provides designers and developers feedback for making design improvements at key points along the way. Project teams may include a variety of skill sets, including writers, editors, graphic designers, photographers, and others as appropriate to the project. A total of 9 credits may be earned. Open only to CCIM graduate students or with graduate director permission.	Commun., Info. and Media (CM)	Journalism (JOUR)	GR

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
FCS	690	Sustain Des		X	Provides the graduate student the opportunity to learn sustainable theories and practices specific to apparel, merchandising, and interior design. Topics include ecological principles, consumer perspectives, process and practices, policy and performance assessments of various design methods and frameworks.	Miller College of Business (CB)	Applied Business Studies (APBS)	GR
GCM	373	Graphics: Pack Constr and Des	X		Advanced applications in packaging. CAD packaging software will be explored. Topics include design, sustainability, layout, and fabrication of structural materials, multi-content packages, specialty boxes, and point of purchase displays. Prerequisite: GCM 283 or permission of the instructor.	Fine Arts (FA)	Art (ARTT)	UG
GEOG	120	Economic Geog of Globalization	X		A systematic approach to economic issues emphasizing local, regional, national, and global economic developments in the geographic setting.	Sciences and Humanities (SH)	Geography (GEOG)	UG
GEOG	150	Global Geography	X		A basic survey course emphasizing geographic facts and interdependencies between the developed and developing world. Particular emphasis is given to physical and social environmental interdependencies.	Sciences and Humanities (SH)	Geography (GEOG)	UG
GEOG	261	Intro to Sustainable Tourism		X	Examines the history, components, and spatial structure of tourism from an ethical standpoint in regard to environmental, socio-cultural and economic impacts. Introduces principles of sustainable tourism and their application to various types of tourism and geographical contexts.	Sciences and Humanities (SH)	Geography (GEOG)	UG
GEOG	323	Tourism and Geography of Food	X		Surveys the origin, spatial diffusion, and cultural ecology of food crops and agriculture in the context of tourism and travel. Examines the globalization of regional foods as a cultural commodity and agricultural landscapes as tourist attractions.	Sciences and Humanities (SH)	Geography (GEOG)	UG
GEOG	423	Population Geography	X		A systematic and regional analysis of areal patterns of population distribution, composition, migration, and growth, as well as their causes and the effects they have on the cultural landscape.	Sciences and Humanities (SH)	Geography (GEOG)	UG
GEOG	491	Sustainable Tourism Develop		X	Discusses how to develop tourism destinations and activities that integrate sustainable economic development, accessibility, and indigenous cultural evolution with minimal impact on the environment. Includes site assessment, financial analysis, market forecasting, and impact assessment. Prerequisite: GEOG 261, 262; or permission of the instructor.	Sciences and Humanities (SH)	Geography (GEOG)	UG

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
GEOG	625	GIS for Environmental Science	X		Examination of techniques in Geographic Information Systems (GIS), with emphasis on data and analyses relevant to the environmental sciences. Course delivery includes both guided instruction and applied GIS projects focused on data collection, preparation, analysis, and reporting. Prerequisite: permission of the instructor.	Sciences and Humanities (SH)	Geography (GEOG)	GR
GEOL	101	Planet Earth Geol Environment	X		Introductory study of the materials, structure, and surface features of the earth; the processes responsible for their development; geologic hazards; and the application of geologic knowledge to mankind's environmental and resource problems.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	UG
GEOL	105	Lab in Physical Geology	X		Practical study of minerals, rock, planimetric and topographic maps, fold and fault structures, geological maps, climate change, earthquakes, flooding, sustainability; local field trip. An introductory high school or college earth science course. Prerequisite: an introductory high school or college earth science course; permission of the department chairperson.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	UG
GEOL	206	Oceans and Nations	X		Worldwide human interactions with the oceans and international conflicts of interest related to the marine environment. Introduction to oceanography, marine law, resource conflicts, pollution, cooperation for research and hazard response, and other topics. Credit does not count toward the geology minor.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	UG
GEOL	207	Environ Geology Geochem Cycles	X		Explores the geochemical cycling in the interior of the Earth and its effects on surface processes, the cycling of components crucial for humans and life in general such as water, carbon, and nitrogen, and the geologic cycling of hazardous chemicals such as heavy metals. Regularly scheduled laboratory. Prerequisite: CHEM 111; GEOL 101; or high school equivalents, or permission of the department chairperson.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	UG
GEOL	416	Geology Hazards Environment	X		Applied geology for hazard and environmental problems. Properties and mechanics of rocks and soil; geologic materials in construction; erosion, mass wasting, subsidence; flooding, shoreline, seismic, volcanic, and other natural hazards. Dams, tunnels, mines, shoreline structures, and other special construction problems; groundwater engineering problems. Prerequisite: an introductory course such as GEOL 101, 207, 240; NREM 211 or EMHS 352; MATH 108 or high school equivalent, or permission of the department chairperson.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	UG

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
GEOL	462	Env Geol in the Field and Lab	X		Provides development of research projects and instruction in field and laboratory techniques used in the collection and analysis of field samples. The techniques are applied to the study of local environment research projects and may include instruction on well probes and standard "wet" chemical techniques. Prerequisite: GEOL 207, 461 or 560.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	UG
GEOL	516	Geol of Hazards and Env	X		Applied geology for hazard and environmental problems. Properties and mechanics of rocks and soil; geologic materials in construction; erosion, mass wasting, subsidence, flooding, shoreline, seismic, volcanic, and other natural hazards. Dams, tunnels, mines, shoreline structures, and other special construction problems; groundwater engineering problems. Prerequisite: an introductory course such as GEOL 101, 207, 240; NREM 211 or EMHS 352; MATH 108 or high school equivalent, or permission of the department chairperson. Not open to students who have credit in GEOL 416.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	GR
GEOL	562	Env Geol in the Field and Lab	X		Provides development of research projects and instruction in field and laboratory techniques used in the collection and analysis of field samples. The techniques are applied to the study of local environment research projects and may include instruction on well probes and standard "wet" chemical techniques. Prerequisite: GEOL 207, 461 or 560. Not open to students who have credit in GEOL 462.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	GR
HIST	204	US Environmental History	X		Designed to give students knowledge of resource use in the United States. Government policies and private enterprise practices of exploitation and conservation from settlement to the present are treated in historical perspective. Emphasizes the way resource use has shaped society. Not open to students who have credit in NREM 204.	Sciences and Humanities (SH)	History (HIST)	UG
HIST	299X	Experiment Development Topic	X		Topics relevant to the discipline. Course titles will be announced before each semester. A total of 6 credits may be earned, but no more than 3 in any one semester or term.	Sciences and Humanities (SH)	History (HIST)	UG
HONR	189	Inquiries in Global Studies	X		Interdisciplinary exploration of the commonalities and diversities in global culture, economy, history, politics, and society. Focus is upon Asia, Africa, Central and South America, and Indigenous Peoples.  Open only to Honors College students.	Honors College (HN)	Honors College (HONR)	UG

