

EES 022: Exploring Earth (1 credit NS)

Fall 2006 Syllabus

Professor Dave Anastasio
EES Teaching/Graduate Assistants

Description:

Laboratory course in methods, data acquisition, data analyses and scientific communication relevant to Earth and Environmental Sciences. Case study of anthropogenic change in the Lehigh River watershed. Required fieldtrips. Pre- or co-requisite: introductory-level course in EES. (NS)

Overview:

This inquiry-based laboratory course is designed to give you hands on experience in Earth and Environmental Science concepts relevant for general life including water resources, land development, global warming, GPS technology, etc. while improving your analytical and communication skills. The laboratory activities address realistic problems scientists encounter, allow you to work with real data in authentic contexts, call for you to draw and justify conclusions using the same kind of reasoning scientists use, and then present and justify your conclusions to classmates orally, as electronic poster, and written lab report. Lab exercises will vary from 1 week exercises to month long projects. Labs will variously take place in laboratory, computer classroom, and field settings. Explorations during the weeks of Pacing Break and Thanksgiving, are entirely web-based. . The material in this course was designed so that every student, regardless of their academic background, can succeed.

Expectations:

Laboratory attendance is required. Review and complete prelaboratory assignments as directed. Print out the laboratory exercises from the course's blackboard site before your laboratory period and bring them to lab. Course announcements will also be posted on Blackboard (www.bb.lehigh.edu), so check it often.

All laboratory assignments are expected to be legible, well thought out, in your own words, well written, and on time. The laboratory portion of the course will include several field excursions, which will occur rain or shine, so come prepared. Absence from a fieldtrip will result in a zero for that laboratory session.

The Teaching Assistants are EES graduate students. The TAs are in charge of the laboratories. You are welcome to consult with any of the TAs.

Teaching Assistants:

Name	Labs	email
Dario Bilardello		dabc@lehigh.edu
Ian Barton		
Chrissy Mazerowicz		
Johanna Troy		
Maura Sullivan		mes4@lehigh.edu

EES 22 Teaching Assistant Office Hours:

Monday	Tuesday	Wednesday	Thursday	Friday

And by appointment as well.

Accommodations for Students with Disabilities:

If you have a disability for which you are or may be requesting accommodations, please contact both your instructor and 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.

Location:

You will be meeting in your normal classroom, Williams 320 for on most lab days, if a lab calls for computer use we may meet in Williams 210. There are 3 labs that will meet in the field to collect data, dress prepared to be outside. Field labs will occur as scheduled, irrespective of weather. Specific directions for bus pick-up and meeting location will be given prior to the field day. **Check the course Blackboard site often and pay attention to the schedule!**

<u>Week of</u>	<u>Laboratory</u>	<u>Location</u>	<u>Notes:</u>
8/28	Introduction	WI320	
9/4	State of the Lehigh R. Watershed	WI320	
9/11	Geology, Hazards, and Land Use	WI210	
9/18	<i>GPS and Orienteering</i>	Iacocca Hall	
9/25	Topography and Maps	WI320	
10/2	Intro to Watershed Geometry	WI320	
10/9	<i>Stream Lab Field Work</i>	Bus:Grace Hall	
10/16:	Pacing Break: Exploring Weather	WWW	
10/23	Stream Lab Data Analysis	WI320	Weather due
10/30	<i>Carbon in our Environment</i>	Bus:Grace Hall	Watershed due
11/6	Carbon Data Analysis	WI320	
11/13	Presenting Carbon Research	TBA	Carbon due
11/20:	Thanksgiving: Changing Climate	WWW	

11/27 Regional Planning
12/4 Development Simulation

WI320
WI 320

Climate due

Evaluation: 1=7.14%, 2=14.28%, 3=21.42% of final course grade,

1. State of the Lehigh R. Watershed
1. Geology, Hazards, and Land Use
2. GPS and Orienteering / Topography and Maps
3. Watershed Geometry, Field Work, Data Analysis, Report
1. Exploring Weather
3. Carbon in our Environment, Data Analysis, EPoster
1. Changing Climate
1. Regional Planning
1. Development Simulation

Permission to make-up work for missed laboratories must be preapproved, fieldtrips can not be made up.

Computing Skills:

You will be expected to use a few software programs as a part of this lab, including the Microsoft Office suite of programs including Excel for data management and analysis, Word for word processing, and PowerPoint for Eposter presentation. If you are unfamiliar with these programs you may find the following online tutorials useful:

<http://www2.tntech.edu/its/pubs/MSTutorials.htm#Excel>

<http://www.fgcu.edu/support/office2000/>,

<http://office.microsoft.com/en-us/assistance/CH790018021033.aspx>.

Or

Lehigh's Library & Technology Services is offering an Intro to Excel seminar 9/18 and 9/20, register at <http://www.lehigh.edu/its/sems/>

Or

Make an appointment with one of the course TAs.

Field and Laboratory Safety:

Use of your common sense will keep you safe in this laboratory course. Respect others, listen and follow TA instructions. Always sit when the bus is moving, be careful getting in and out. Dress in weather appropriate clothing and shoes for field labs. Use instrumentation only as directed.