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EVR 4274: Sustainable Agriculture Syllabus for Spring 2017 (3 credits)

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Office Hours:

Dr. Shetty: Mondays and Wednesdays 2:30 – 4 PM, Walk-ins are okay but call me first.

Class Schedule: Monday, Wednesday, and Friday, 12:00 - 12:50 PM

Class Room: TBA

Texts:

- ✓ Toward Sustainable Agricultural Systems in the 21st Century. National Research Council, Washington, DC: The National Academic Press. (e-book)

Course Description:

- This course provides an overview of sustainable agriculture. The course looks at the sustainability of food production at multiple levels: farm resources, community, regional, national and global. Students will gain basic understanding of the environmental problems caused by conventional agriculture/horticulture and understand the challenges to alternative forms of sustainable agriculture.

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- This class is intended for students with a general interest in sustainable food production systems. There are no pre-requisites. We will discuss a variety of ecological, social, and economic topics within the framework of sustainability. Students from a variety of backgrounds are welcome.
- The course will be of interest particularly to students from the environmental studies, biological sciences, nutrition and health sciences, international relations, political science, sociology, and business. The course work involves hands-on experience working at the Campus *Organic Garden* once a week. In addition, for an on-farm experience the students are required to spend minimum of 14 hours during the semester towards a Community Engagement project at selected farm and/or *community sites*, relating to food and agriculture. The details of the project will follow.
- ❖ This course is one of the required courses for the Agroecology Certificate program housed in the Earth and Environment Department.
- ✓ At the end of this course, students will:
 - Learn how issues at various levels--farm, community, regional, national and global--influence agriculture sustainability and future food supply.
 - Gain a basic understanding of agricultural/horticultural practices at the farm-level, including agroecological management principles and practices used to reduce environmental degradation.
 - Learn to think critically about where their food comes from, and be able to analyze the environmental, economic, and social costs and benefits involved in delivering food from farm to market.
 - Become knowledgeable of agri-environmental policies used to keep farmland in production as well as integrating farming priorities into the urban and rural interface.
 - Gain knowledge about the pros and cons to global trade, and what forms of sustainable agriculture will best suit the needs of a growing global population.

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COURSE DESIGNATION

This course is a Discipline-Specific Global Learning course that counts toward your Global Learning graduation requirement.

GLOBAL LEARNING OUTCOMES AND ASSESSMENTS

Students will be assessed for the following Global Learning Outcomes with specific course outcomes listed below them.

Global Awareness — Demonstrate understanding and the awareness of the interrelationship of human food systems and natural systems; global human population growth and ecological footprint, human activities and technologies connected with food systems, their various environmental impacts, and the economic and social factors that favor the use of one technology over another.

Assessments for Global Awareness will include combinations of one or more of the following: a computer based formative assessment activity or assignments or take-home quizzes or in-class exams. These assessments will be based on videos, national and international case studies, lectures and reading assignments.

Global Perspective — Students will be able to articulate the perspectives of multiple stakeholders involved in the complex local, regional, national and international agriculture/food system sustainability issues and how those perspectives interact and influence policy decisions.

Assessment for Global Perspective will include student participation in class discussion and sharing of their ideas and perspective on food system sustainability issues and solutions. Students will submit a summary of their perspective including analysis and concept map connecting issues. Grading for these activities will be done using the appropriate rubrics that will be provided to students.

Global Engagement — Students will collaborate in groups to devise/propose solutions to local, global and intercultural problems related to agriculture/food systems and sustainability.

Assessment for Global Engagement will take the form of a reflection posting to the course discussion forum regarding their assessment of various types of food system footprint

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calculations and sustainability indicators. In addition, students will participate in a community service/co-curricular activity in a local farm. Students will describe their experience in a report and make a class presentation. Both the postings and the report will be evaluated using the appropriate rubrics that will be provided to students.

Active Learning Exercises:

Students will participate in in-class discussions on resource, conservation and sustainability issues presented in the class. Students will be evaluated on the basis of their participation in the discussions and Blackboard Learn webpage forum input.

Co-curricular Activities and Group learning exercise:

Student groups will be able to participate in various on and off campus co-curricular activities; (1) On-campus activity at FIU organic garden will include experimental and experiential learning activities. (2) Off-campus community service activity will include hands-on learning activities (groups of 4 to 5 students) in a local sustainable or organic farm (Alternative options will be given to disabled students), (3) Project report submission and presentation - analysis and reflections on farm experience, sustainability, and community engagement; Participation in in-class discussions, assessment of various agriculture related footprint calculations and sustainability indicators.

Readings and Resources:

Available on for a free download.

<http://www.nap.edu/catalog/12832/toward-sustainable-agricultural-systems-in-the-21st-century>

The following and additional articles will be included for specific topics and will be announced in class and posted on class Blackboard webpage.