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
HONR	296	Inquiries in Physical Sciences	X		Study of introductory principles within the physical sciences, emphasizing the relationships of the sciences to human concerns and society. Study of social and ethical consequences of scientific discoveries and their applications to critical issues confronting contemporary society. Open only to Honors College students.	Honors College (HN)	Honors College (HONR)	UG
HONR	297	Inquiries in Earth Sciences	X		Study of introductory principles within the earth sciences, emphasizing the relationships of the sciences to human concerns and society. Study of social and ethical consequences of scientific discoveries and their applications to critical issues confronting contemporary society. Open only to Honors College students.	Honors College (HN)	Honors College (HONR)	UG
HONR	298	Inquiries in Life Sciences	X		Study of introductory principles within the life sciences, emphasizing the relationships of the sciences to human concerns and society. Study of social and ethical consequences of scientific discoveries and their applications to critical issues confronting contemporary society. Open only to Honors College students.	Honors College (HN)	Honors College (HONR)	UG
HOSP	395	Food and Culture	X		Explores the relationships between agricultural practices, diet patterns, food procurement and distribution, and religious dietary doctrines from a national and global perspective. Emphasis on how culture, national and international policies, and belief systems shape food consumption patterns.	Miller College of Business (CB)	Applied Business Studies (APBS)	UG
HSC	482	Environmental Health	X		Examines health issues, scientific understanding of causes, and possible future approaches to control of the major environmental health problems in industrialized and developing countries. The relationship of people to their environment, how it affects their physical well-being, and what they can do to influence the quality of the environment and to enhance the protection of their health are also emphasized. Basic concepts of the modes of transmission of environmental stressors from source or reservoir to host and methods of reducing their impact on human population are accentuated. Prerequisite: HSC 180.	College of Health (CH)	Nutrition and Health Science (NUHS)	UG
HSC	682	Environmental Health	X		Physical environment and its relationship to disease causation. Review of environmental health problems and their solutions. Areas of study include air and water pollution, food sanitation, disposal of human excreta and waste, radiation and occupational health problems, and risk. Not open to students who have credit in HSC 482.	College of Health (CH)	Nutrition and Health Science (NUHS)	GR

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
IDES	114	Sustainable Interiors		X	Focused on the examination and application of the appropriate sustainable/green principles in interior design. Emphasis will be on Leadership in Energy & Environmental Design for Contract Interiors Green Building Rating Systems (LEED-CI), a national certification program by the U.S. Green Building Council.	Architecture and Planning (AP)	Construction Mgt & Int Design (CMID)	UG
IDES	115	Interior Materials and Appl	X		Study of interior materials, finishes, furniture, and architectural components. Covers floor, wall, and ceiling finishes, furniture, cabinetry, and case goods. Selection criteria, green design, cost, quality, application, sources, and specifications will be discussed and analyzed. Open only to interior design majors and minors.	Architecture and Planning (AP)	Construction Mgt & Int Design (CMID)	UG
IDES	606	Visual Culture in Built Enviro	X		Provides an integrated survey of global interior environments and architecture, exploring significant design styles and movements from the mid-19th century through the present day. Explores Western and non-Western interior and architecture within the context of the arts, politics, business, technology, economics, the sciences, and social sciences.	Architecture and Planning (AP)	Construction Mgt & Int Design (CMID)	GR
IDES	619	Environ Psychology Int Des	X		Explores how a space and building affect an occupant's behavior, well-being, and health. Discusses psychosocial responses to the built environment, analyzes the interaction between environments and human behavior and well-being, while exploring how individual differences related to age, gender, and cultural background impact that interaction. Provides proactive initiatives designed to minimize stress and maximize user satisfaction, helping designers to create more comfortable spaces that will both satisfy the needs of the intended occupants and expand the scope of design.	Architecture and Planning (AP)	Construction Mgt & Int Design (CMID)	GR
LA	100	Intro Landscape Architecture	X		An introduction to landscape architecture: lectures, site observations, and environmental experiences that focus on landscape architectural practice, representative projects, philosophy, and areas of specialization within the field.	Architecture and Planning (AP)	Landscape Architecture (LAND)	UG
LA	201	Site Design	X		Application of basic design principles, programming, and analysis to small-scale site-specific landscape design problems. Visual and functional design principles as they relate to natural and cultural influences in landscape design. Open only to LA majors.	Architecture and Planning (AP)	Landscape Architecture (LAND)	UG
LA	202	Park and Open Space Design	X		Design projects emphasizing park design, park and recreational master planning, and open-space design in rural, suburban, or urban settings. Prerequisite: LA 201. Open only to LA majors.	Architecture and Planning (AP)	Landscape Architecture (LAND)	UG

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
LA	220	LA Hist Ancnt to Mid 19th Cent	X		The history of landscape architecture from ancient times to approximately the mid-19th century; course emphasizes the human environment relationship and contemporary parallels in landscape design.	Architecture and Planning (AP)	Landscape Architecture (LAND)	UG
LA	270	Environmental Systems	X		Qualitative investigations and analysis of the interrelationships between people and landscape systems. Studies include the assessment of ecological systems including land, water, climate, and biotic systems; influence of natural processes as they relate to the principles of landscape architectural design, planning and construction.	Architecture and Planning (AP)	Landscape Architecture (LAND)	UG
LA	301	Housing and Community Design	X		Design projects focusing on social, political, economic, cultural, and environmental issues as they relate to land-planning and site design for housing developments and residential communities. Prerequisite: LA 202 and 280. Open only to LA majors.	Architecture and Planning (AP)	Landscape Architecture (LAND)	UG
LA	302	Planting Design	X		Design problems focusing on the functional, ecological, and aesthetic uses of plants in the landscape. Prerequisite: LA 211 and 341. Open only to LA majors.	Architecture and Planning (AP)	Landscape Architecture (LAND)	UG
LA	312	LA Engineering 2	X		Principles and practices of landscape architecture engineering and construction emphasizing landscape materials, structures, planting, and fabrication techniques. Includes design implementation techniques and construction documents. Open only to LA majors and minors.	Architecture and Planning (AP)	Landscape Architecture (LAND)	UG
LA	341	Plants 1	X		The study of woody and herbaceous plants, including plant identification and plant adaptation to urban and natural environmental conditions.	Architecture and Planning (AP)	Landscape Architecture (LAND)	UG
LA	371	Sustainable Site Design		X	interdisciplinary course examining theories, tools, and practices of sustainable site design and landscape planning. Connections are made between theories and green design movements; sustainable design projects are examined. Emphasis is placed on the interdisciplinary nature of sustainable design, collaboration, and site design processes for complex systems.	Architecture and Planning (AP)	Landscape Architecture (LAND)	UG
LA	403	Urban Design	X		Design studio emphasizing the physical and socio-behavioral influences on the design of cities. Projects may focus on the design of new urban environments or the redesign and revitalization of existing urban centers. May include interdisciplinary studies. Prerequisite: LA 312 or 401 or permission of the instructor. Open only to LA majors.	Architecture and Planning (AP)	Landscape Architecture (LAND)	UG

