

# PLB 301i Contemporary Issues in Environmental Science

## Course Syllabus – Spring 2016

**Lectures:** 9:00 – 9:50 am Tues, Thurs Wham 105

**Labs:** Life Sciences II Rm. 480

Section 1: 12:00 - 1:50 M

Section 2: 2:00 - 3:50 M

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### **Professor:**

Dr. Loretta Battaglia

Office: 411 Life Sciences II

Office Hours: M 1-4pm; W 1-4pm

Phone: 453-3216

email: [lbattaglia@plant.siu.edu](mailto:lbattaglia@plant.siu.edu)

### **TA:**

Mr. Brad Delfeld (Sections 1 & 2)

Office: 401 Life Sciences II

Office Hours: T 10am-1pm; W 10am-1pm

email: [bmdelfe@gmail.com](mailto:bmdelfe@gmail.com)

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### **Required Textbook:**

- 1) Principles of Environmental Science. Cunningham. 7<sup>th</sup> edition.

**Check the class D2L site regularly for announcements, handouts and to check grades.**

### **Course objectives**

This course is designed to familiarize students from a variety of academic majors with a scientific understanding of general ecological principles, current environmental issues, and ways that science and society are addressing current environmental problems. Students will gain an understanding of:

- 1) Basic biological principles needed to understand environmental change.
- 2) Major ecosystem components and processes, and how their alteration affects global change.
- 3) Community development, species interactions, and population dynamics.
- 4) Implications of human population growth.
- 5) Anthropogenic alterations to air, water, and land resources, including effects on global biodiversity and potential implications for human health.

### **Attendance**

Students are expected to attend all lectures and labs in this course. We will be covering a wide variety of material throughout the semester, and any of the material covered in lectures and labs may appear on the exams.

Unannounced quizzes will be given periodically during the lectures. Quizzes will cover topics from previous lectures and labs and will provide feedback to help the student gauge their understanding of the material before exams. There are no make-ups for quizzes missed (see below for more details).

### **Conduct**

All students have the right to attend class in an environment that is conducive to learning. It is the responsibility of the instructor to maintain that environment in the classroom. Talking during lectures and disruptive behavior are not acceptable. Please turn off all sound-producing devices (*e.g.*, cell phones, pagers) before entering the classroom. Students are expected to adhere to all aspects of the SIU code of conduct. Plagiarism is a serious offense and will not be tolerated!

### **Exams**

There will be three exams in this course, including the final. The final is NOT comprehensive. Exams will be multiple-choice and short answer. **No make-up exams will be given.**

### Lecture Quizzes

Eleven pop quizzes will be given during the semester. Questions will be multiple choice and/or short answer. No make-ups will be given, but the lowest quiz score will be dropped.

### Lab Quizzes

A short quiz that covers the previous week's work in lab will be given at the beginning of each lab period. No make-ups will be given. Each quiz is worth five points; the two lowest scores will be dropped.

### Lab Participation

Each student is expected to come to lab prepared to work in groups and to participate fully in all lab exercises and activities. Each lab is worth five participation points; the two lowest scores will be dropped.

### Environmental Issues Paper

Each student will independently research a current environmental issue. You must find a topic and submit a relevant scientific paper and/or news article for approval and refinement by the instructor. Following approval and refinement, you must find a minimum of five scientific studies on the topic from the peer-reviewed literature. Additional details will be provided in a handout. The final paper will be submitted to the class account on turnitin.com.

### Group Project

Each student will work in a group of three people from his/her lab section. The group will identify an interesting environmental issue and research the topic. Each group's findings will be summarized in a poster presentation, which will be given during the final lab period at a class symposium. **PLEASE NOTE THAT THE TOPIC MUST BE DIFFERENT FROM THE INDIVIDUAL PAPER ASSIGNMENT.** You will work collaboratively as a team, which is an excellent opportunity to hone an important job skill. Additional details will be provided in a handout.

### Lab Reports

Each student will prepare a lab report for each of the two experiments conducted in lab (the *Lemma* and Vermiculture studies). There will be time allocated in lab for hypothesis generation, data collection, data summary and graph preparation. Students will work **INDEPENDENTLY** on the lab report, which will be submitted to turnitin.com. See below for due dates.

### Labs

Most lab activities will take place in the designated classroom. However, some labs have a field component and most of the exercise will take place outside on campus. For those labs, please come prepared to walk around outside (appropriate footwear, jackets, or raingear, depending on weather). Some labs involve a computer exercise; if you arrive late on one of those days, please join the group in LS II, Rm. 449.

