

**Department of Earth and Environmental Sciences
LEHIGH UNIVERSITY
EES 004 / ES 004 - The Science of Environmental Issues (1 credit)
Spring 2015**

Introduction

EES 004 (ES004) is a one-credit science course that counts towards Natural Science distribution requirements (but NOT as a laboratory course). There is no textbook for this course — all content materials and assignments will be posted on CourseSite.

The course has three sections, each of which meets once per week. **You must report to and attend your rostered section.** If you need to change sections temporarily because of an excused conflict (like an athletic commitment), you need to clear that switch in advance, with the TA for your regular session and with the section you wish to attend. If you wish to change sections permanently, you must use the normal drop-add procedure. The sections and their meetings times and places are:

EES/ES 004-060 (CRN 14366/14364) Monday, 11:10 to 12:25 (STEPS 102)

EES/ES 004-062 (CRN 14374/14373) Wednesday, 11:10 to 12:25 (STEPS 102)

EES/ES 004-061 (CRN 14372/14369) Friday, 1:10 to 2:25 (STEPS 102)

It's important that you read through this syllabus so that you can understand:

- Course Background and Goals
- Course Operations and Grading
- Expectations and Policies

Course Background and Goals

This course is designed to give you the scientific background behind some of the most pressing environmental issues facing humankind. We've chosen topics that have both global and local ramifications and so are likely to affect us all.

We know that students in this class bring a diversity of experience and background knowledge, and we know that most people are probably not planning a career as a practicing scientist, engineer, or technologist. If you are interested in such a path, we'd be happy to explore options with you, like minors and majors in EES and allied fields.

We hope that you will leave EES 4 more confident in your ability to make informed environmental decisions because you understand a few scientific processes and have a better understanding of how the environment works!

Instructors and Course Schedule

EES/ES 004 is a team-instructed course. Six professors will engage you in the course topics and provide assessment of your performance. These professors will work closely with three TAs who will be responsible for much of the grading.

Gray Bebout (Course Coordinator, first week introduction and last week assessment; Soils and Food) 216 STEPS; geb0@lehigh.edu
(Bebout Office hours: Thursdays 12:00 to 1:00 pm; Fridays 10:00 to 11:00 am)

Joan Ramage (Complexity) 584 STEPS; jmr204@lehigh.edu
Bruce Hargreaves (Biodiversity) 134 STEPS; brh0@lehigh.edu
Steve Peters (Water) 144 STEPS; scp2@lehigh.edu
Dork Sahagian (Energy) 424 STEPS dos204@lehigh.edu
Charly Massa (Climate) 224 STEPS; chm313@lehigh.edu

Office hours for individual other professors will be announced in class.

The TAs for the course will be (TA office hours listed below):

Monday - **Rebecca Whiteash** (raw314@lehigh.edu)
Wednesday - **Jill Henry** (jeb308@lehigh.edu)
Friday - **Zheng (Erick) Gong** (zhg214@lehigh.edu)

T.A. Office Hours:

Rebecca Whiteash: Wednesdays, 11:00 to noon; Fridays, 9:30 to 10:30 am (STEPS room 140)
Jill Henry: Fridays, 9:30 to 11:30 am (STEPS room 240)
Erick Gong: 2:00 to 3:00 pm, Mondays and Tuesdays (STEPS room 240)

Meeting times	Topic/Unit (and professor)
January 19, 21, and 23	Course introduction; Bebout
January 26, 28, 30, Feb. 2, 4, 6	Complexity in nature and the environment; Ramage
February 9, 11, 13, 16, 18, 20	Biodiversity; Hargreaves
February 23, 25, 27, March 2, 4, 6	Water; Peters
March 16, 18, 20, 23, 25, 27	Energy; Sahagian
March 30, April 1, 3, 6, 8, 10	Soils and food; Bebout
April 13, 15, 17, 20, 22, 24	Climate; Massa
April 27, 29, May 1	Course wrap-up, assessments; Bebout

Course Operations and Grading

Course topics will have a regular structure. We will start and end the course with an introductory class and an assessment class. In between, during semester weeks 2-13, we will devote two weeks to each of the six topics. **For each topic, the pattern we will follow is:**

Meeting time 1.

- 15-minute Quiz on previous topic (no quiz following warm-up week)
- Introduction to topic, content presentation, followed by questions and discussion

Homework.

- **Homework assignments are due by 5:00 PM four days after your class meeting.** Monday section deadline is Friday at 5:00 PM, Wednesday section deadline is Sunday at 5:00 PM and Friday section deadline is Tuesday at 5:00 PM. Homework assignments will be turned in using CourseSite. Bring a copy of your homework to class to refer to during discussion.

Meeting time 2.

- Full-class discussion of homework exercise.
- Review of topic for subsequent quiz.

This means you will take six quizzes and submit six homework assignments, and along with a participation component, these elements will determine your course grade. This course structure requires that you attend every class, be on time, and be engaged.

Course Grading and Policy on Missed Assignments

You will be responsible for two deliverables for every module: (1) a 15-minute quiz during the class before starting the next unit, and (2) a reading-writing assignment which is evaluated and discussed at the second meeting for each unit. Each deliverable is worth 10% of the course grade (each unit is worth 20%). You can drop the entire score of your lowest-scored topic. The drop can be used to accommodate missed classes, quizzes, or homework. There will be no make-up privileges or any extra credit opportunities for the course.