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
LA	414	LA Engineering 4	X		Advanced methods of landscape architecture engineering and construction/implementation practices. Subjects include advanced applications for construction documentation, Building/Site/Land Information modeling (e.g., BIM); documented sustainable design criteria/guidelines/techniques (e.g., SITES); landscape construction management; and post construction evaluation. Course topics may include advanced sustainable site construction and landscape engineering applications for lighting, water, material selection, and landscape management. Prerequisite: LA 313 or permission of the instructor. Open only to LA majors.	Architecture and Planning (AP)	Landscape Architecture (LAND)	UG
LA	430	Philosophy of Land Arch	X		Readings, seminars, and lectures in the background and development of historic and contemporary philosophies of landscape architecture. Includes discussions of design and environmental issues, land use, and professional ethics. Prerequisite: LA 221 or permission of the instructor.	Architecture and Planning (AP)	Landscape Architecture (LAND)	UG
LA	471	Sustainable Land Systems		X	Interdisciplinary course addressing sustainability in relation to diverse resource issues. It explores regions and sites as parts of land systems; and landscape planning and design integration with these systems to promote sustainability. It focuses on resource harvesting and regeneration; environmentally responsible materials and technologies, sustainable planning and design, and building-site integration.	Architecture and Planning (AP)	Landscape Architecture (LAND)	UG
LA	498	Special Projects	X		Special and timely landscape architectural projects undertaken by groups. A total of 9 credits may be earned, but no more than 6 in any one semester or term.	Architecture and Planning (AP)	Landscape Architecture (LAND)	UG
LA	514	LA Engineering 4	X		Advanced methods of landscape architecture engineering and construction/implementation practices. Subjects include advanced applications for construction documentation, Building/Site/Land Information modeling (e.g., BIM); documented sustainable design criteria/guidelines/techniques (e.g., SITES); landscape construction management; and post-construction/-occupancy evaluation. Course topics may include advanced sustainable site construction and landscape engineering applications for lighting, water, material selection, and landscape management. Prerequisite: LA 313 or permission of the instructor. Open only to landscape architecture majors.	Architecture and Planning (AP)	Landscape Architecture (LAND)	GR

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
LA	573	Environmental Systems	X		Qualitative investigations and analyses of and research in landscape systems. Studies include assessments of vegetation, climate, hydrology, soils, and surface geology as determinants of landscape architectural form; natural processes as they relate to the principles of landscape architectural construction.	Architecture and Planning (AP)	Landscape Architecture (LAND)	GR
LA	598	Special Projects	X		Special and timely landscape architectural projects undertaken by groups of students. Prerequisite: permission of the department chairperson. A total of 9 credits may be earned.	Architecture and Planning (AP)	Landscape Architecture (LAND)	GR
LA	601	LA Design Principles	X		Design projects, exercises, lectures, and field studies to develop awareness of principles and concepts integrating natural and cultural elements in the landscape.	Architecture and Planning (AP)	Landscape Architecture (LAND)	GR
LA	602	Site Design	X		Continued applications of basic design principles, programming, and site analysis reinforcing design processes and visual thinking in the design of sites. Emphasizes open space planning and park design. May include projects in natural, rural, and urban settings. Computer applications as appropriate. Prerequisite: LA 601 or departmental permission.	Architecture and Planning (AP)	Landscape Architecture (LAND)	GR
LA	603	Community and Urban Space Des	X		Continued application of principles of landscape architecture to community- and neighborhood- scale projects of increasing complexity, including housing, commercial and urban land planning, and development issues. Additional issues addressed include human behavioral principles and planting design concepts as they relate to landscape architectural spaces. Computer graphic and CAD techniques as appropriate. Prerequisite: LA 602 or departmental permission.	Architecture and Planning (AP)	Landscape Architecture (LAND)	GR
LSCM	480	Supply Chain Mgt Integ Project	X		Senior level capstone course requires students to plan, develop, and present a capstone project in operations and supply chain management. Topics include global manufacturing strategies, green movement and reversed logistics, lean Six Sigma, enterprise resource planning and implementation, process design--value stream mapping, and product costing. In addition to class meeting time, students will be required to meet in arranged times to complete a capstone project. Prerequisite: LSCM 361, 453, 460 or permission of the department chairperson. Open only to logistics and supply chain management majors.	Miller College of Business (CB)	Info Systems/Operations Mgmt (ISOM)	UG

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
MATH	622	Environmental Statistics	X		Aims to provide an introduction to the types of statistical analyses used in environmental studies. Topics include collecting environmental data with special emphasis on inaccessible and sensitive data, population size estimation, sampling in the wild such as quadrat, recapture, transect and adaptive sampling, composite sampling, ranked set sampling, examining environmental effects by regression-type models, statistical verifiability of environmental standards and regulations, time series, longitudinal, spatial, and temporal methods for the environmental processes. Prerequisite: MATH 320 or permission of the department chairperson.	Sciences and Humanities (SH)	Mathematical Sciences (MATH)	GR
MBA	600	Global Business Experience	X		Examines a strategic business problem for an organization with international offices/operations. Students will study relevant international business practices and culture, current practices related to the business problem presented, and theoretical underpinnings of those practices. Students will work in teams to create solutions for the client and may present findings during on-site international meetings. Prerequisite: full admission to a graduate program in the Miller College of Business. Open only to Miller College of Business students or by permission of the Executive Director of graduate programs.	Miller College of Business (CB)	Miller College of Business (MCOB)	GR
MBA	691	Global Strategic Management	X		Integrative application of business knowledge to managerial decisions and action that determine the long-run performance of organizations. Deals with legal and environmental issues and strategy formulation, and implementation in a global setting. Prerequisite: completion of 12 credits of MBA core courses; full admission to a graduate program in the Miller College of Business. Open only to Miller College of Business students or by permission of the director of graduate programs.	Miller College of Business (CB)	Miller College of Business (MCOB)	GR
METC	331	Global Climatology	X		Introduction to the dynamics of the global climate system. Emphasizes the physical processes that force spatial variability in climate, and the feedback mechanisms associated with global teleconnections and climate change. Prerequisite: METC 230.	Sciences and Humanities (SH)	Geography (GEOG)	UG

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
METC	334	Atmospheric Hazards	X		Examination of the causes, consequences, and spatial distribution of hazards deriving from or impacting the atmosphere. Both the physical properties and processes of natural hazards (e.g. hurricanes, tornadoes, biochemical) and the human actions and reactions to these hazards will be emphasized at the local, regional, and global scales. Prerequisite: METC 230.	Sciences and Humanities (SH)	Geography (GEOG)	UG
MKG	610	Business and Sustainability		X	Examines business activity from an input-process-output perspective. Addresses design, materials flows, production, distribution, usage, and end-of-life disposition of materials throughout the life cycle of products and services and their impacts on resources and the integrity of environmental, social, and economic systems necessary for long-term human activity and quality of life. Prerequisite: full admission to a graduate program of the university.	Miller College of Business (CB)	Marketing (MKG)	GR
NEWS	418	Specialty Reporting	X		Development of reporting and writing skills needed to communicate the complexities of topics such as science, environment, business, or education to diverse media audiences. Topic of course will be announced in advance of each offering. Prerequisite: JOUR 104 or NEWS 221 or SPTA 345. A total of 6 credits may be earned.	Commun., Info. and Media (CM)	Journalism (JOUR)	UG
NREM	101	Environment and Society	X		Study of human roles in conservation resource management, environmental quality, and sustainable development. Effects of population and technology on environmental systems including air, energy, minerals, soil, water, vegetation, and wildlife. Environmental ethics, outdoor recreation, and public lands management are also covered. Laboratory and field activities.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	UG
NREM	203	Decision-Making in Nat Res Mgt	X		Application of decision-making principles to natural resource management. Instruction in the use of basic microeconomic principles (investment, capital recovery, property rights, opportunity costs, discounting, compounding, prices) in practical resource management situations within the constraints of environmental laws and regulations. Uses simple algebraic and graphical tools.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	UG
NREM	204	American Environmental History	X		Designed to give students knowledge of use of resources in the United States by treating, in historical perspective, government policies and private enterprise practices of exploitation and conservation from settlement to the present. Emphasizes the way use of resources has shaped society. Not open to students who have credit in HIST 204.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	UG

