Syllabus

Introduction to Environmental Science EVR 1001
Spring 2019

Class Time: Monday-Wednesday-Friday – 10:00 to 10:50 AM
Class Room: Green Library (GL) 245

Dr. Kateel G. Shetty
(305)348-0178
Please use Canvas E-mail
VH 210 (MMC)
Office hours: Monday and Wednesday 2 – 3 PM, or by appointment. Walk-ins are fine
but first call my office to make sure I am there.

FIU Arts & Sciences Faculty Information

COURSE DESCRIPTION

This is an introductory course on the interdisciplinary field of environmental science emphasizing natural capital, natural capital degradation, solutions, trade-offs, and the importance of individuals focused around a central theme “Sustainability.” In this course, you will learn the concepts, theories and principles from physical and biological sciences to better understand the complex issues surrounding the human ecological footprint, global climate change, degradation of water resources, and reliance on fossil fuels for energy and industrial scale agricultural practices.

COURSE OBJECTIVES

Students will be able to:

- Identify and analyze the environmental problems grappling us today;
- Gain an understanding of the concepts fundamental to environmental science; to understand the complexity of ecosystems;
• State chemical and ecological principles related to environmental problems;
• Distinguish between sustainable and unsustainable practices regarding resource use;
• Understand how social issues and politics affects the environment;
• Take part confidently in discussions with others about issues involving environmental science and
• Make informed personal decisions about things that involve environmental science.

**COURSE DESIGNATION**

This course is a *Global Learning Foundations Course*. It fulfills the University Core Curriculum Natural Sciences category – Physical Sciences sub-category requirement when taken with the accompanying lab course, EVR 1001L.

**GLOBAL LEARNING OUTCOMES AND ASSESSMENTS**

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

**Global Awareness**—Students will be able to demonstrate an understanding of the global natural resources (air, water, energy, minerals, food etc.,) and natural services, and able to assess how global issues and trends are interrelated with the ecological, social and economic sustainability.

Demonstrate understanding of the patterns and processes of Earth’s natural systems and the awareness of the interrelationship of human activities and natural systems.

Demonstrate understanding of global human population growth and ecological footprint, human activities and technologies, their various environmental impacts, and the economic and social factors that favor the use of one technology over another.

Analyze global impacts of human activities – hunger and poverty, loss of biodiversity, pollution, global warming, and evaluate means for reducing those impacts.

Assessments for Global Awareness will include either a computer based formative assessment activity or in-class exams or both.

**Global Perspective**—Students will have the ability to develop a multi-perspective analysis of local, regional, national and international, and intercultural issues and problems related to environment and sustainability.
Demonstrate understanding of scarcity and heterogeneous distributions of earth resources and competition for resources are affecting international relations and the drive towards sustainable use and replacement of resources.

Students will be able to articulate the perspectives of multiple stakeholders involved in the complex international environmental issues and how those perspectives interact and influence policy decisions.

Assessment for Global Perspective will take the form of group-based debates on environmental topics where groups will represent the positions of different stakeholders. Students from groups that are not participating on a panel for that session’s debate will provide input on the performance of the groups. Groups will also submit a position paper on their topic. 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 solutions to local, global and intercultural environmental problems.

Students will reflect on the relationship between their own consumption of resources and consequent impacts (ecological footprint through its calculation using an on-line ecological footprint calculator).

Students will experience and appreciate the challenges facing human communities in their efforts to achieve the sustainable use of natural resources and services.

Assessment for Global Engagement will take the form of a reflection posting to the course discussion forum regarding their personal ecological footprint. In addition, students will participate in a community service/co-curricular activity designed to reduce environmental degradation and promote the health of the community. Students will describe their experience in a posting to the course discussion forum. Both postings will be evaluated using the appropriate rubrics that will be provided to students.