Quizzes

Each quiz will have ten questions. The quiz will be done in class and handed in for grading by the TA, following a rubric provided by the professor. The scores on the quizzes will translate to letter grades the following way:

≥ 9 correct = A, 8 correct = B, 7 correct = C, 6 correct = D, ≤ 5 correct = F.

Homework Assignments

Homework assignments will be due by 5:00 PM, four days after your first meeting time for a given topic. The homework will be handed in electronically to CourseSite and graded by the TA, following a rubric provided by the professor. The CourseSite will be set up to not accept any late assignments for any reasons. **Answers to the assigned questions will be graded as follows:**

Excellent, thoughtful answers = A, average answers = B, minimalist answers = C, assignment not completed = F. It is important to note that these grades are “temporary”; they may change pending your participation, or lack of participation during the subsequent discussion period.

For the second topic meeting, the instructor will have all of your answered and graded questions, and will use them to seed the discussion. We want to reward you for participation in this discussion. In order to preserve your grade on the homework, you must be present to defend your responses, should you be called upon. If you are called upon and are present, your grade is preserved, or even enhanced should your oral answer be excellent. If you are called upon but not present, your grade immediately falls to a D. Alternatively, if you are present, but did not turn in the assignment, you can indicate as such, and your grade goes from an F to a D. If you are not called upon, and not present, well....you got lucky, but the chances of you slipping under the radar for all topics is small.

Numerically, an A is 4 pts, a B is 3 pts, a C is 2 pts, a D is 1 pt, and an F is zero pts.

The final grade is calculated just like you calculate a GPA. For this course, take all of your grades, there should be 12 in all. Find the topic for which you did the most poorly on and drop those two grades (you cannot mix low scores from two separate topics). Now you are left with 10 grades. Add those 10 grades up and divide by 10. The numeric score you receive will map into the letter grade as defined by the student handbook:

<http://www.lehigh.edu/~indost/conduct/handbook/sect4.shtml>. For example, the student handbook treats a "B+" = 3.3, a "B" = 3.0 and a "B-" = 2.7. If you earn between a 3.15 to 3.5, for example, you get a B+. If your grade averages out to a 2.86, you would receive a B.

Discussions

Our intention is to moderate these with a light hand. We will add our comments at times, but mostly we want you all to participate, and more than just participate, we want you to interact with one another and even have some fun discussing these important topics.

Expectations and Policies

It is essential that you show up to class on time. Quizzes will be handed out exactly at the start of class and will be collected after 15 minutes. If you are late you will just have to write faster and take your lumps. There will be no make-up quizzes. There will be no make-up homework assignments. We want you to take advantage of the dropped lowest score for assignments missed for any reason.

If you know you must miss a class, we need written and approved notice well in advance (for things like team sports, class trips, etc.). For other events (like job interviews) we may take your request under consideration if there is plenty of advance notice, but for the most part we will expect you to view this course as a serious commitment and plan your schedule around it. In the case of acute illness or a family emergency where advance notice is not possible, we do ask that you arrange for a notice from the Dean of Students office, as soon as is reasonable.

Please do not blame the computer or CourseSite for losing your work or for causing it to be late. We have full access to your computer logs.

Finally, please exercise common-sense common courtesy in class. Cell phones must be turned off, and you should not work on other homework, surf the web, read the Brown and White, or have off-topic conversations during discussion. Section 3s will be filed for repeat offenders.

Accommodations for Students with Disabilities: If you have a disability for which you are or may be requesting accommodations, please contact us as early in the semester as possible. You are also required to contact the Office of Academic Support Services, University Center 212 (610-758-4152) as early as possible in the semester. You must have documentation from the Academic Support Services office before accommodations can be granted.

Academic dishonesty is a serious offense to the academic integrity of Lehigh. It hurts you, your classmates, and the whole institution. **Please see the Lehigh website on Academic Integrity for more information http://www.lehigh.edu/~inprv/academic_integrity.html.** We appeal to your academic honesty to do your own work except for those occasions where you are asked to work together. We will not tolerate academic dishonesty of any kind; we will pursue the university policies regarding academic honesty to the fullest extent that Lehigh allows. The proliferation of the web into the education process comes with responsibilities and sensibilities. Just because it is on the web, it is not yours for the taking. Just as copying verbatim out of a book, or photocopying an illustration, then calling it your own constitutes plagiarism, so does using the web in a similar manner constitute plagiarism. If you have any question of whether or not the answers to your homework assignments will lead to plagiarism, please ask.

If you have any concerns or questions, or just want to talk more about the topics of the day, PLEASE take advantage of office hours to come see us, or set up an appointment.

Please note the following important semester dates:

- Last day to drop without a W: January 30
- Last day to drop with a W: April 14
- Last day to drop with a WP or WF: May 1 (you need to be earning at least 60% on your cumulative lab and lecture points for us to assign a WP)

Statement on Equitable Community:

Lehigh University endorses The Principles of Our Equitable Community (<http://www4.lehigh.edu/diversity/principles>). We expect each member of this class to acknowledge and practice these Principles. Respect for each other and for differing viewpoints is a vital component of the learning environment inside and outside the classroom.