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
NREM	205	Internatnl Natural Resources	X		An analysis of problems occurring as a result of development and use of natural resources worldwide. The role of resource management and conservation to enhance the carrying capacity of the earth. A case-study approach to the management of global environmental problems.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	UG
NREM	211	Water Resources	X		Hydrologic cycle and climate as a basis for water resources distribution and management. U.S. and international water resources issues: U.S. water allocation laws, national and international water conflicts, water quality, drinking water and wastewater treatment, surface and ground water hydrology, municipal water resources development. Includes laboratory and field work. Prerequisite: MATH 108 or 111 or 112 or 132 or 161 or 165 or appropriate math placement score and permission of the instructor.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	UG
NREM	221	Soil Resources	X		Soil as an integral part of our resource base and its relationship to other natural resources; its origin, development, and classification. The physical, chemical, and biological properties, with emphasis on the practical applications of soil science to natural resources planning. Includes laboratory and field work. Prerequisite: CHEM 111; MATH 108 or 111 or 112 or 132 or 161 or 165 or appropriate math placement score and permission of the instructor.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	UG
NREM	304	Sustainable Agriculture		X	Natural resource use in agricultural systems with emphasis on principles of sustainability. Includes integrated pest management, permaculture, and other production practices that conserve soil, water, and biological resources. Field trips included.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	UG
NREM	307	Env Mgt Developing Countries	X		Survey of challenges facing management of urban environments and the rural-urban interface in the developing nations of Asia, Africa, Latin America, and Pacific Oceania. Features interdisciplinary approach with frequent guest speakers to discuss existing and potential management, economic, technical, and policy solutions in their regional, cultural, and historic contexts.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	UG
NREM	309	Human Dimensions Global Change	X		Systematic exploration of major topics of human and environmental change from local to global scales, including: population, energy, agriculture, industry, technology, urbanization, water, climate, natural hazards, socioeconomic systems, land use, trade, marginalized societies, and biodiversity. Prerequisite: junior standing; or permission of the instructor.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	UG

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
NREM	331	Energy and Mineral Resources	X		Appraisal of the problems, prospects, and societal and technical issues surrounding the use of energy and mineral resources. Emphasizes environmental problems and ecoenergetics, consideration of the natural resource base, distribution and production problems, conservation, alternative energy systems, resource policy, and research.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	UG
NREM	335	Renewable Energy Sustain Tech		X	Exploration of alternative/renewable energy systems (wind, solar, hydro, biomass, geothermal, fuel cells). Case studies of sustainable technology emphasize topics including industrial ecology (life-cycle analysis, design for the environment, clean manufacturing, and impact assessment) and appropriate technology applications in developing countries. Problem-solving applications using various approaches.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	UG
NREM	357	Internat Community Development	X		Application of practical methods to problems of development in poor rural agrarian communities and environmental management in poor urban communities in Asia, Africa, and Latin America. Emphasizes face-to-face methodologies to the identification and development of workable solutions to resource and environmental problems of disadvantaged populations in developing nations.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	UG
NREM	372	Applied Research Methods	X		Social science applications in natural resource and environmental management. These applications include quantitative and qualitative survey research designs, analysis of social data, and applications of survey results to political processes. Perspectives range from local to international.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	UG
NREM	392	Environmental Interpretation	X		Develops skills and techniques necessary to the interpretation of ecological and environmental characteristics of earth systems. Emphasizes field work and creative presentation of concepts, and organization and management of interpretive programs including sites and facilities. Prerequisite: NREM 101 or its equivalent; junior standing.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	UG
NREM	395	Teaching Environmental Ed	X		Opportunities for enriching instruction through environmental education in formal and non-formal educational settings. Studies conservation, outdoor and environmental education, including teaching techniques and instructional resources used in each. Prerequisite: NREM 101 or permission of the department chairperson.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	UG

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
NREM	401	Forest Plan	X		Introduces students to the social, economic, and ecological forces that shape U.S. private forests. Takes an in-depth look at forest landowner values, attitudes, and perceptions of forests and linkages to management decision-making strategies and behaviors. Also introduces students to the skills they will need to interact with private forest landowners (PFLs) and forest management professionals. Students will develop forest stewardship plans based on interactions with PFLs on their property and information from forest professionals. Prerequisite: NREM 101, 211, and 221 or permission of instructor or department chairperson.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	UG
NREM	405	Integrated Resource Management	X		Systems perspective on holistic or integrated planning and management of natural resources. Stresses data analysis and its role in the decision-making process. Prerequisite: NREM 101 or equivalent; all core courses in natural resources and environmental management (or concurrent enrollment); junior or senior standing.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	UG
NREM	490	Community Engagement in NREM	X		Professional experience with a client whose needs are matched by the NREM faculty. Each experience is unique and determined by the nature of the client-professor relationship. Prerequisite: NREM 101 or equivalent; junior or senior standing. A total of 6 credits may be earned, but no more than 3 in any one semester or term.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	UG
NREM	491	Environmental Readings	X		Individual or small-group discussions relevant to natural resources or environmental studies/sciences/management. Prerequisite: NREM 101 or equivalent. A total of 3 credits may be earned.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	UG
NREM	501	Forest Plan	X		Introduces students to the social, economic, and ecological forces that shape U.S. private forests. Takes an in-depth look at forest landowner values, attitudes, and perceptions of forests and linkages to management decision-making strategies and behaviors. Also introduces students to the skills they will need to interact with private forest landowners (PFLs) and forest management professionals. Students will develop forest stewardship plans based on interactions with PFLs on their property and information from forest professionals.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	GR
NREM	504	Sustainable Agriculture		X	Natural resource use in agricultural systems with emphasis on principles of sustainability. Includes integrated pest management, permaculture, and other production practices that conserve soil, water, and biological resources. Field trips included. Not open to students who have credit in NREM 304.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	GR

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
NREM	507	Env Mgt Developing Countries	X		Survey of challenges facing management of urban environments and the rural-urban interface in the developing nations of Asia, Africa, Latin America, and Pacific Oceania. Features interdisciplinary approach with frequent guest speakers to discuss existing and potential management, economic, technical, and policy solutions in their regional, cultural, and historical contexts. Not open to students who have credit in NREM 307.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	GR
NREM	509	Human Dimensions Global Change	X		Systematic exploration of major topics of human and environmental change from local to global scales, including population, energy, agriculture, industry, technology, urbanization, water, climate, natural hazards, socio-economic systems, land use, trade, marginalized societies, and biodiversity. Not open to students who have credit in NREM 309.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	GR
NREM	531	Energy and Mineral Resources	X		Appraisal of the problems, prospects, and societal and technical issues surrounding the use of energy and mineral resources. Emphasizes environmental problems and ecoenergetics, consideration of the natural resource base, distribution and production problems, conservation, alternative energy systems, resource policy, and research. Not open to students who have credit in NREM 331.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	GR
NREM	535	Renewable Energy Sustain Tech		X	Exploration of alternative/renewable energy systems (wind, solar, hydro, biomass, geothermal, fuel cells). Case studies of sustainable technology emphasize topics including industrial ecology (life-cycle analysis, design for the environment, clean manufacturing, and impact assessment) and appropriate technology applications in developing countries. Problem-solving applications using various approaches. Not open to students who have credit in NREM 335.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	GR
NREM	557	Internat Community Development	X		Application of practical methods to problems of development in poor rural agrarian communities and environmental management in poor urban communities in Asia, Africa, and Latin America. Emphasizes face-to-face methodologies to the identification and development of workable solutions to resource and environmental problems of disadvantaged populations in developing nations. Not open to students who have credit in NREM 357.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	GR

