



Sustainability within academic majors (2011-2012)

Peace with Creation

April 2012

(Courses listed by alphabetical order by department)

Theories of International Development (PXD 485)

Major: Peacebuilding and Development

Department: Applied Social Sciences

Instructor: Carl Stauffer

Description:

Social Work Senior Practicum III (SOWK 430)

Major: Social Work

Department: Applied Social Sciences

Description:

Introduction to Theology (THEO 201)

Majors: Biblical Studies, Congregational and Youth Ministries, Philosophy and Theology, and Religion and Intercultural Studies.

Department: Bible and Religion

Description:

We read Norman Wirzba's *Living the Sabbath*, which has a nice foreword by Wendell Berry in it. Wirzba argues, on the basis of a reading of Genesis by rabbi Rashi in the 13th century, that on the seventh day God created rest or "menuha." God's rest and harmonic peace is active, not passive. Rest is best understood as doing something, not taking a break from doing something. And then from that reading of Genesis, he critiques education, work, home, etc. and suggests ways in which we might live the sabbath in those areas. A key claim, of course, is that life without rest is not sustainable. The assignment was to read the book and then to think creatively about how actually to live the sabbath. Some students chose simply to take a full sabbath from Saturday sundown to Sunday sundown, and then they wrote reflections from their experience.

Faith, Science, and Ethics (BIOL 431)

Majors: Biology, Biochemistry, and Clinical Lab Sciences

Department: Biology

Description:

Environmental Sustainability Capstone (SUST 419)

Major: Environmental Sustainability

Department: Biology, Applied Social Sciences

Description (SP 2011): This course brings together students who have gone through the two different tracks of the major—environmental science and social sustainability. This course centers around activities that will help students reflect on their learning about sustainability, and will bring together threads from diverse disciplines to an integrated understanding of contemporary sustainability issues. Students work as a group at a common project which serves as a case study in environmental sustainability and that gives students a concrete example of the multifaceted nature of a "real life" sustainability issue. The course culminates in a written thesis in which students outline an independent and original analysis of the issue defined by the case study. In spring 2011 the case study was the debate over the proposal use of hydrological fracturing ("hydrofracking") to drill for natural gas in Rockingham County. The student

project culminated with a community educational event that included a showing of the movie “Gasland” followed by a panel discussion with local experts and stakeholders. Student theses explored the potential effect of hydrofracking on broader U.S. energy policy, the nature of leases offered to property owners, and the attitudes and opinions of local stakeholders on the issue.

Organizational Behavior (BUAD 331)

Majors: Accounting, Economics, International Business

Department: Business and Economics

Description:

Management Policy (BUAD 461)

Majors: Accounting, Economics, International Business

Department: Business and Economics

Description:

This is a senior level course that examines business strategy and ethics, taught primarily using the case study method. The course addresses environmental sustainability in a class entitled “Sustainability and Innovation” using the Harvard Business School case “Sustainability at Millipore”. Millipore manufactures products for the medical industry such as filtration products. The company’s CEO is committed to reducing Millipore’s carbon footprint and waste in all phases of its operation. At the time of the case the company has implemented a number of projects to meet its aggressive goals to reduce carbon emissions and waste. However, these projects have had a fairly certain and short payback period and thus make economic sense for the company. The payback on future projects is longer and less certain. The issue at hand: Should the company proceed with projects that may increase its costs, thus putting it at a disadvantage versus competitors?

Principles of Management (BUAD 221)

Majors: Business Administration

Department: Business and Economics

Instructor: Jim Leaman

Description:

Principles of Management students study two broad styles of organization, leadership and management. The mainstream style (orthodoxy) emerges from materialistic and individualistic orientations, is driven by acquisitive economics and profits, and tends to have a shorter time horizon. By contrast, the multistream style (emerging) is oriented around longer time horizons, seeks to balance profits with people and planet (triple bottom line), is driven by sustenance economics, and attempts to provide multiple forms of well-being for multiple stakeholders. Contrasting these models prompts students to consider economic sustainability alongside social and ecological sustainability, and students are given opportunity to reflect on these various forms of sustainability in assignments throughout the course.

