

ESCI 1101 Course Information – Spring 2018

ESCI 1101: Environmental Science Lab
CRN #, section:
Biology Room B326

Instructor:

Office Hours:
Location:

Email:

Phone:

Required Text: Introduction to Environmental Science Lab Manual, 1st edition. Floyd and Walsh. Supplementary readings, pre-lab quizzes, and lab assignments will be posted on Blackboard.

Course objectives:

There are two main purposes to the labs:

- 1) To show students how different parts of the environment interact, how we measure properties of these features and detect environmental disturbances such as pollution
- 2) Teach practical skills for use in the lab and field.

Some labs illustrate observing the environment and collecting samples, while others teach specific skills.

Students are expected to:

- 1) ***Learn concepts and vocabulary.*** Students will explore several important concepts that are of concern to us as citizens, educators, and scientists.
- 2) ***Learn how scientists think.*** Scientists observe, question, and analyze, and you will be expected to do the same.
- 3) ***Investigate real world examples.*** Students will be investigating soil, water, biota and associated issues from the El Paso area.
- 4) ***Practice independent thinking.*** Students will critically evaluate the information they receive regarding environmental issues so they can make informed and independent decisions.
- 5) ***Enjoy.*** This should be a class where you learn a lot and also have a good time. Participation is a key to enjoyment.

Process:

Before each class:

- * Read the assigned materials
- * Complete the pre-lab quiz (must be turned in at the beginning of class)
- * Identify concepts that are central to understanding the environmental issue to be discussed
- * Prepare a list of questions from the reading for which you need further clarification (you usually will get an opportunity to ask those questions in class).

In class:

- * Most classes will begin with a quiz over concepts learned in the previous class. These will last about 10 minutes. There are no make ups for missed quizzes (see below).
- * Take careful notes
- * Ask questions if you are not sure how to do something
- * Be an active participant!!

Evaluation of work:

There are **a total of 500 points possible for this lab**. There is a form at the end of the syllabus for you to keep track of your grades. We will **post grades on Blackboard** at least once a month.

Quizzes: There will be **quizzes most weeks**. These will usually be split between a **pre-lab quiz** that will be collected at the beginning of the lab and an **in-lab quiz**. The pre-lab quiz will be posted on **Blackboard** and will cover material for the lab that we will conduct that day. The goal of the pre-lab quiz is for you to become familiar with the concepts and activities for that day's lab BEFORE coming to class. That will help you understand what we will be doing and why we will be doing it. The answers will usually be found in the PowerPoint lecture slides and the lab instructions.

There will also be an **in-lab quiz** that will cover material **from the previous week's lab**. This part of the quiz will be given promptly at the beginning of lab, and it will not be given to latecomers. Each **quiz is worth 10 points** (usually split 5 points for the pre-lab and 5 points for the in-lab), and there will be **10 quizzes during the semester**. The **last two pre-lab quizzes** (numbers 11a and 12a) will be **extra credit**.

Lab assignments: **All labs** will have questions associated with them. You are allowed to complete lab *activities* in groups, **and can discuss the answers** to the questions in groups, but you must **write your own answers** to the questions unless otherwise instructed. **Each lab assignment** is worth **20 points**, and there will be a total of **12 lab assignments during the semester**, plus a final lab assignment for extra credit (number 13).

Energy white paper: We are going to do a mock El Paso Electric company hearing about potential energy sources for generating electricity to meet El Paso's future needs. Each group will be assigned a different energy source (solar, wind, natural gas, coal, or nuclear). During the lab the week of 13 February each group will make a short presentation about why their source is the best option, followed by a discussion about the strengths and weaknesses of

each energy source. To prepare, each group will complete a short (2–3 page) white paper about their energy source. More details will be provided early in the semester. The white paper is worth **25 points**, and the presentations and discussion will be graded as the lab assignment for that week (worth 20 points).

UTEP Green Fund proposal and peer review: The project for the lab is a simplified version of a proposal to the UTEP Green Fund. The Green Fund is a \$3 per student per semester fee that raises up to \$40,000 per year for campus sustainability projects (<http://sa.utep.edu/greenfund/>). This semester you and a partner will 1) perform an assessment of the campus ecological footprint, 2) present your ideas of how to use Green funds to improve the sustainability of some aspect of the campus footprint, and 3) write a 2–3 page proposal of your ideas (both a rough draft for peer review and a final draft). Details will be provided in lab. You are required to go to the **writing center** at the library before turning in the proposal. The first draft will be due the week of 27 February, the peer reviews will be due the week of 20 March, and the final draft will be due the week of 10 April. The peer review of the written proposals is worth **20 points**, and the final proposal is worth **50 points**.