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
NREM	592	Environmental Interpretation	X		Develops skills and techniques necessary to the interpretation of ecological and environmental characteristics of earth systems. Emphasizes field work and creative presentation of concepts, and organization and management of interpretive programs including sites and facilities. Not open to students who have credit in NREM 392.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	GR
NREM	595	Teaching Environmental Ed	X		Opportunities for enriching instruction through environmental education in formal and nonformal educational settings. Studies conservation, outdoor and environmental education, including teaching techniques and instructional resources used in each. Not open to students who have credit in NREM 395.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	GR
NREM	652	Air, Water and Soil Pollution	X		Chemical and biological processes related to environmental pollution, with emphasis on causes, pathways and risks to public health and the environment. Conventional and innovative technologies for remediation of contaminated air, water and soil. Some environmental chemistry. Open only to graduate students.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	GR
NREM	697	Advanced Topics in Env NR Mgt	X		Advanced special topics course in environmental and natural resources management. Prerequisite: permission of the department chairperson. A total of 6 credits may be earned, but no more than 3 in any one semester or term.	Sciences and Humanities (SH)	Environ Geol Nat Res (EGNR)	GR
NUTR	350	Technology of Food Science	X		Scientific evaluation of the behavior of food and its qualitative and quantitative properties. Overview of the food industry, food technology, biotechnology, and federal regulations related to food supply. Review of research and marketing practices of bioengineered food and dietary supplements. Prerequisite: HOSP 220. Open only to students admitted into the dietetics program.	College of Health (CH)	Nutrition and Health Science (NUHS)	UG
NUTR	456	Community Nutrition	X		Overview of community nutrition and nutrition education. Analysis of biological, economic, social, cultural, and policy issue affecting a community's nutritional status. Emphasis on federal food and nutrition programs and policy implications at the state and local level. Observation and participation in local nutrition programs. Prerequisite: NUTR 455.	College of Health (CH)	Nutrition and Health Science (NUHS)	UG
NUTR	480	Global Nutrition	X		This course explores 21st century global nutritional issues including both over and under nutrition, food insecurity, religious dietary prohibitions and national and international food system paradigms. Food and nutrition policies that shape population and individual dietary consumption patterns both nationally and globally are researched and debated for immediate and downstream impacts. Prerequisite or parallel: NUTR 340.	College of Health (CH)	Nutrition and Health Science (NUHS)	UG

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
NUTR	645	Nutrition and Food Policy	X		Explores the relationships between agricultural practices, diet patterns, food procurement and distribution, nutrition policy formation and implications at the local, state, federal, and international levels with a focus on how food and nutrition policies effects health.	College of Health (CH)	Nutrition and Health Science (NUHS)	GR
NUTR	660	Adv Healthcare Admin	X		Identification and application of advanced healthcare, food service, dietary management and marketing concepts: development of leadership skills required of dieticians and upper level managers. Open only to NUTD majors.	College of Health (CH)	Nutrition and Health Science (NUHS)	GR
PHIL	230	Environmental Ethics	X		Introduction to and analysis of basic concepts, principles, theories, and issues in environmental ethics.	Sciences and Humanities (SH)	Philosophy/Religious Studies (PHIL)	UG
PLAN	100	Intro Urb Planning and Dev	X		An introduction to urban planning and development. Open to all students.	Architecture and Planning (AP)	Urban Planning (PLAN)	UG
PLAN	101	Introduction to Planning	X		Introduces students to the planning skills needed to help influence the direction and growth of communities and to help neighborhoods, cities, and rural areas strike a balance between development, the provision of essential services, and environmental protection. Offered on-line only to high school students. Not open to students who have credit in PLAN 100.	Architecture and Planning (AP)	Urban Planning (PLAN)	UG
PLAN	202	Site Plan and Des Studio	X		Site analysis and design principles for small-scale projects, including building complexes, subdivisions, and neighborhood development. Present and defend designs for specific site locations. Prerequisite: CAP first year core program.	Architecture and Planning (AP)	Urban Planning (PLAN)	UG
PLAN	261	Comm and Pres Tech	X		Development of graphic and visualization skills for planners. Use of a variety of communication techniques and media for public presentation. Open only to urban planning majors and minors.	Architecture and Planning (AP)	Urban Planning (PLAN)	UG
PLAN	302	Urb and Neighbrhd Analy Stdio	X		Collection, analysis, and communication of information for urban- and neighborhood-scale planning, including use and interpretation of published data sources, field surveys and inventories, and interviews. Prerequisite: PLAN 203.	Architecture and Planning (AP)	Urban Planning (PLAN)	UG

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
PLAN	303	Economic Development Studio	X		Methods of analyzing local economic condition and performance, both qualitative and quantitative. Three local economies are examined: neighborhood, municipal, and region. Formulation of an economic development plan involving all three interacting economies and a set of policies to improve their performance. One or more sites and land uses are selected strategically toward plan implementation, and are analyzed as to their legal, market, financial and operational feasibility. The plan is mentored by, and presented to, external jurors in the field. Required for BUPD major and RED minor. Prerequisite: PLAN 203; waived for minors in Real Estate Development upon permission of the instructor or department.	Architecture and Planning (AP)	Urban Planning (PLAN)	UG
PLAN	404	Urban Design	X		An exploration of the physical form of the public realm and how it has been shaped by social, economic, political, and cultural forces. Special attention will be paid to issues of identity, sense of place, placemaking, and sense of belonging.	Architecture and Planning (AP)	Urban Planning (PLAN)	UG
PLAN	421	Urban Land-use Planning	X		Principles of urban land-use planning for newly developing areas and for changing older communities. Attention to environmental, efficiency, and aesthetic concerns in urban growth. Preparation of the comprehensive urban land-use plan.	Architecture and Planning (AP)	Urban Planning (PLAN)	UG
PLAN	425	Urban Ag as Comm Dev	X		Examines the growing role of urban agriculture in cities and the implications for community development and design. Examines the broad issues of food production and distribution along with related policies. Focuses on the present discourse associated with food security. Sustainability provides a framework under which communities better use natural resources, create infrastructures that are more efficient, protect and enhance quality of life, and create new, greener businesses that strengthen their economies without compromising the environment.	Architecture and Planning (AP)	Urban Planning (PLAN)	UG
PLAN	428	Urban Impact Analysis	X		Techniques for estimating the environmental, socioeconomic, fiscal, and energy effects of proposed plans and development projects.	Architecture and Planning (AP)	Urban Planning (PLAN)	UG
PLAN	433	Environmental Planning	X		Introduction to the fundamental issues and technologies associated with planning for sensitive use of environmental resources. Topics include waste management, air and water quality planning, ecological systems, and methods of environmental analysis and implementation.	Architecture and Planning (AP)	Urban Planning (PLAN)	UG

