

JCCC Sustainability / Sustainability Inclusive Course Inventory 2012-2013						
SUSTAINABILITY COURSES:						
Division:	Sub-Division (if applicable):	Department (if applicable beyond sub-division)	Course:	Title:	Faculty Member (s):	Sections taught 2012-2013
Arts, Humanities & Social Sciences		Philosophy	PHIL 128	Environmental Ethics	All	1
				This course provides a survey of environmental ethics. It focuses on the emergence of environmental issues as a topic of careful philosophical study and its connection to the political and legal considerations of environmental problems. It also examines various theories and traditional approaches developed in Western and Eastern philosophy as well as major world religions to understanding the value and status of nature. Lastly, this course looks at specific controversies pertaining to the conservation, use and value of natural resources.		
Arts, Humanities & Social Sciences		Psychology	PSYC 221	Environmental Psychology	All	1
				Environmental psychology will allow students to explore the relationship between the environment and human behavior. The premise of the course is that the social setting, environmental setting, and individual behavior are interrelated. The focus will be on (1) our relationships with the human built environment, (2) our relationships with the natural environment, (3) how humans adapt to changing environments, and (4) how we can coordinate our behavior to achieve sustainable relationships with our environment. The content of the course will appeal to individuals interested in urban planning, architecture, interior design, ecological sustainability, and community physical and psychological well-being.		
Business	Business Programs	Legal Studies	LAW 175	Environmental Policy and Law	All	0
No longer offered ?						
Business	Design	Interior Design	ITMD 189	Sustaining Design	All	1
				Upon successful completion of this course the student should be able to understand and explain the concepts, terminology and global issues of the various ecological approaches to design and of the impact of design on the environment. The student will have an understanding of the cradle-to-cradle paradigm. Students will learn to identify the impact their selections will have on the environment and to consider ecological options when specifying products.		
Sciences		Horticulture	HORT 245	Commercial Crop Production	All	2
				This course is designed to illustrate the concepts of environmental stewardship and sustainability in Market Farming. It covers the relationship between profitability and sustainability and farms and local farm communities. Crop diversification, resource conservation and connections to human health are emphasized in theory and practice. Students are familiarized with plant materials and production of crops grown in the Market Farming industry. This course will help answer questions about varieties of plants to grow, establishment, growth, harvesting and post-harvesting of crop, varieties of plants to grow. Students will become familiar with different marketing options and good record keeping.		
Sciences		Horticulture	HORT 272/274	Sustainable Agriculture Fall/Spring Practicum	All	2
				Through practical experience complemented by lectures and discussions, students will gain exposure to a broad range of tasks facing the market farmer during the fall and early winter seasons. This includes production and marketing of summer crops, planning, and production of fall crops in high tunnels and open field, and marketing these fall crops. Topics include production planning, planting, integrated crop management, harvest and postharvest practices, marketing through various channels, tools and equipment, soil fertility management, and record keeping.		
Sciences		Science	BIOL 130	Environmental Science	All	17
				Environmental Science seeks to describe problems and solutions associated with human use of natural resources. Students will study the major physical and biological processes that govern the complex interactions in natural ecosystems. Major course topics include human population growth, resource use and pollution. Practical solutions aimed at sustainability will be identified and examined. This is an introductory, nonscience-major survey course.		
Sciences		Science	BIOL 131	Environmental Science Lab	All	16
				In this lab, students will learn ecological principles that are necessary for understanding and solving environmental problems. Students will sample the local environment for various types of environmental pollution, conduct lab projects and computer simulations, and attend field trips. Field trips may include a visit to a local wastewater treatment plant, a stream ecosystem and a prairie ecosystem.		
Sciences		Science	BIOL 134	Principles of Sustainability	All	1
				Principles of Sustainability introduces students to the social, economic and environmental dimensions of sustainability and sustainable development. The course will critically examine the use of sustainable principles to guide decision making and problem solving in personal, campus, community and global contexts. Students will engage in a variety of individual, group, campus and community activities and collaborate with campus and community offices and agencies in order to identify, assess and address local sustainability needs.		