Worm food: Each student will need to bring in food waste suitable for worm composting one time during the semester. Details will be provided the first week of the semester, but suitable foods are generally vegetables and fruits, except citrus. No meats, breads, or other animal products. Bringing in the worm food on time and with only correct food is worth **5 points**.

Final exam: The lab final exam is comprehensive and will come from the quizzes and lab assignments, typically about 3–5 questions per lab. **Save your work** as it is returned to you; you will need it to study with. The final exam is worth 60 points, and will be given the final week of class (the week before finals).

Extra credit: There will be several opportunities for extra credit throughout the semester. There will be a variety of different activities that you may attend, such as meetings of environmental organizations, work days at local parks, and seminars on campus. We will post details as we learn about the events on Blackboard. You can only attend approved events for extra credit, but we encourage you to let your TA know about possible events.

For each event, you must submit a written description of three new things you learned about the environment/environmental science. You may submit **two** extra credit write ups, and you can earn up to **10 points** on each. To earn the full amount of points, you must **explain** what you learned, not just list three facts. The write ups must be turned in **within two weeks of the event**.

Missed Assignments and Late Work: There will be no makeups on any of the assignments, quizzes, or the Green Fund Proposal. Late work is not accepted and will count as a 0.

Grading:

There are no exceptions to the grading scale presented below.

A = 450 – 500 points (100 – 90%)

B = 400 – 449 points (90 – 80%)

C = 350 – 399 points (80 – 70%)

D = 300 – 349 points (70% - 60%)

F = ≤ 299 points (below 60%)

COURSE POLICIES:

POLICY ON CLASS PARTICIPATION: You are expected to **come to class** prepared to **answer questions** about the assigned lab. Always bring a pen and paper. **Pop quizzes** may be given at any time during the lab period. The instructor will post grades electronically, but **students are responsible for knowing their grades at all times.**

POLICY ON CELL PHONES: Do NOT have them on or out in class....this includes texting! **Cell phones can be confiscated** for the class period if used in lab.

POLICY ON ALL OTHER ELECTRONIC DEVICES: You cannot surf the internet, watch movies, listen to music, etc. in lab. You will be asked to leave if this happens.

POLICY ON MAKE-UP QUIZZES AND EXAMINATIONS: NO make-up quizzes or exams will be given for reasons **except illness (doctor's note required) or when a student is on official University business (documentation required).** Make-ups **must be scheduled** within a week of when the quiz or test was given.

POLICY ON CAMPUS CARRY: Persons holding a Concealed Handgun License can lawfully carry their handgun into a UTEP classroom as long as the gun remains concealed. Open carry remains prohibited on campus. In other words, none of us should see (or be able to tell that there is) a gun at UTEP. Call the University Police at 747-5611 or dial 911 if you see any individual on campus with a handgun or other type of weapon. For more information on campus carry, see <http://sa.utep.edu/campuscarry/>; for more information on overall campus safety, see <http://admin.utep.edu/emergency>. However, the laboratory is a designated Exclusion Area, and no concealed handguns are permitted.

POLICY ON ACADEMIC INTEGRITY: Academic dishonesty is prohibited and is considered a violation of the UTEP Handbook of Operating Procedures. It includes, but is not limited to, **cheating, plagiarism, and collusion.** **Cheating** may involve copying from or providing information to another student, possessing unauthorized materials during a test, or falsifying research data on laboratory reports. **Plagiarism** occurs when someone intentionally or knowingly represents the words or ideas of another person's as ones' own. **Collusion** involves collaborating with another person to commit any academically dishonest act. Any act of academic dishonesty attempted by a UTEP student is unacceptable and will **not be tolerated.**

While you will be working in lab teams, the work you submit for assessment must be evaluated on its own merit. Therefore, team members' **reports and work should reflect the individual's thoughts**. Do NOT turn in near-duplicate reports with different names or **everyone involved will be sent to the Dean of Students** for possible **disciplinary action**. Students may be **suspended or expelled from UTEP for such actions**. Yes, we have had to deal with this problem in the past and we are not lenient. You can calculate the consequences. All university guidelines will be strictly followed. Please read these guidelines carefully. The guidelines can be found on line at:

<http://admin.utep.edu/Default.aspx?PageContentID=2084&tabid=30292>

POLICY ON DISRUPTIVE BEHAVIOR: Any student who disrupts the class will be asked to leave and will be referred to the Dean of Students.

