Syllabus

Sustainable Agriculture EVR 4274
Spring 2020

Class Time: Monday-Wednesday-Friday – 12:00 to 12:50 PM
Class Room: Charles E. Perry (PC) 331

Dr. Kateel G. Shetty
(305)348-0178
Please use Canvas E-mail
VH 210 (MMC)
Office hours: By appointment. Walk-ins are okay but call me first.
FIU Arts & Sciences Faculty Information

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.

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 12 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.

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 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.

REQUIRED TEXT AND ON-LINE ACCESS:


Additional on-line readings, short videos, documentary films and talks will be assigned to offer other perspectives on the agricultural topics under discussion. Information on study materials (word/ pdf document, short video, web link, pictures/poster etc.,) specific to each of the book chapter will be provided in class. This is a blended class with both in-class and on-line learning activities. Frequent reliable access to learning management system CANVAS is required for this class. The FIU Canvas Web Tool will be used for posting readings, lecture outlines, assignments, grades, etc. Method of instruction is traditional lectures, and student discussion on relevant theme articles. Lack of Internet access will not be an excuse for missed assignments.

Active Learning Exercises:

Students will participate in in-class discussions on resource, conservation and sustainability issues presented in the class. Students will be evaluated based on their participation in the discussions and Canvas 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 workshops and garden related 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 students with disability), (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.

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 affect his/her performance/grade.

- Reading of the assigned chapters from the textbook and additional readings from Canvas 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.

Internet Resources:

This is a web assisted course. A course webpage will be maintained with Canvas learning management system. There will be syllabus, course materials, assignments, articles, videos, rubric, and announcements posted on Canvas.

To access this resource, go to http://canvas.fiu.edu/login/ and click on Canvas under the Login menu. In the Login window enter your FIU MyAccounts User Name and Password. Select EVR 4274 – Sustainable Agriculture - Section U01 - Spring 2019. For help with Canvas, contact Educational Technology Services at (305) 348-2814 or Green Library 150.

Quizzes & Exams:

- Quizzes will consist of fill-in-the-blank, short answer essay, multiple choice, matching, true/false, problem solving, etc., covering the textbook, theory discussion sessions, video, reading materials, garden experiences, and field trips.
• 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/Learning activities* 10%
Assignment 10%
Community Engagement Project** 20%

*Participation/Learning activities (includes attendance): Students will participate in in-class activities, discussions on resource, conservation and sustainability issues presented in the class. Students are encouraged to participate in groups of 4 or 5. Students will be evaluated based on their participation in the presentations/discussions, in-class quizzes and interactive learning activities. At the beginning of the class or at the end of lecture, or at any other appropriate stopping point, a one or two-question "quiz" will be given based on the material just covered in the class. Additionally, students may be asked to write down what they consider (a) the main point/s of the class and (b) the main question they still have as they leave. The interactive learning activities include collaborative learning, world café sessions, think team share, learning by teaching, team review and posting to discussion forums.

Coming late to the class or leaving the class early will affect your score in these activities. If you miss your assigned group presentation/active learning activities/discussion in the class, you will lose additional points. No make-up will be allowed for missing these activities, in the absence of valid official/medical evidence you will lose 1 point for missing each class activity.
**12-hours Engagement, Individual Reflection Paper, and in-Class Group Presentation**

**Attendance:** Everyone is expected to attend class and prepare for class in advance. Attendance is mandatory and will be taken every class. If you miss class due to a valid, documented extenuating circumstance, it will not count as an absence. Examples of valid absences (excused absences) include: (a) family member serious illness or other emergency; (b) official academic/athletic event (e.g. field trip); or (c) recommendation from an MD.

Missing more than THREE classes will result in 5% loss of your final grade and missing more than FOUR days will result in 10% loss of your final grade. Every additional absence will lower your class grade by 10 percentage points. EIGHT or more unexcused absences may result in an “F” for the semester.

Participation points will be awarded for attentiveness and positive contribution to class discussions. Conversely, points will be lost for unexcused absences, being late to the class, leaving the class at will, class disruptions, etc.

Late submissions will not be accepted except when due to the above-cited circumstances.