Technology	Industrial Technology	Heating, Vent. Air Conditioning	HVAC 125	Energy Alternatives	All	2
				Upon successful completion of this course, the student should be able to identify diverse methods of alternate energy production. Some of the technologies that will be discussed are wind energy, photoelectric energy, nuclear energy, hydroelectric energy, biomass and alternate fuel vehicles. Students will understand the advantages of using various alternate energy technologies, the effects or by-products of each and the problems that might be encountered. Some student research will be included in the context of the course. Emphasis will be on the most promising or effective alternate energy technologies available.		
					TOTAL:	43
SUSTAINABILITY INCLUSIVE COURSES:						
Division:	Sub-Division (if applicable):	Department (if applicable beyond sub-division)	Course:	Title:	Faculty Member (s):	Sections taught 2012-2013
Arts, Humanities & Social Sciences		Art History	ARTH 184	Art History: Twentieth Century	Smith	1
				Covers the movement of "Earth Art" or using the landscape to create works of art with messaging about environmental issues. Students will propose their own "Earth Art" piece dealing with a sustainability topic of their choosing.		
Arts, Humanities & Social Sciences		History	HIST 120	Local and Kansas History	Antle	1
				This course introduces students to the history of Kansas from the beginning of the Late Ceramic Period (1500) to the present. Emphasis will be on the examination of the living patterns of the various peoples who have inhabited the region during this time. This course will also analyze the social and economic factors and political objectives that transformed the central plains from the domain of the bison-hunting Plains Indian to a society based in a market-agricultural economy. Students will recognize the sustainability implications of significant historical moments such as the Dust Bowl and near extinction of the Bison.		

Arts, Humanities & Social Sciences / Science		Philosophy / Science	PHIL 155 / BIOL 155	Introduction to Bioethics / Bioethics	All	1
This course is an introductory course in ethics with an emphasis on the ethical content raised by the discipline of biology. The student will examine the major ethical theories, including deontology, act utilitarianism, rule utilitarianism, along with select others. Study of the theories will enable the analysis of case studies involving such issues as human populations problems, reproductive technologies, genetic engineering of humans and other organisms, stem cells and their use, beginning/ending of life, the human genome project, environmental impact of humans, cloning, medical and non-medical genetic interventions, and biological ethics.						
Arts, Humanities & Social Sciences		Sociology	SOC 205	Sociology of Food	All	1
Through this exploration of food in society, students will discover the fundamental significance of the relationships between people and food. In studying the ways food is produced and consumed, we will also discover the ways food shapes and expresses relationships among people. This most basic of human needs is easily taken for granted by those who have plenty, while the causes of hunger are easily dismissed or misunderstood. This course will address such misunderstandings, as well as issues of culture, meaning, identity, power, and ecology, all through a focus on food.						
Business	Hospitality		HMG 123	Professional Cooking I	Prater	2
Through a series of lectures and labs students will be able to learn not only the proper way to compost and reduce the amount of waste produced in a commercial kitchen but also the why it is necessary, as well as learning the positive (and negative) impacts their choices in the kitchen make on the larger world outside. Students will see the historical context and impact of cooking in a more sustainable way. Weekly cooking topics will span sustainable food issues such as: industrial vs. local food production, US food systems, issues in factory vs. sustainably raised meat animals, seafood choices, energy efficient cooking methods and more.						
Business	Hospitality		HMEC 151	Nutrition and Meal Planning	Page	8
A unit on sustainable nutrition looks at food miles as well as benefits of organic and local foods to nutrition as well as social and ecological health. Students are assigned a food mile study of their own pantries.						
Business	Hospitality		HMG 167	Local Food Production	All	1
Upon successful completion of this course, the student should be able to analyze and explain the basic cooking methods, recipe conversion and professional food preparation and handling of local food products. Additionally, the student should be able to safely operate common food service equipment used in commercial kitchens. It will provide students with practical methods of application involved with safe handling and production of post-harvest local food products.						
Business	Design	Interior Design	ITMD 121	Interior Design	All	6
This course provides an introduction to issues in the built environment. New concepts including the subject of sustainability are discussed and applied to assignments and projects throughout the course of the semester.						