**Lecture Schedule** This is a tentative schedule; details may change slightly as the semester progresses.

Date	Chapter	Topic
Jan 19	----	Introduction and course policies
Jan 21	1	Understanding our environment
Jan 26	2	Environmental systems: matter and energy and life (Part 1 - the basics)
Jan 28	2	Environmental systems: matter and energy and life (Part 1 - the basics)
Feb 2	3	Evolution, species interactions and biological communities
Feb 4	3	Evolution, species interactions and biological communities
Feb 9	3	Evolution, species interactions and biological communities
Feb 11	2	Environmental systems: matter and energy and life (Part 2 - ecosystems)
Feb 16	2	Environmental systems: matter and energy and life (Part 2 - ecosystems)

Feb 18	5	Biomes and biodiversity
Feb 23	5	Biomes and biodiversity
Feb 25	----	<b>Exam 1</b>
March 1	4	Human populations
March 3	4	Human populations
March 8	6	Environmental conservation: forests, grasslands, parks and nature preserves
March 10	6	Environmental conservation: forests, grasslands, parks and nature preserves
March 15/17	---	Spring break (no class)
March 22	7	Food and agriculture
March 24	9	Climate
March 29	9	Climate
March 26	10	Air pollution
March 31	10	Air pollution
April 5	----	<b>Exam 2</b>
April 7	11	Water: resources and pollution
April 9	11	Water: resources and pollution
April 12	13	Energy
April 14	13	Energy
April 19	14	Solid and hazardous waste
April 21	14	Solid and hazardous waste
April 26	15	Economics and urbanization
April 28	15	Economics and urbanization
May 3	16	Environmental policy and sustainability
May 5	16	Environmental policy and sustainability
Thurs, May 12	----	<b>Final Exam – 8:00-10:00 am</b>

**Tentative Lab Schedule (note: details may change slightly as the semester progresses).**

<b>Date</b>	<b>Topic</b>
Jan 18	No lab – Dr. MLK Day
Jan 25	Carbon footprint exercise (computer lab)  Discussion (paper)
Feb 1	Isle Royale exercise (computer lab)  Discussion (paper)
Feb 8	Vermiculture and decomposition experiment: setup  Discussion (paper)
Feb 15	Vermiculture and decomposition experiment: collect data  Discussion (paper)
Feb 22	Vermiculture and decomposition experiment: collect data  Keystone Predator (computer lab)
Feb 29	Vermiculture and decomposition experiment: final data collection and summarize data; make graphs  <i>Lemna</i> experiment: setup
March 7	<b><u>Vermiculture and decomposition lab report (25 pts) due to turnitin.com by 11:59 pm central time</u></b>  <i>Lemna</i> experiment: collect data and connect photosynthesis with respiration (spinach leaf disks)
March 14	Spring break – no class
March 21	<i>Lemna</i> experiment: final data collection and summarize data; make graphs  Discussion (paper)
March 28	<b><u><i>Lemna</i> lab report (25 pts) due to turnitin.com by 11:59 pm central time</u></b>  Intermediate disturbance hypothesis (computer lab)  Discussion (paper)
April 4	Food INC Movie
April 11	Dendrochronology lab (outside)
April 18	Biodiversity movie
April 25	Biodiversity lab (outside)
May 2	Poster symposium (25 pts)

### Point Distribution

	Points
Exam 1	100
Exam 2	100
Final exam (not comprehensive)	100
Lecture quizzes (Best 10 of 12 x 5 pts)	50
Environmental issues paper	100
Group project (poster)	100
<i>Lemma</i> and Vermiculture lab reports	50
Lab participation (Best 11 of 13 x 5 pts)	55
Lab quizzes (Best 11 of 13 x 5 pts)	55
Poster symposium participation	25
<b>Total</b>	<b>735</b>

### Grading Scale

The grading scale is a standard 10 point scale, e.g., A = 90-100%. There will be no extra credit or bonus points.

## IMPORTANT DATES \*

Semester Class Begins.....	01/19/2016
Last day to add a class (without instructor permission):.....	01/24/2016
Last day to withdraw completely and receive a 100% refund: .....	01/31/2016
Last day to drop a course using SalukiNet:.....	04/03/2016
Last day to file diploma application (for name to appear in Commencement program): .....	02/12/2016
Final examinations: .....	05/09–05/13/2016

Note: For outreach, internet, and short course drop/add dates, visit Registrar's Academic webpage <http://registrar.siu.edu/>

## SPRING SEMESTER HOLIDAYS

Martin Luther King, Jr.'s Birthday Holiday 01/18/2016

Spring Break 03/12—03/20/2016

## WITHDRAWAL POLICY ~ Undergraduate only

Students who officially register for a session may not withdraw merely by the stopping of attendance. An official withdrawal form needs to be initiated by the student and processed by the University. For the proper procedures to follow when dropping courses and when withdrawing from the University, please visit <http://registrar.siu.edu/catalog/undergraduatecatalog.html>