Dufour, R. 2001. "Biointensive Integrated Pest Management (IPM) Fundamentals of Sustainable Agriculture." <http://attra.ncat.org/attra-pub/ipm.html>

SARE *Building Soils for Better Crops, crop Rotation on Organic Farms: A Planning Manual, Manage Insects on Your Farm* highlights ecological strategies, *Managing Cover Crops Profitably* <http://www.sare.org/Learning-Center/Books>

SAN. The New American Farmer: Profiles of Agriculture Innovation. Sustainable Agriculture Network (see class Blackboard Learning for the article).

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Sagar, A.D., and Kartha, S. 2007. “Bioenergy and Sustainable Development?”

<http://www.energycommunity.org/documents/BiofuelsSustainableDevelopment.pdf>

Ervin et al. 2010. “Are biotechnology and sustainable agriculture compatible?” Article will be posted on class Blackboard Learning.

Gold, Mary “Sustainable Agriculture: Definitions and Terms” Special Reference Briefs Series no. SRB 99-02, September 1999, <http://www.nal.usda.gov/afsic/pubs/terms/srb9902.shtml#toc1>

(READ up to the section “A Sampling of Perspectives” of the reading).

MSU (Michigan State University), 2010. “Economic Analysis of Sustainable Agriculture”

http://sustainecon.msu.edu/sustainecon/profitability_using_budgets

(Multiple links on this website would be required; will let you know the specific readings)

Course requirements and policies:

Prior to coming to the theory discussion session, each student is required:

- ✓ On-time participation in all scheduled class activities is required. Absenteeism and/or nonparticipation not only preclude a student’s learning the material in this course, but also will likely affect his/her performance.
- ✓ Reading of the assigned chapters from the textbook and additional readings from *Blackboard* prior to class is expected.
- ✓ All electronic devices must be turned off/muted during class. Failure to comply with this rule, may result in the student being excused from class.
- Please note: All field trips are tentative and subject to change

Internet Resources:

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- ✓ This is a web assisted course. A course webpage will be maintained with Blackboard Learn.

Additional course materials contain this syllabus articles, videos, rubric, and the announcements will be posted on **Blackboard**

- To access this resource, go to <https://ecampus.fiu.edu/> and click on **Blackboard** under the **Login** menu. In the Blackboard Login window enter your FIU MyAccounts User Name and Password. Select EVR 4274 – Sustainable Agriculture - Section U01 - Spring 2016. For help with Blackboard, click the Student menu on the [ecampus website](https://ecampus.fiu.edu/) call the UTS Help Center at (305) 348-2284.

Quizzes & Exams:

- Quizzes and exams will consist of fill-in-the-blank, short answer essay, multiple choice, matching, true/false, problem solving, etc., covering the textbook, theory discussion sessions, garden experiences, and commodity tours.
- If other required academic activity precludes a student's taking a quiz or exam, the quiz or exam may be taken at full value prior to its scheduled time as shown on the Course Schedule; however, arrangements for taking the quiz or exam must be made in person with the instructor at least one week prior to the quiz's or exam's scheduled time as shown on the Course Schedule, and a letter from the advisor or professor of the conflicting activity must be presented at that time. Two exams and one cumulative final exam will be administered during the semester.

Estimated Points:

3 Exams (20%, 20%, and 20%)	60%
Participation, assignment and discussion forum posting	15%
Quizzes	5%
Community Engagement Project (14-hours Engagement, Individual Reflection Paper, and in-Class Presentation)	20%

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- ✓ Missing more than THREE classes (including Friday workdays) will result in 5% loss of your final grade and missing more than FIVE days will result in 10% loss of your final grade. Missing field work on Friday can be made up.

Community Engagement Project

Students will participate in a community engagement project, which carries 20% of the class grade. Per Janet S. Eyler and Dwight E. Giles, Jr. of Vanderbilt University, the community engagement is “...a form of experiential education where learning occurs through a cycle of action and reflection as students. . . seek to achieve real objectives for the community and deeper understanding and skills for themselves”. In the process, students link personal and social development with academic and cognitive development. . . experience enhances understanding; understanding leads to more effective action.” Through this project we hope that you not only enhance your intellectual curiosity and hands on farm operation/production/marketing skills, but also will become more engaged citizens and advance the cause of community spirit and collective good. More details regarding the engagement project will follow. Alternative options will be given to disabled students.

Course Outline and Schedule: The Instructors reserve the right to change the outline, readings and dates of materials covered in this course. Required readings are listed following outline table.