Business	Design	Interior Design	ITMD 125	Interior Textiles	All	3
This course is an overview of textiles used in the built environment. The issue of sustainability in the textile industry is communicated and researched with each stage of creating and selling a textile product.						
Business	Design	Interior Design	ITMD 132	Materials and Resources	All	3
This course provides in-depth knowledge about materials used in interior spaces. The student will evaluate the quality of interior materials; demonstrate the ability to use product information resources; identify manufacturing and construction techniques used in products; recognize the sustainability and environmental impact of materials; use correct terminology to describe the various types of interior materials; and compare the design, use, durability and cost of materials						
Business	Design	Interior Design	ITMD 140	Window Treatments	All	1
This course provides comprehensive knowledge about draperies and window treatments and their construction. Sustainability issues related to heat gain and loss in and around windows is discussed and constructs are applied to improve thermal issues.						
Business	Design	Interior Design	ITMD 145	Upholstered Furniture	All	1
This course provides comprehensive knowledge about furniture construction and upholstery application. Sustainability best practices are discussed throughout the course in regards to materials and application of those materials.						
Business	Design	Interior Design	ITMD 149	Casegoods	All	1
This course provides a comprehensive overview of casegoods materials and construction. Sustainability best practices are discussed throughout the course.						
Business	Design	Interior Design	ITMD 213	Lighting Design and Planning	All	1
This course is a comprehensive examination of lighting in the built environment. Sustainability is a guiding principle used in all projects and assignments in this course as lighting design and planning is regulated in regards to energy efficiency.						
Business	Design	Interior Design	ITMD 219	Issues in Interior Design	All	1
This course is designed to educate the student on the current issues that affect the interior design profession such as environmental design, green/sustainable design and Universal Design. These topics may vary based on current industry concerns. Upon successful completion of this course, the student should be able to identify, explain and analyze ramifications to the industry that arise from the economy, politics and social culture. Sustainability implications for the topic of focus is always covered.						
Business	Design	Interior Design	ITMD 221	Residential Design	All	2
This advanced course exercises all phases of the design process for the built environment. This course has a focused project where students will apply all learned sustainability principles. The student is responsible for justifying and rating the sustainability of their work.						
Business	Design	Interior Design	ITMD 225	Interior Textiles II	All	1
This course is an advanced study of textiles used in the built environment. This course will differentiate fibers and textiles according to their specific characteristics and to select fibers and interior textiles for specific applications. Sustainable constructs are applied throughout the entire process.						
Communications	Academic Achievement Center		AAC 135	Career & Life Planning	Stevens	2
Assignments incorporate consideration of how various careers of interest to the student can have a positive impact or implications for sustainability.						
Communications		Foreign Language	FL 170	Elementary Japanese I	Daugherty	2
Goes beyond simply learning the language to introducing behaviors and customs as well as discussions of resource availability, manufacturing, imports and exports and how these influence the culture and sustainability.						
Communications		Foreign Language	FL 234	Conservational Spanish	Schmidt	2
Conservation and presentation topics will include sustainability issues and solutions in Spanish speaking countries, often compared to those in the United States.						
Communications		Foreign Language	FL 230	Intermediate Spanish I	Schmidt	2
In addition to covering vocabulary about sustainability practices (recycling, etc.), the presentation component of this course will focus on sustainability practice in Hispanic Countries						
Communications		Reading	RDG 127	College Reading Skill	Parra	2
Readings will include current affairs in campus and national sustainability and novels set in environmental contexts or about sustainability issues.						

Communications	Speech	SPD 121	Public Speaking	Broxterman	2
Includes preparing and delivering an informative or a persuasive speech about a sustainability topic or a solution to an issue.					
English & Journalism	English	ENGL 122	Composition II	Senter	2
Examines the writings and progression of the Conservation movement, the Environmental movement and the Sustainability movement and issues of today.					