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
PLAN	435	Energy Planning	X		Energy resource issues in urban planning. Strategies for incorporating energy efficiency in housing, land use, transportation, social services, and community development. Analysis of energy policy, emphasizing innovative public and private sector initiatives at the community level.	Architecture and Planning (AP)	Urban Planning (PLAN)	UG
PLAN	439	Community Facilities Planning	X		Design principles and economic conditions in planning for urban physical facilities, including recreation facilities, streets, sidewalks, drainage, water supply systems, sewerage, waste treatment, and others.	Architecture and Planning (AP)	Urban Planning (PLAN)	UG
PLAN	440	Building Performance	X		A scientific approach to understanding how energy and moisture move in buildings and how buildings fail with respect to health and safety, durability, comfort, and affordability. While the focus is on housing, the fundamentals are applicable to all buildings.	Architecture and Planning (AP)	Urban Planning (PLAN)	UG
PLAN	441	Sustainable Housing		X	A survey of sustainable housing typologies, with an emphasis on their design and integration into existing planning law frameworks. Includes discussion of energy ranking systems, sustainable material use, and response to local climatic and geologic conditions.	Architecture and Planning (AP)	Urban Planning (PLAN)	UG
PLAN	460	Altern Sustainable Comm Plan		X	Seminar course examining nontraditional approaches to community planning and design. Focuses on concepts associated with the design of sustainable communities. Historical precedent, case study, and utopian alternatives are synthesized to project alternative futures for present community planning and design issues.	Architecture and Planning (AP)	Urban Planning (PLAN)	UG
PLAN	504	Urban Design	X		An exploration of the physical form of the public realm and how it has been shaped by social, economic, political, and cultural forces. Special attention will be paid to issues of identity, sense of place, placemaking, and sense of belonging.	Architecture and Planning (AP)	Urban Planning (PLAN)	GR
PLAN	506	Environmental Design Studio	X		An interdisciplinary approach to the resolution of problems in environmental design. Appropriate projects to be determined in consultation between the students and faculty.	Architecture and Planning (AP)	Urban Planning (PLAN)	GR
PLAN	525	Urban Ag as Comm Dev	X		Examines the growing role of urban agriculture in cities and the implications for community development and design. Examines the broad issues of food production and distribution along with related policies. Focuses on the present discourse associated with food security. Sustainability provides a framework under which communities better use natural resources, create infrastructures that are more efficient, protect and enhance quality of life, and create new, greener businesses that strengthen their economies without compromising the environment.	Architecture and Planning (AP)	Urban Planning (PLAN)	GR

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
PLAN	531	Urban Transportation Planning	X		Transportation planning methods and policy, including analysis of travel demand, links between land use and transportation, choice of transportation modes, and design of balanced transportation systems.	Architecture and Planning (AP)	Urban Planning (PLAN)	GR
PLAN	532	Economics of Planning	X		Essential economic perspective on planning issues, such as land use and its impact, urban form, environmental protection, housing, traffic and multi-modal transportation, public goods, public utilities, and choices. Advanced urban economics, including location theory, and development economics; theory and methods of economic development; rationale and forms of market interventions and the basis for structuring public-private partnerships. The course is an intellectual exchange between a market economist and a planner on how to formulate and solve urban problems.	Architecture and Planning (AP)	Urban Planning (PLAN)	GR
PLAN	533	Urban Environmental Planning	X		Introduction to urban planning considerations for control and reduction of air, water, and land degradation, including waste management, noise pollution, and other side effects of urban development.	Architecture and Planning (AP)	Urban Planning (PLAN)	GR
PLAN	534	Regional Development Planning	X		Seminar in techniques of regional planning analysis and policy formulation. Methods of integration of economic, ecological, and social objectives in regional development.	Architecture and Planning (AP)	Urban Planning (PLAN)	GR
PLAN	538	Regional Land-use Planning	X		Planning the uses of land at the regional, area, and state levels; interface between social, environmental, and land-use plans at the regional level; and land-use policies for critical-area management including the coastal zone.	Architecture and Planning (AP)	Urban Planning (PLAN)	GR
PLAN	541	Sustainable Housing		X	A survey of sustainable housing typologies, with an emphasis on their design and integration into existing planning law frameworks. Includes discussion of energy ranking systems, sustainable material use, and response to local climatic and geological conditions.	Architecture and Planning (AP)	Urban Planning (PLAN)	GR
PLAN	559	International Dev and Plan	X		An exploration of the nature of the urban and regional planning process in other countries. Topics includes development policies, planning strategies, institutional structures, implementation strategies, and accomplishments. Attention will also be paid to the usefulness of these experiences to American cities.	Architecture and Planning (AP)	Urban Planning (PLAN)	GR
PLAN	560	Altern and Sust Comm Plng		X	Seminar examining nontraditional approaches to community planning and design. Focuses on concepts associated with the design of sustainable communities. Historical precedent, case study, and utopian alternatives are synthesized to project alternative futures for present community planning and design issues.	Architecture and Planning (AP)	Urban Planning (PLAN)	GR

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
PLAN	630	Comprehensive Planning Studio	X		Application of substantive skills and knowledge in a comprehensive planning exercise for an urban area, involving fieldwork and a real location. Emphasizes the process by which comprehensive planning decisions are reached.	Architecture and Planning (AP)	Urban Planning (PLAN)	GR
PLAN	631	Studio in Physical Planning	X		Application of substantive skills and knowledge in physical planning through the creation of a site plan utilizing fieldwork and a real location. Emphasizes the processes of site planning and analysis. Six contact hours. Prerequisite: PLAN 583.	Architecture and Planning (AP)	Urban Planning (PLAN)	GR
PLAN	637	Impact Analysis	X		Human and environmental impact analysis starts with a foundation of the social indicators of the quality of place, and methods of their measurement, including levels of service; it then explores analytical methods of development impacts, overall and distributive, on both human and non-human settlements: fiscal, economic, multi-modal transportation, environmental. A foundation in the science of ecology, briefly reviewed here and with readings, is beneficial. historical and contemporary problems of the less-developed nations.	Architecture and Planning (AP)	Urban Planning (PLAN)	GR
POLS	281	Econ Pol Prob of Emerg Ntns	X		Conditions contributing to economic, political, and social change. Problems of economic development policies and programs within the institutional structure. Internal and external pressures that influence patters of development. Not open to students who have credit in ECON 279.	Sciences and Humanities (SH)	Political Science (POLI)	UG
POLS	293	International Relations	X		A survey of the formal relations among sovereign states in the international system, emphasizing diplomacy, the elements of power, and the procedures for conflict resolution. May include computer simulation exercises.	Sciences and Humanities (SH)	Political Science (POLI)	UG
POLS	342	Problems in Public Policy	X		A systematic examination of the institutions and processes central to understanding and evaluating domestic public policies in the United States. Emphasizes the theoretical and political aspects of policy making at the national level and implementation within a federal system.	Sciences and Humanities (SH)	Political Science (POLI)	UG
POLS	347	Environmental Law and Policy	X		Study of the American political and legal system's response to environmental problems. Politics of environmental policy making, problems of policy implementation, environmental law cases, and trends toward global environmental governance are considered.	Sciences and Humanities (SH)	Political Science (POLI)	UG