**REQUIRED TEXT AND ON-LINE ACCESS:**

*Scientific American Environmental Science for a Changing World (Required)*
Susan Karr, Jeneen Interlandl, Anne Houtman
W. H. Freeman, 3rd Edition, 2018

**ISBN-10:** 1-319-13400-9  
**ISBN-13:** 978-1-319-13400-6
You may purchase your textbook online at the FIU Bookstore or from Vital Source.

The text is an e-book. YOU DO NOT NEED ACCESS TO THE "EXTRA's" (e.g., SaplingPlus). If students prefer a paper textbook, the loose-leaf version with Enviroportal access can also be purchased; however, the e-book/website purchase is more cost effective.

Additional on-line readings, short videos, documentary films and talks will be assigned to offer other perspectives on the environmental 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 (Participation/In-class Activities & Assessment/ Global learning):

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, 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.
Individual Co-Curricular Activities:

This activity concerns the calculation of the personal ecological footprint using a website footprint calculator and a reflection posted to the Ecological Footprint Discussion Forum. Students will be asked to reply to postings with a thoughtful consideration of the steps that could be taken to reduce an individual’s ecological footprint.

Individual activity – Post personal footprint calculation reflection on class Canvas discussion forum by March 29, 2019.

COURSE SYLLABUS OUTLINE:

The Instructors reserve the right to change the outline, readings and dates of materials covered in this course.

INTRODUCTION TO ENVIRONMENTAL, SCIENCE, AND INFORMATION LITERACY
Jan 7  Introduction and Overview
Jan 14  Chapter 1 – Modules 1.1, 1.2 and 1.3

ECOLOGY
Jan 23 & 28  Chapter 2 – Modules 2.1, 2.2 and 2.3

EVOLUTION AND BIODIVERSITY
Feb 4  Chapter 3 - Modules 3.1, 3.2 and 3.3

HUMAN POPULATIONS AND ENVIRONMENTAL HEALTH
Feb 11  Chapter 4 - Modules 4.1, 4.2 and 4.3

MANAGING RESOURCES: ENVIRONMENTAL ECONOMICS AND POLICY
Feb 18  Chapter 5 - Modules 5.1, 5.2 and 5.3

EXAM-1 (February 22nd, 2019)

WATER RESOURCES
Feb 25  Chapter 6 - Modules 6.1, 6.2 and 6.3

LAND RESOURCES
March 4  Chapter 7 - Modules 7.1, 7.2 and 7.3

FOOD RESOURCES
March 18  Chapter 8 - Modules 8.1, 8.2 and 8.3

MIDTERM EXAM (March 22th, 2019)
CONVENTIONAL ENERGY: FOSSIL FUELS
March 25 & April 1       Chapter 9 - Modules 9.1, 9.2 and 9.3

AIR QUALITY AND CLIMATE CHANGE
April 8                Chapter 10 - Modules 10.1, 10.2 and 10.3

ALTERNATIVES TO FOSSIL FUELS
April 15               Chapter 11 - Modules 11.1, 11.2 and 11.3

FINAL EXAM          TBA

IMPORTANT INFORMATION

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 situation; (b) official academic/athletic event (e.g. field trip); or (c) recommendation from an MD.

Missing classes without valid documentation will SINGNIFICANTLY AFFECT your Participation / in-class assessment grade and the FINAL GRADE. Only THREE absences during the semester is counted as “unexcused absence” regardless of the reason. If you miss MORE THAN THREE class during the semester, every additional absence will lower your class grade by 5 percentage points. Remember by being absent you will also lose in-class activity points. NINE or more unexcused absences will result in an “F” for the semester.

If you arrive to the class more than 10 minutes late you are required to sign in on the LATE ARRIVAL SIGN-IN SHEET. Please take instructors prior approval if you plan to leave early. If you leave the class early you are required to sign in on the EARLY DEPARTURE SIGN-IN SHEET. There will be deduction in participation points for being repeatedly late to the class and for leaving the class early.