**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.
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic/Activity</th>
<th>Readings and Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jan. 6</td>
<td><strong>Introduction and Course Overview</strong></td>
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|      | Jan. 8 | Food Systems  
The Hidden Costs of Food     | NRC, Ch. 1                                   |
|      | Jan. 10| FIU Organic garden activities               | @ FIU Organic Garden                         |
| 2    | Jan. 13| **Definition of Sustainable Agriculture (SA)** | NRC, Ch. 1                                   |
|      | Jan. 15| Historical Perspective, US Agriculture and Transition to SA | NRC, Ch. 2  
Lecture notes / articles on Canvas |
|      | Jan. 17| Planning for Comm. Engagement               | In-Class                                     |
| 3    | Jan. 20| **Martin Luther King Day (No Class)**       |                                               |
|      | Jan. 22| SA – A systems perspective                  | Lecture notes / articles on Canvas           |
|      | Jan. 24| Comm. Engagement Planning                   | On Your Own                                  |
| 4    | Jan. 27 -31 | **SA Principles, Concepts and Issues**    | NRC, Ch. 3  
Lecture notes / articles on Canvas |
| 5    | Feb. 3 & 5 | Sustainability on Farm – Natural Resource Base - 1 | NRC, Ch. 3, SARE  
Lecture notes / articles on Canvas |
|      | Feb. 7 | Comm. Engagement                            | On Your Own                                  |
| 6    | Feb. 10 & 12 | Sustainability on Farm – Natural Resource Base - 2 | NRC, Ch. 3, SARE  
Lecture notes / articles on Canvas |
|      | Feb. 14 | Sustainability on Farm – Biodiversity and Crop protection | Lecture notes / articles on Canvas |
| 7    | Feb. 17 & 19 | Sustainability on Farm – Biodiversity and Crop protection | Lecture notes / articles on Canvas |
|      | Feb 21 | EXAM-I                                      | In-Class                                     |
| 8    | Feb 24 - 28 | Spring Break (No Classes)                   |                                               |
| 8    | Mar. 2 & 4 | Sustainability on Farm - Farm energy        | Lecture notes / articles on Canvas           |
|      | Mar. 6 | Comm. Engagement                            | On Your Own                                  |
| 9    | Mar. 9 & 11 | Sustainability Issues: Biotechnology        | Lecture notes / articles on Canvas           |
|      | Mar. 13 | Sustainability Issues: Nanotechnology       | Lecture notes / articles on Canvas           |
| 11   | Mar. 16 & 18 | Sustainability – Discovering Alternative Approaches | Lecture notes / articles on Canvas |
|      | Mar. 20 | Comm. Engagement                            | On Your Own                                  |
| 12   | Mar. 23 & 25 | Sustainability – Alternative Farming Systems | Lecture notes / articles on Canvas           |
|      | Mar. 27 | MIDTERM EXAM                                 | In-Class                                     |
| 13   | Mar. 30 | Government policies for sustainable agriculture | MSU, 2010, Lecture Notes, Handouts          |
Readings and Resources:

Available for a free download:


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


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

**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 Canvas Learning.


(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
GRADING SCALE:

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.
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

FIU STUDENTS AND FACULTY "STAYING SAFE AND HEALTHY"

In collaboration with the Health, Safety, and Welfare Committee of the FIU Faculty Senate and the Healthy Panthers Council, the Provost encourages each faculty and student to take a proactive role in their safety, personal health, and well-being.

Through viewing the "Staying Safe and Healthy" video series, you will learn:
• How to respond to an active shooter situation
• Care of an unconscious person
• Care of the bleeding person
• Panther’s Care Initiative
• How to enhance your personal health and well being

These 3-5 minute videos and related resources can be found for:
• On Campus Students in the Student Starter Kit in Canvas
• 2.0 Fully Online Students in Panther Den in Canvas
• Faculty in the Faculty Starter Kit in Canvas

This video series and related resources can make a difference in promoting the safety and protecting the health of all members of the FIU community. These resources are available any time you have a few minutes to watch them and you can refresh your memory about their content
at any point in time. STAYING SAFE AND HEALTHY requires the commitment of each of us as Panthers.

*Note: This syllabus and course schedule may be updated, if needed. An announcement of changes will be made in class and in Canvas Learn*