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
POLS	395	Politics of the Global Economy	X		Historical and theoretical introduction to the politics of international trade and payments, including barriers to trade, exchange rates, multinational corporations, financial crisis, international economic institutions, and the problems of economic development.	Sciences and Humanities (SH)	Political Science (POLI)	UG
SOC	328	Global and the Social World	X		Examines the process of globalization especially as it occurs in countries with emerging economies. Social problems, social change models, and ideologies related to globalization are also discussed.	Sciences and Humanities (SH)	Sociology (SOCI)	UG
SOC	355	Environment	X		Addresses the role of social structures as cause, impediment, and solution to environmental and sustainability issues.	Sciences and Humanities (SH)	Sociology (SOCI)	UG
SOC	441	Social Change	X		Analyzes social movements and resistance to these movements. Prerequisite: SOC 100 plus 6 SOC credits, or permission of the instructor. Presents sustainable development objectives as dependent upon	Sciences and Humanities (SH)	Sociology (SOCI)	UG
SUST	250	Intro to Sustainable Dev		X	interactions both within and among systems comprising natural, human/social, and economic capital. Examines elements and linkages essential for functioning of these systems. Addresses values that frame decision making for maintaining systems elements and linkages and for setting natural, human/social, and economic sustainable development goals.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	UG
SUST	320	Sys Thnk for Sust		X	An introduction to the composition and dynamic complexity of natural and human-fabricated systems. Differentiation of systems types, their operations, and use of systems frameworks for modeling future states are addressed. Emphasis on "whole systems" and "life cycle" approaches lead students through progressive exploration of case studies that culminates in a research presentation based on a systematic exploration of a selected human-fabricated system. Open only to students with permission of advisor or instructor.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	UG
SUST	330	Measure and Rpt Sust		X	Introduces students to the metrics, indicators, and reporting systems used to characterize and influence organizational practices and performance relative to sustainability goals. Emphasis is placed upon how these sustainability indicators, especially greenhouse gas inventories, are completed, analyzed, and reported. Assignments will provide students with the opportunity to critically analyze data and prepare reports. Prerequisite: SUST 320 or by permission of advisor or instructor. Open only to students with permission of advisor or instructor.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	UG

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
SUST	340	Analytics and Mod for Sust		X	Introduces students to principles of predictive analysis and computer-based modeling tools which assist stakeholders in making informed decisions. Emphasis is on systems thinking, statistical techniques, and the application of systems dynamics theory for quantitatively analyzing and predicting the potential impact of organizational decisions upon sustainability issues, e.g., population, economics, water scarcity, greenhouse gas emissions, climate change, energy, food security, and biodiversity. Prerequisite: SUST 320 and 330 or by permission of advisor or instructor. Open only to students with permission of advisor or instructor.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	UG
SUST	400	Creating a Sustainable Future		X	Addresses from a systems perspective multiple limiting factors in the environmental, social, and economic domains that constrain global sustainability and the interactions among these factors. The influence of civilization on these factors and on their interconnections is examined along with potential human interventions for ensuring long-term viability of critical systems. Includes a substantial immersive project component for assessing the sustainability of an existing system and developing recommended interventions for enhancing long-term success of that system.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	UG
SUST	510	Atmosphere		X	Introduction to the atmosphere and to processes, through its physical and chemical components, and the interactions among the many additional factors that produce weather and climate, as well as interactions of the atmosphere with the oceans, within the broad social and economic issues which relate to understanding the atmosphere as a system.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	GR
SUST	511	Ecological Systems		X	Introduction to the principles and dynamics of ecological systems at the population, community, ecosystem, and biome levels. Study of the effects of physical and biological conditions on the abundance, distribution, and diversity of plants and animals. Emphasis on human impacts on ecosystems and the provision of ecosystem services, and the related issues of conservation, planning, and restoration of ecological systems.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	GR
SUST	512	Soil Resources		X	Introduction to the principles and dynamics of soil formation and the potentials for damage. Examination of the physical and chemical properties of soils and their role in agricultural production, storm water filtration, and aquifer recharge, and support of biota in the varying biomes of the world.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	GR

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
SUST	513	Material Resources and Waste		X	Introduction to concepts, issues, and practices surrounding the use of material resources and waste streams. Emphasis on reducing the environmental and human health impacts of materials and waste. Study of resource conservation, reuse, and recycling; and solid, liquid, and molecular waste stream reduction. Emphasis on the whole life cycle of materials from cradle to grave, or cradle. Discussion of the Living Product Challenge, Design for Sustainability, and Cradle to Cradle.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	GR
SUST	514	Water Resources		X	Introduction to and evaluation of water security issues, including how climate, population, economic growth, technological changes, and other socioeconomic factors affect the water supply and demand imbalances.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	GR
SUST	515	Food Systems		X	Introduction to domestic and global food production, supply, and consumption, both historically and projected to future likelihoods. Differentiation of food systems by cultural groups with an emphasis on the full life-cycle of food within a society. How political, sociological, and ecological structures shape consumption will be emphasized. Considerations of human health, environmental impacts, and ethical questions of food are addressed.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	GR
SUST	516	Energy Resources		X	Introduction to the sourcing, distribution, and use of energy. Examination of conventional fossil-fuel systems and more contemporary alternative energy and green power sourcing, distribution, and use. Comparative study of distributed energy networks against centralized systems.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	GR
SUST	519	Environmental Law		X	Critical investigation of the American political and legal system in shaping possible responses to issues of environmental sustainability. Topics may include: the foundations of environmental law, the process of environmental law-making and implementation; the role of the courts; and specific controversies regarding pollution regulation, energy production, and land use management/planning.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	GR
SUST	520	Environmental Ethics		X	Critical examination of central concepts, principles, theories, and issues in environmental ethics. Topics may include: environmental theory, history of ethics, animal rights, population ethics, future generations, climate ethics, the ethics of activism, and corporate responsibility.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	GR

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### AC-1: Academic Courses

Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
SUST	521	Human Health and Well-Being		X	Introduction to concepts, issues, and practices related to individuals living together while maximizing human potential and shared values and minimizing social breakdown and violence. Initially will investigate basic human needs for survival. Exploration will then expand to encompass societal provisions and expectations that lead to human flourishing across the lifespan, such as livability, cultural competence, health and health equity, social support, participatory governance, and human resilience.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	GR
SUST	523	Population		X	Introduction to historical and recent trends in the fundamental demographic variables affecting human population change (growth or decline) at the global as well as at national and sub-national scales. Emphasis on rate of natural increase, total fertility rates, and life expectancies. Additional investigation of demographic variables as they influence (or are influenced by) human health, epidemiology, culture, technological threats, lifestyles, and health policies/technologies.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	GR
SUST	524	Social/Environmental Justice		X	Survey of principles of justice: libertarianism, welfare liberalism, and socialism. Distribution of environmental benefits and burdens across bioregions, populations, and markets, including indigenous rights, environmental racism, food security, and climate change treaties. Evaluation of various models of public participation in environmental decision making.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	GR
SUST	525	Int Mat Fin and Sust		X	Introduction to interior material finishes and their environmentally sustainable properties. Emphasis will be on the importance of sourcing appropriate materials and finishes to ensure the health, safety, and welfare of building occupants as well as navigating material resources and verification systems to discern and provide the most socially, environmentally, and economically viable sustainable products for sustainable interiors.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	GR
SUST	528	Waste/Human Health		X	Introduction to concepts and issues that guide human practices influencing material consumption patterns as they generate resource depletion and waste/pollution, and impact upon human health conditions. Emphasis on reducing material flow-through in society, addressing best practices for treating waste/pollution, and reducing the conditions that negatively influence human health by our practices of material consumption and waste generation.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	GR