Health Care Professions & Wellness	Nursing	NURS 232	Complex Care Management	Duggan	1
Nursing students take NURS 232 in their final semester of the program. Within their clinical group (for the semester recorded here it was just one of these groups piloting the project), students observe the clinical environment where they are assigned and explore and recommend opportunities to improve either waste, efficiency or prevention, with emphasis on the last having come to understand that prevention means less energy and material waste in the clinical environment as well as savings in human capital and tax and healthcare costs.					
Mathematics	Mathematics	MATH 171	College Algebra	Goodman / Lefert	3
Math problems focus on calculations pertaining to real world sustainability issues, for example, focusing on population growth and resource availability while learning logarithms.					
Sciences	Science	BIOL 115	Natural History of Kansas	All	1
Natural History of Kansas describes physical and biological processes that have led to the present Kansas landscape. Physical science topics include geology, climate patterns and soil formation. Biological science topics include ecology and a survey of the plants and animals of Kansas. The course will consider how the physical and biological environment relates to past and present human resource uses.					
Sciences	Science	GEOS 140	Physical Geography	All	10
This course is a survey of the physical and environmental topics of geography, including the methods used to study them. The Earth as a system and the subsystems of the atmosphere, hydrosphere, lithosphere and biosphere constitute the major units of study. Students will acquire basic terminology that they will use to explain the earth, the atmosphere, the landscape, and the processes that occur on earth to change the landscape. Topics may include mapping with topographic maps and remote sensing; development and structure of the atmosphere; weather; water resources; climate; rock formation; mountain building; chemical and physical weathering; mass movement; soil formation; erosion, transportation and deposition by running water, wind, ice, currents, waves and tides; and the foundation that these processes build for the biosphere on earth.					
Sciences	Science	GEOS 141	Physical Geography Lab	All	2
Students in this course will practice their knowledge of physical geography through the collection and analysis of atmospheric data and the identification and interpretation of landforms and biological patterns as depicted on topographic maps and remotely sensed imagery.					
Sciences	Science	GEOS 145	World Regional Geography	All	12
In this introductory course, the student will first review the basic theories of the discipline of geography, the relationship of world population and resources and the factors affecting development. Next, the student will survey the major regions of the world to identify each region's distinguishing geographic characteristics, summarize its past development and explain the key issues affecting the region's future development.					
Sciences	Science	GEOS 130	General Geology	Beatty	2
While learning about the water cycle, this class will discuss issues involving hydraulic fracturing – the method of extracting natural gas from underground shale deposits – and its implications for water quality.					
Technology	Industrial Technology	Automotive	AUTO 235	Hybrid & Alternative Fuels Vehicles Repair & Maintenance	All
1					
This course will cover the technology of hybrid electric, electric, alternative fuel and fuel cell vehicles. Topics covered will include changes in the vehicle engine, drive train, emissions, heating/ventilation/air conditioning (HVAC), brake and computer systems. Variations between manufacturers will be covered. Students will learn to safely diagnose, repair and service these vehicles.					
Technology	Industrial Technology	Civil Engineering Technology	CET 160	Green Building Fundamentals	All
1					
This course introduces the student to sustainable design and green building practices used in the construction industry. The goal of the course is to improve the energy and environmental performance of buildings through a better understanding of standard practices used by industry professionals, as well as, to provide students preparation for the Leadership in Energy and Environmental Design (LEED) Professional Accreditation Exam					
Technology	Industrial Technology	Civil Engineering Technology	CET 205	Advanced Construction Methods	Dye
1					
Focus is on sustainable building products, including industry trends, where to acquire, and how they effect individual and community health.					
Technology	Industrial Technology	Civil Engineering Technology	CET 229	Advanced Construction Management	Dye
1					
Focus is on sustainability in managing the construction process, including minimizing construction related pollution, maintaining indoor air quality during construction, analyzing the sustainability of construction practices in the Kansas City area and the implications thereof, recognizing how personal worldviews affects practices on the job site.					
Technology	Industrial Technology	Civil Engineering Technology	CET 270	Fluid Mechanics	Johnson
1					
Students learn to recognize stormwater design best management practices compared to typical construction. They will recognize sources of pollution and realize why it is important to manage due to impacts on the community and local ecology. In a hands-on project they will design their own stormwater treatment BMP.					