DISABILITY STATEMENT: If a **student has or suspects** she/he has a disability and needs an **accommodation**, he/she should contact the Disabled Student Services Office (DSSO) at **747-5148** or at **<dss@utep.edu>** or go to **Room 106 Union East Building**. The student is responsible for presenting to the instructor any DSS accommodation letters and instructions. Please let us know during the first two weeks of the semester.

MILITARY STATEMENT: If you are a military student with the potential of being called into military service and/or training during the course of the semester you are encouraged to contact the instructor regarding these matters. You must let us know during the first two weeks of the semester.

DROP POLICY (College of Science): All grades of Incomplete must be accompanied by an Incomplete Contract that has been signed by the instructor of record, student, departmental chair, and the dean. Although UTEP will allow a maximum of one year to complete this contract, the College of Science requests it be limited to month based upon completion data. A grade of Incomplete is only used in extraordinary circumstances confined to a limited event such as a missed exam, project, or lab. If the student has missed a significant amount of work (e.g. multiple assignments or tasks), a grade of Incomplete is not appropriate or warranted. The drop deadline is **30 March 2017**.

Tentative Lab Calendar

Week of:	Lab	Topic	Quiz #	In-lab quiz	Assign. #	Assignment
16-Jan		No Labs				
23-Jan	1	Intro/Safety/Ecological footprint/Worm composting				
30-Jan	2	Campus ecological footprint	1	Individual ecological footprint	1	Individual ecological footprint
6-Feb	3	Vehicles and climate change	2	Campus ecological footprint	2	Campus ecological footprint
13-Feb	4	Energy development scenarios	3	Vehicles and climate change	3 and 4	Vehicles and climate change, Energy development
20-Feb	5	Human population growth	4	Energy develop. scenarios		
27-Feb	6	Algal biofuels and population growth - experiment setup	5	Human population growth	5	Human population growth
6-Mar	7	Algal biofuels and population growth - results and analysis	6	Algal biofuels - experiment setup	6	Algal biofuels - experiment setup
13-Mar	Spring break					
20-Mar	8	Introduction to water quality, field trip prep	7	Algal biofuels - results and analysis	7	Algal biofuels - results and analysis
27-Mar	9	Water sampling techniques (Field trip to Rio Grande)	8	Water sampling	8	Water quality
29-Mar	Drop deadline					
3-Apr	10	Aquatic biodiversity	9	Water sampling techniques	9	Water sampling techniques
10-Apr	11	Worm composting and crop production	10	Aquatic biodiversity	10	Aquatic biodiversity
17-Apr	12	Soils	11a*		11	Worm composting and crop production
24-Apr	13	El Paso water supplies (field trip)	12a*		12	Soils
1-May	14	Lab final			13*	EP water supplies
8-May	No lab - Finals week					

Grade tracking form

	Points possible	Points earned
Quiz 1a	5	
Quiz 1b	5	
Quiz 2a	5	
Quiz 2b	5	
Quiz 3a	5	
Quiz 3b	5	
Quiz 4a	5	
Quiz 4b	5	
Quiz 5a	5	
Quiz 5b	5	
Quiz 6a	5	
Quiz 6b	5	
Quiz 7a	5	
Quiz 7b	5	
Quiz 8	10	
Quiz 9a	5	
Quiz 9b	5	
Quiz 10a	5	
Quiz 10b	5	
Quiz 11a*	5	
Quiz 12a*	5	
subtotal	100	

Assignments denoted with * are extra credit

Grade	Points required
A	450 - 500
B	400 - 449
C	350 - 399
D	300 - 349
F	≤ 299

	Points possible	Points earned
Lab assignment 1	20	
Lab assignment 2	20	
Lab assignment 3	20	
Lab assignment 4	20	
Lab assignment 5	20	
Lab assignment 6	20	
Lab assignment 7	20	
Lab assignment 8	20	
Lab assignment 9	20	
Lab assignment 10	20	
Lab assignment 11	20	
Lab assignment 12	20	
Lab assignment 13*	20	
subtotal	240	

	Points possible	Points earned
Worm food	5	

	Points possible	Points earned
Energy white paper	25	
Green Fund proposal: Peer review	20	
Green Fund proposal: Final Draft	50	

	Points possible	Points earned
Lab final	60	

<i>Extra credit 1*</i>	10	
<i>Extra credit 2*</i>	10	

Total points	500	
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