## INCOMPLETE POLICY~ Undergraduate only

An INC is assigned when, for reasons beyond their control, students engaged in passing work are unable to complete all class assignments. An INC must be changed to a completed grade within one semester following the term in which the course was taken, or graduation, whichever occurs first. Should the student fail to complete the course within the time period designated, that is, by no later than the end of the semester following the term in which the course was taken, or graduation, whichever occurs first, the incomplete will be converted to a grade of F and the grade will be computed in the student's grade point average. For more information please visit:

<http://registrar.siu.edu/grades/incomplete.html>

## REPEAT POLICY

An undergraduate student may, for the purpose of raising a grade, enroll in a course for credit no more than two times (two total enrollments) unless otherwise noted in the course description. For students receiving a letter grade of A,B,C,D, or F, the course repetition must occur at Southern Illinois University Carbondale. Only the most recent (last) grade will be calculated in the overall GPA and count toward hours earned. See full policy at

<http://registrar.siu.edu/catalog/undergraduatecatalog.html>

## GRADUATE POLICIES

Graduate policies often vary from Undergraduate policies. To view the applicable policies for graduate students, please visit

<http://gradschool.siu.edu/about-us/grad-catalog/index.html>

## DISABILITY POLICY

Disability Support Services provides the required academic and programmatic support services to students with permanent and temporary disabilities. DSS provides centralized coordination and referral services. To utilize DSS services, students must come to the DSS to open cases. The process involves interviews, reviews of student-supplied documentation, and completion of Disability Accommodation Agreements.

<http://disabilityservices.siu.edu/>

## PLAGIARISM

Student Conduct Code [http://srr.siu.edu/student\\_conduct\\_code/](http://srr.siu.edu/student_conduct_code/)

Guidelines for Faculty <http://pvcaa.siu.edu/common/documents/Plagiarism/Guide%20to%20Preventing%20Plagiarism.pdf>

## SAFETY AWARENESS FACTS AND EDUCATION

Title IX makes it clear that violence and harassment based on sex and gender is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. If you or someone you know has been harassed or assaulted, you can find the appropriate resources here: <http://safe.siu.edu>

## SALUKI CARES

The purpose of Saluki Cares is to develop, facilitate and coordinate a university-wide program of care and support for students in any type of distress—physical, emotional, financial, or personal. By working closely with faculty, staff, students and their families, SIU will continue to display a culture of care and demonstrate to our students and their families that they are an important part of the community. For Information on Saluki Cares: (618) 453-5714, or [siucares@siu.edu](mailto:siucares@siu.edu),

<http://salukicare.siu.edu/index.html>

## EMERGENCY PROCEDURES

Southern Illinois University Carbondale is committed to providing a safe and healthy environment for study and work. We ask that you become familiar with the SIU **Emergency Response Plan** and **Building Emergency Response Team (BERT)** programs. Emergency response information is available on posters in buildings on campus, available on BERT's website at [www.bert.siu.edu](http://www.bert.siu.edu), Department of Safety's website at [www.dps.siu.edu](http://www.dps.siu.edu) (disaster drop down) and the Emergency Response Guideline pamphlet. Instructors will provide guidance and direction to students in the classroom in the event of an emergency affecting your location. *It is important that you follow these instructions and stay with your instructor during an evacuation or sheltering emergency.*

## INCLUSIVE EXCELLENCE

SIU contains people from all walks of life, from many different cultures and sub-cultures, and representing all strata of society, nationalities, ethnicities, lifestyles, and affiliations. Learning from and working with people who differ is an important part of education as well as an essential preparation for any career. For more information please visit: <http://www.inclusiveexcellence.siu.edu/>

## LEARNING AND SUPPORT SERVICES

Help is within reach. Learning support services offers free tutoring on campus and math labs. To find more information please visit the Center for Learning and Support Services website:

Tutoring : <http://tutoring.siu.edu/>

Math Labs <http://math.siu.edu/courses/course-help.php>

## WRITING CENTER

The Writing Center offers free tutoring services to all SIU students and faculty. To find a Center or Schedule an appointment please visit <http://write.siu.edu/>

## AFFIRMATIVE ACTION & EQUAL OPPORTUNITY

Our office's main focus is to ensure that the university complies with federal and state equity policies and handles reporting and investigating of discrimination cases. For more information visit:

<http://diversity.siu.edu/#>

## Additional Resources Available:

SALUKINET: <https://salukinet.siu.edu/cp/home/displaylogin>

ADVISEMENT: <http://advisement.siu.edu/>