Technology	Industrial Technology	Drafting	DRAF 129	Interpreting Arch. Drawings	Cline
2					
Independantly and in class students will research web resources about sustainability in residential design. A final assignment will have them assess sustainability in a residential drawing by identifying and explaining characteristics in place and making recommendations for improvements where they recognize a need.					
Technology	Industrial Technology	Drafting	DRAF 132	Exploring AutoCAD	Cline
2					
Student will recognize best management practices as applicable to a floor plan layout. They will explore sustainability software available through Autodesk and complete a project in which they design a residential or small commercial floor plan utilizing design and component BMPs, including what constitutes an environmentally conscious space, choosing appropriate appliances and fixtures and eco-friendly LEED-compliant materials. Discussion will surround how these skills and tools can be used to meet sustainability objectives of designer or client.					
Technology	Industrial Technology	Drafting	DRAF 151	Introduction to 3D Modeling	Cline
3					
Students learn how to display sustainability features in a conceptual design of a product/space to the client through a hands-on project using SketchUp. Students will research current industry use of SketchUp and its applications for sustainability in design projects. In a presentation to the class they will show sustainability features such as light use and materials, using section cuts, scenes and animations in their own project.					
Technology	Industrial Technology	Drafting	DRAF 164	Arch. Drafting/Residential Interior	Cline
5					

A required course for Interior Design AAS. The sustainability focus appears in approaching the kitchen and bath portion of drafting a residential space, including defining applicable BMPs, describing the land-water connection in relation to architectural design/drafting and societal impact, understanding sources of pollution associated with residential design and designing kitchen and bath BMPs into their projects.						
Technology	Industrial Technology	Drafting	DRAF 222	Mechanical Design and Drafting	Feuerborn	1
Students are introduced to sustainability in manufacturing, compare unsustainable and sustainable practices therein, recognize benefits and applications of sustainable manufacturing and approach their design project with these. Students are also required to research and visit a local business using sustainable manufacturing practices, observing and collecting details on this to return and share and report to the class.						
Technology	Industrial Technology	Energy Performance & Resource Mgmt.	EPRM 142	Solar Thermal Systems	All	1
Solar Thermal Systems presents the key components of thermal conversion systems to absorb and use heat from sunlight. Solar module types and properties, balance of system components, energy management, and economics for a variety of solar thermal system applications are studied. The course includes details of design, installation, operation, and evaluation of solar thermal systems. The course prepares students for the NABCEP (North American Board of Certified Energy Practitioners) Entry Level Solar Thermal exam.						
Technology	Industrial Technology	Energy Performance & Resource Mgmt.	EPRM 256	Solar Electric Systems Lab	All	1
Solar Electric Systems Lab presents practice in the use of the key components of photovoltaic (PV) conversion systems to produce electricity from sunlight. Solar module types and properties, balance of system components, stand-alone and utility interface PV applications are installed. The course includes hands-on details of design, installation, and operation. The course prepares students for the NABCEP (North American Board of Certified Energy Practitioners) Entry Level PV exam.						
Technology	Industrial Technology	Energy Performance & Resources Mgmt.	EPRM 252	Solar Electric Systems	All	1
Solar Electric Systems presents the key components of photovoltaic (PV) conversion systems to produce electricity from sunlight. Solar module types and properties, balance of system components, stand-alone and utility interface, energy management, and economics for a variety of PV applications are studied. The course includes details of design, installation, operation, and evaluation of photovoltaic systems. The course prepares students for the NABCEP (North American Board of Certified Energy Practitioners) Entry Level PV exam.						
Technology	Industrial Technology	Energy Performance and Resource Mgmt.	EPRM 120	Intro to Residential Energy	Eberle	2
More than just how to save money on energy bills, this course also includes larger context about where our energy comes from and why it is important to use it most efficiently						
Technology	Industrial Technology	Engineering Technology	ENGR 251	Statics	Johnson	1
A green building materials unit will compare and contrast materials commonly used in trusses and frames, prompting students to explore how the life-cycle of building materials can affect sustainability.						
						104