Organic Chemistry I (CHEM 315)

Major: Chemistry

Department: Chemistry

Description: In several labs, the students were instructed about the principles of green chemistry. In a few of them they were asked to analyze the lab based on these principles. For example, in the Liquid CO₂ Extraction of D-Limonene from Orange Rind the students were asked to analyze the safety concerns associated with using methylene chloride as an extraction solvent as well as disposal issues. In Addition Reactions: Bromination of an alkene: students a) scaled down this reaction, b) used a safer reagent that generates bromine in situ (pyridinium tribromide) c) used a safer solvent (ethanol) and d) used this product as a starting material in another laboratory. They were then asked to analyze the different reagents in terms of atom economy.

Examining Foundations of Education (ED 401)

Major: Education (Early, Primary, and Secondary), Health and Physical Education

Department: Education

Description: As students process their beliefs about the relationship between an ethic of care within the context of sustainability students will describe their philosophy of sustainability as it will be incorporated into their ideal school or classroom. As the capstone course for education students they will address the following issues of sustainability in schools during the course: a) promoting social systems within the school that build peace and equity for students, teachers, and families; b) teaching sustainability within the K-12 curriculum; and c) and stewardship of environmental/financial resources within the school building. The assignment to assess the sustainability learning outcomes contains two parts, part one is the a philosophy of education that includes a specific criteria relative to sustainability. Part two is the description of your ideal school/classroom based upon the issues discussed during class.

Educational Foundations and Due Process (ED 451)

Major: Special Education

Department: Education

Description: *See description for ED 401 above*

Cultural Geography (GEOG 231)

Majors: History and Social Science, History

Department: History

Description:

Introduction to Literary Theory (LIT 240)

Major: English

Department: Language and Literature

Description:

Introduction to Linguistics (LING 250)

Major: English Education

Department: Language and Literature

Description:

Intro to Linguistics is a course in which students become familiar with the fundamentals of linguistic analysis, the historical, social, regional, political, and cross-cultural dimensions of English, and some implications of linguistics for the study of literature, the pedagogy of English in secondary schools, and the teaching of English as a foreign or second language. Sustainability is one theme in the course as we examine the topic of "endangered languages" and linguistic imperialism. As Anderson and Harrison in their work on endangered languages suggest, we face the possibility of losing unique and helpful alternate ways of seeing and talking about the world. Other linguists have been making the case for the past 10-15 years that there is a correlation between human linguistic diversity and the diversity of healthy ecosystems. By highlighting the theme of sustainability at several points during the semester, this course will facilitate a global shift in attitudes about super-languages and an appreciation for the host of smaller languages of the world. Graduates in the English teaching profession should develop a more modest view of their own language and to learn how to be proactive in affirming and supporting "minority languages." They will also appreciate that particular languages or language varieties are tied with particular places, and our care for the languages is strongly correlated with our care for the place.

Students will be evaluated through their answers to an essay question on the final examination.

Intermediate Spanish I (SPAN 210)

Major: Spanish

Department: Language and Literature

Description: One of the chapters "La Naturaleza" (out of six covered) in the text uses Spanish vocabulary based on nature, recycling, sustainability, and environmental issues facing the global community. The vocabulary is reinforced throughout the lesson with discussion questions, and is woven through the grammatical lessons as well. Several brief reading sections are also presented in the chapter dealing with the increasingly popular eco-tourism and preservation of several species of birds. One of the many assignments which focus on the theme of the chapter is titled "Problem and Solution" and asks students to provide short-answer solutions for "deforestation," "Mountain erosion," "acid rain," "pollution," and "the decrease of natural recourses," all issues facing Latin American countries.

Statistics for the Natural Sciences (MATH 240)

Major: Mathematics

Department: Mathematical Sciences

Description:

Analysis of Algorithms (CS 340)

Major: Computer Science

Department: Mathematical Sciences

Description:

System Administration (CS 350)

Major: Computer Science

Department: Mathematical Sciences

Description:

Conducting I (CMUS 411)

Major: Music

Department: Music

Description: Sustainability and the field of music do not ordinarily go together. Ken and Joan of the music faculty joined together these fields with the theme, "Sustainability of the Soul". We incorporated it into Conducting I, fall semester 2010. This conducting course, the first of a two course sequence, covers more than the technique of conducting. In addition to studying a variety of beat patterns, left hand cues, expressive body language, and complex scores, students spent one day a week focused on developing "outside the box" thinking, required of all creative artists, especially musicians. Guided by the book Free Play by Stephen Nachmanovitch, students developed and led workshops to the other members of the class on the four chapters of the book: The Sources, The Work, Obstacles and Openings, and The Fruits. By devising and participating in this work, students learned the necessity and ways of feeding the soul through the creative arts. The results for the individual students were a better understanding of themselves as people and artists and of those with whom they connect and collaborate.