Week	Date	Topic/Activity	Readings and Assignment
1	Jan. 9	Introduction and Course Overview	
	Jan. 11	Food Systems The Hidden Costs of Food	NRC, Ch. 1
	Jan. 13	Field work	Organic Garden
2	Jan. 16	Martin Luther King Day (No Class)	
	Jan. 18	Definition of Sustainable Agriculture (SA)	NRC, Ch. 1
	Jan. 20	Planning for Comm. Engagement	In-Class
3	Jan. 23	Historical Perspective, US Agriculture and Transition to SA	NRC, Ch. 2 Lecture notes / articles on Blackboard
	Jan. 25	SA – A systems perspective	Lecture notes / articles on Blackboard
	Jan. 27	Comm. Engagement Planning	On Your Own
4	Jan. 30	SA Principles, Concepts and Issues	NRC, Ch. 3

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	& Feb 1		Lecture notes / articles on Blackboard
	Feb. 3	Field Work	Organic Garden
5	Feb. 6 & 8	Soils & Sustainability	NRC, Ch. 3, SARE Lecture notes / articles on Blackboard
	Feb. 10	Comm. Engagement	On Your Own
6	Feb. 13 & 15	Water & Sustainability	NRC, Ch. 3, SARE Lecture notes / articles on Blackboard
	Feb. 17	EXAM - I	In-Class
	Feb. 24	Field Work	Organic Garden
8	Feb. 27 Mar. 1	Sustainability issues: Farm energy and biofuels	Lecture notes / articles on Blackboard
	Mar. 3	Comm. Engagement	On Your Own
9	Mar. 6 & 8	Sustainability Issues: Biotechnology	Lecture notes / articles on Blackboard
	Mar. 10	Field Work	Lecture notes / articles on Blackboard
10	Mar. 13 -17	Spring Break (No Classes)	
11	Mar. 20 & 22	Sustainability – Discovering Alternative Approaches	Lecture notes / articles on Blackboard
	Mar. 24	Comm. Engagement	On Your Own
12	Mar. 27 & 29	Sustainability – Alternative Farming Systems	Lecture notes / articles on Blackboard
	Mar. 31	MIDTERM EXAM	In-Class
13	Apr. 3	Economic Dimensions of Farm Sustainability	MSU, 2010, Lecture Notes, Handouts
	Apr. 5	Economics of Trade	Lecture notes / articles on Blackboard
	Apr. 7	Field Work	Organic Garden
14	Apr. 10 & 12	Assessing farm sustainability and sustainability indicators	Lecture notes / articles on Blackboard
	Apr. 14	Comm. Engagement	On Your Own
15	Apr. 17, 19 & 21	Student Presentations on community engagement and class projects	
16	TBA	FINAL EXAM	In-Class

Grading Scale:

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93 - 100 = A ; 89 - 92 = A- ; 86 - 88 = B+ ; 83 - 85 = B ; 79 - 82 = B- ; 76 - 78 = C+ ;
70 - 75 = C ; 59 - 69 = D ; <58 = F

Office of Disability Services for Students:

If you have a disability and need assistance, please notify me and also contact the Office of Disability Services for Students (University Park - GC 190; Ph. 348-3532). Upon contact, the Office of Disability Services for Students will review your request and contact your professors or other appropriate personnel to make arrangements for appropriate modification and/or assistance.

Early Alert:

In an effort to help you succeed in your academic courses, FIU utilizes an Early Alert system. Instructors are now able to notify students' academic advisors if there are concerns about class performance. If an alert is submitted, your academic advisor will send you a message via your Student Dashboard (accessed via your MYFIU page) to discuss ways to improve your performance. Please respond to any communication you receive from your academic advisor about an early alert. Our goal with this program is to help you to be successful by identifying any issues as early on as possible and working to address them.

Honor Code:

Florida International University is a community dedicated to generating and imparting knowledge through excellent teaching and research, the rigorous and respectful exchange of ideas, and community service. All students should respect the right of others to have an equitable opportunity to learn and honestly to demonstrate the quality of their learning. Therefore, all students are expected to adhere to a standard of academic conduct, which demonstrates respect for themselves, their fellow students, and the educational mission of the University. All students are deemed by the University to understand that if they are found responsible for academic misconduct, they will be subject to the Academic Misconduct procedures and sanctions, as outlined in the *Student Handbook* and through the following link:

<http://academic.fiu.edu/AcademicBudget/misconductweb/1acmisconductproc.htm>.

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Cheating and plagiarism are violations of the academic honesty section of the FIU student code of conduct and will be reported to Judicial Services. Plagiarism is a serious offence will not be taken lightly. Plagiarism can be intentional (copying another student's work, collaborating too closely with another student) or unintentional (not citing all references, collaborating too closely with another student.) The best ways to avoid unintentional plagiarism are to reference all outside information, and to do all work on your own. If you have any questions about what is plagiarism, please ask the instructor. Instructors may use plagiarism detection software (such as turnitin.com) to determine if plagiarism has taken place. Suspected acts of plagiarism may be investigated and taken to the FIU Grievance Committee. Plagiarism will result in you receiving a 0 grade for your assignment (no exceptions) and may also result in your suspension or expulsion from the University.

Sexual Harassment Policy:

FIU's sexual harassment policy is available at:

http://hr.fiu.edu/index.php?name=sexual_harassment

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