Late assignments/term papers/exams will not be accepted except when due to the above-cited circumstances. Examinations will have subjective and objective sections. 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.

It is important that you use the class Canvas webpage e-mail message system for communicating with me and to look out for important messages from me during the semester.
Problem with class Canvas webpage will not be accepted as an excuse for no submission or late submission of quizzes, assignment, discussion posting. You must notify the FIU Educational Tech people regarding the problem or go to the Educational Tech lab and demonstrate the problem to them, once they confirm the issue, ask them to inform me through e-mail.

Late submissions will be graded according to the following policy: you have maximum of 2 days to make a late submission, every day that an assignment/quiz/report is late, the maximum score will decrease by 20%.

Course behavior:

Students will arrive on time, ready to participate in the day’s activities and remain until the end of class. Refrain from private conversations during the class. Laptop/tablet/smart phone may be used only for legitimate classroom purposes. You will lose your laptop/tablet user privilege if use it inappropriately and distract those seated around you. Students are not allowed to use their smart phones for making a call or receiving a call or texting etc. in class. The smart phone must be set on vibrate mode. Students violating this policy will be asked to leave the class. Any violations of the university honor code (available at http://www2.fiu.edu/~daiglerr/code.htm) will result in charges of academic misconduct. This includes any form cheating such as use of unauthorized materials or communication during exams, plagiarism and so on. Students will behave in a respectful manner toward one another even during debates, Q&A, and on discussion forums, regardless of how strongly you disagree. Students showing a lack of courtesy and consideration for the Instructor and other students will be asked to leave the classroom and will be marked absent for that session.

ACADEMIC MISCONDUCT

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.
ASSIGNMENTS AND EXAMS

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Take home Quizzes*</td>
<td>5%</td>
</tr>
<tr>
<td>Assignment**</td>
<td>10%</td>
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<tr>
<td>Individual Activity- Footprint calculation</td>
<td>5%</td>
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<tr>
<td>Group Presentation</td>
<td>5%</td>
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<tr>
<td>Participation/Active learning***</td>
<td>25%</td>
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<tr>
<td>Exam-1</td>
<td>15%</td>
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<tr>
<td>Midterm Exam</td>
<td>15%</td>
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<tr>
<td>Final Exam</td>
<td>20%</td>
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*Quizzes: Each quiz will have one to three single questions that you must answer with a short and concise paragraph; questions will be based on the previously assigned on-line short video or article. An average of all your quiz scores will be used in determining your final quiz grade. **Upload your completed take-home quiz answer document using the appropriate quiz link in the class Canvas webpage on or before the assigned due date.**

**Assignment – Environmental News Headlines, upload your completed assignment using the assignment link in the class Canvas webpage by April 5th, 2019.**

***Participation/Active learning
This includes:
1. Attendance/Participation
2. In-class quizzes
3. Collaborative learning
4. Think team share
5. Learn by teaching
6. Team review
7. Discussion forum posting

FINAL GRADES

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<thead>
<tr>
<th>Grade Range</th>
<th>Letter Grade</th>
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<tbody>
<tr>
<td>93 - 100</td>
<td>A</td>
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<tr>
<td>89 - 92</td>
<td>A-</td>
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<td>86 - 88</td>
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<td>73 - 75</td>
<td>C</td>
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<tr>
<td>69 - 72</td>
<td>C-</td>
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5 9 - 68 = D
<58 = F

Turn-it-In:
To verify the originality of the work, certain assignments may be submitted for grading to www.turnitin.com by way of a link in Canvas Learn. Such assignments must be your original individual effort, and any sources used must be cited. No credit will be given if the assignment has not been submitted to Turnitin, it lacks sources or there is evidence of a lack of originality. Assignments will be archived at the Turnitin website. Additional details will be provided in class.

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.

Sexual Harassment Policy:
FIU’s sexual harassment policy is available at:
http://hr.fiu.edu/index.php?name=sexual_harassment
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.

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