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### AC-1: Academic Courses

Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
SUST	529	Business Ethics/Environment		X	Survey of fundamental principles of business plans and models for achieving operational sustainability. Topics may include: ethical materials sourcing, industrial ecology principles, "cradle-to-cradle" production models, justice in human resources practices, and corporate green washing.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	GR
SUST	530	Analytics for Business		X	Introduction to internationally-sanctioned protocols for analyzing the social, economic, and environmental impact of business practice. Includes the analysis of human resource management, supply chain networking and logistics, and the economic benefits/trade-offs of localized sourcing of feed stocks, components and assemblies, and whole system service delivery.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	GR
SUST	531	Modeling for Business		X	Introduction to internationally-sanctioned protocols for documenting the social, economic, and environmental impact of business practice. Includes the study of human resource management, supply chain networking and logistics, and the economic benefits/trade-offs of localized sourcing of feed stocks, components and assemblies, and whole system service delivery.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	GR
SUST	532	Reporting for Business		X	Introduction to internationally-sanctioned protocols for reporting the social, economic, and environmental impact of business practice. Includes the reporting of human resource management, supply chain networking and logistics, and the economic benefits/trade-offs of localized sourcing of feed stocks, components and assemblies, and whole system service delivery.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	GR
SUST	535	Internal Communications		X	Introduction to principles of internal communications.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	GR
SUST	536	Ecological Economics		X	Evaluation of environmental goods and services include raw materials, watershed functioning, nitrogen cycling, and carbon sink capacities. Principles for translating the valuation of environmental goods and services into the market terms of sustainability, including market distortions and discounting.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	GR
SUST	537	Media Relations		X	Introduction to how journalists do their jobs; what the needs and the strengths and weaknesses are of different news media platforms, e.g., broadcast, print, online, social media; how to prepare for an interview with a journalist and the tools best used to communicate stories to the news media.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	GR

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
SUST	550	Survey of Sustainability Princ		X	This 3-credit course provides a wide-ranging survey of literature in the field of whole systems thinking and the principles and foundations of social, economic, and environmental sustainability in corporate, governmental, and public enterprise. Extensive review of topical literature and accepted models for projection of future developments and impacts from the adoption of best practices in corporate, governmental, and public enterprise are examined.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	GR
SUST	600	App of Sustainability Princ		X	Provides opportunity for students to define targets of opportunity and select a case study engagement for the application of the principles of sustainability in social, environmental, and economic contexts. Students are encouraged to shape a game plan for implementation suitable to their current work environment, their community setting, and/or personal enterprise.	Architecture and Planning (AP)	Academy for Sustainability (SUST)	GR
TDPT	204	Energy Processing	X		Examines sources and types of energy and common energy processing techniques. Emphasizes controlling and transmitting energy and the operation of energy conversion systems. Includes laboratory activities.	Teachers College (TC)	Educational Studies (EDST)	UG
TDPT	406	Technical Decision Making	X		Focuses on technology assessment techniques used to differentiate the potential impacts of alternative technological decisions. Policy development in the public and private sectors, and at the personal level, is examined. Prerequisite: junior status.	Teachers College (TC)	Educational Studies (EDST)	UG
TDPT	495	Green Prototyp Upcycl	X		Students use recycling, 3D printing, and lasers to design environmentally sustainable products. Not open to students who have credit in TDPT 595.	Teachers College (TC)	Educational Studies (EDST)	UG
TDPT	595	Res Green Prototyp Upcycl	X		Students take a research-based approach to designing and creating prototypes that promote environmental sustainability using laser machining and 3D printing. Not open to students who have credit in TDPT 495.	Teachers College (TC)	Educational Studies (EDST)	GR
UD	501	UD Studio 1: Sust Urban Syst		X	Studio/project-based introduction, fostering the understanding of methods and systems analysis and development that lead to the design of sustainable urban settlements. The interplay of context, culture, design, and performance are highlighted through complex urban design projects. Prerequisite: permission of the MUD program coordinator. A total of 4 credits may be earned, but no more than 2 in any one semester or term. Open only to College of Architecture and Planning students.	Architecture and Planning (AP)	Landscape Architecture (LAND)	GR

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Subject	Course Number	Course Title	Includes Sustainability	Sustainability Focused	Course Description	College	Department	Level
UD	502	UD Studio 2: Urban Mobility	X		Studio/project-based study of contemporary multimodal urban mobility systems. The interrelationship of pedestrian, as well as vehicular traffic systems and their impact on urban design and development are highlighted through complex urban design projects. Programming as well as implementation of contemporary mobility systems will be explored through research analysis and the study of implementation strategies. Prerequisite: permission of the MUD program coordinator. A total of 4 credits may be earned, but no more than 2 in any one semester or term. Open only to College of Architecture and Planning students.	Architecture and Planning (AP)	Landscape Architecture (LAND)	GR
UD	503	UD Studio 3: Comm-Bsd Sust Des		X	Explores the interpretive dimensions of community, politics, and culture. Encourages critical thinking and studies the relationship of ethics, politics, and development. Sustainability, equity, and justice in urban design will be examined through context-rich community-based projects. Prerequisite: permission of the MUD program coordinator. A total of 4 credits may be earned, but no more than 2 in any one semester or term. Open only to College of Architecture and Planning students.	Architecture and Planning (AP)	Landscape Architecture (LAND)	GR
UD	601	UD Studio 4: Pub Realm Des	X		Focuses on the study of urban, shared spaces in the public realm including public streets and plazas. Students will be engaged in the study and exploration of the principles of public open space design. Methods of planning and designing active people spaces will be examined through site specific design problems. Prerequisite: permission of the MUD program coordinator. A total of 4 credits may be earned, but no more than 2 in any one semester or term. Open only to College of Architecture and Planning students.	Architecture and Planning (AP)	Landscape Architecture (LAND)	GR
UD	602	Urban Design Capstone	X		Student-derived capstone urban design project developed through an urban design question exploring specialized areas of interest and concentration. Each student project is self-generated and defined. Projects must meet graduate school creative project requirements. Prerequisite: UD 502 or 503 or 601; permission of the MUD program coordinator.	Architecture and Planning (AP)	Landscape Architecture (LAND)	GR
ZOOL	441	Entomology	X		Anatomy, physiology, taxonomy, life histories, habits, and adaptations of insects. Prerequisite: BIO 111 and 112 or permission of the instructor.	Sciences and Humanities (SH)	Biology (BIOL)	UG
ZOOL	483	Wildlife Biology	X		The identification, population dynamics, and geographic distribution of wildlife species with particular emphasis on those of the United States. The harvest and management of wildlife. May require additional field work. Prerequisite: BIO 216 or permission of the department chairperson.	Sciences and Humanities (SH)	Biology (BIOL)	UG

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ZOOL	682	Animal Ecology	X		The composition, development, dynamics, and geographic distribution of animal communities. The relationships between animals and the physical, chemical, and biotic elements of the environment. Includes physiological ecology and ethology. Field studies of animal communities.	Sciences and Humanities (SH)	Biology (BIOL)	GR