Community and Public Health (NURS 432)

Major: Nursing

Department: Nursing

Description: Aspects of sustainability incorporated into this course have to do with "The fairness, equity, stability and security of human cultures and social systems , and "Economic opportunity for all current and future humans". Students watched sections of the DVD Unnatural Causes - a PBS special UNNATURAL CAUSES which portrays the root causes of our alarming socio-economic and racial inequities in health. The episode they watch explores how the

distribution of power, wealth and resources shape opportunities for health (<https://appsrv.emu.edu/nursing/unnatural-causes/>). They responded in homework assignments to their own experiences of racism and/or privilege. This also was part of class discussion.

Conceptual Framework for Nursing (NURS 310)

Major: Nursing

Department: Nursing

Description: The concept of environment is one of the five major sections of this course. We examine the impact of environment on health; utilize a broad concept of environment that includes both biological/physical, psychological, sociological and spiritual aspects; examine environmental and sustainability aspects of the health care system; and the role of nurses in improving the environment for clients. Students work as a group and are given an environmental issue in our society that has health implications. They then complete a webquest matrix that identifies websites that provide information regarding the environmental issue, describe content from the website, and then extrapolate from that what strategies nurses can use to use this information to clients and the community. Their results are also expressed both in the matrix as well as a class presentation to a pseudo - nurse legislator who has requested hearings on environment issues and health.

Senior Recreation Internship (REC 404)

Majors: Recreation and Sports Leadership, Outdoor ministry and Adventure

Department: Physical Education

Description:

History of Psychology (PSYC 371)

Major: Psychology

Department: Psychology

Description: Students were asked to examine the ways that psychology can contribute to sustainability (both emotional and physical sustainability). Differing approaches to psychology often reflect the zeitgeist of a given time period. In the History of Psychology course, students examine issues through different lenses, using ways of knowing that were dominant throughout history. Sustainability was introduced as part of our current zeitgeist, and students were asked to explore ways in which psychology can contribute to promoting sustainability. Students met in groups/pairs and brainstormed about ways in which psychology can contribute to promoting sustainability and presented their ideas to the class (non-graded). The graded assignment was an essay question on the final exam about potential contributions of psychology in promoting sustainability.

Vocations in Theater (THR 420)

Major: Theater

Department: Theater

Description: The purpose of the Vocations in Theater class is student exploration and examination of their calling as an artist and a Christian. Economic and social sustainability, in particular, are unpacked in terms of definition and individual goals. Each student journals on how their anticipated path in the theater arts needs to intersect with EMU's principles of sustainability as adapted from Cortese. The purpose is to intentionally consider possible choices in light of personal sustainability and economic and social justice. This exploration is then developed into their final writing assignment, a theater and faith integration paper. The purpose of the Vocations in Theater class is student exploration and examination of their calling as an artist and a Christian. Economic and social sustainability, in particular, are unpacked in terms of definition and individual goals. Each student journals on how their anticipated path in the theater arts needs to intersect with EMU's principles of sustainability as adapted from Cortese. The purpose is to intentionally consider possible choices in light of personal sustainability and economic and social justice. This exploration is then developed into their final writing assignment, a theater and faith integration paper.

Cinema and Visual Communication Theory (COMM 332)

Majors: Art, Communication, Digital Media, and Photography

Department: Visual and Communication Arts

Description:

Cinema and Visual Communication Theory is concerned with how cultural forms of communication construct ideas of truth, including social understandings of reality, suffering, violence and ideas of what it means to function in human community. Students explore and practice how pop cultural texts represent difference, genders, class and race. They must then incorporate this learning into a critical analysis of a specific theorist/philosopher and do an artistic response. These explorations encourage students to think about how art and communication can foster collaborative, justice making communities where the voices of all are welcomed.

Junior/Senior Art Seminar (ART 391)

Majors: Art

Department: Visual and Communication Arts

Description:

Pop Culture and Mass Media (COMM 231)

Majors: Digital Media and Photography

Department: Visual and Communication Arts

Description: