SYLLABUS

CHEE 270 – Introduction to Environmental Engineering

Time: Day / Time TBD
Location: TBD
Final Exam Date: TBD
Final Exam Time: TBD

Instructor and Contact Information

Dr. Vicky Karanikola

Office location: CE 306 F

Office phone: (520) 621-5881

E-mail address: vkaranik@email.arizona.edu

Course Website on D2L: D2L will be used for posting the lecture schedule, hand-outs and assignments; http://www.d2l.arizona.edu

Office Hours: "Open Door Policy" or by scheduling appointment by email

Course Objectives and Expected Learning Outcomes

During the course, the students will:

• Familiarize students with the possible careers in the environmental engineering field

• Learn basic concepts of water chemistry and apply them to the quantification of water quality

• Learn basic concepts of environmental health and risk assessment

• Learn basic concepts of air pollution at local and global scales and acquire knowledge to quantify air quality including climate change

• Learn basic concepts of solid and hazardous waste

Learning outcomes:

• Students will understand career opportunities for Environmental Engineers

• Students will acquire and apply new knowledge on the impacts of engineered systems on the environment and the applications of engineering technology to protecting environmental quality

• Students will acquire the ability to apply scientific principles to the formulation of problems in environmental systems

• Students will acquire the ability to synthesize and develop solutions to complex environmental problems in the areas of air and water pollution

Absence and Class Participation Policy

The UA's policy concerning Class Attendance, Participation, and Administrative Drops is available at: http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop

The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable, http://policy.arizona.edu/human-resources/religious-accommodation-policy.

Absences pre-approved by the UA Dean of Students (or Dean Designee) will be honored. See: https://deanofstudents.arizona.edu/absences

Participating in the course and attending lectures and other course events are vital to the learning process. As such, attendance is required at all lectures and discussion section meetings. Students who miss class due to illness or emergency are required to bring documentation from their health-care provider or other relevant, professional third parties. Failure to submit third-party documentation will result in unexcused absences.

Required Texts or Readings

Textbook: G.M. Masters and W.P. Ela, Introduction to Environmental Engineering, 3rd edition, Pearson.

Assignments and Examinations: Schedule/Due Dates

There will be no examinations in this course.

Quizzes (on D2L) will be posted every week, the content of the quizzes will be based on the previous week's lecture. All of them will be open book/notes. Mandatory by all students both one and two unit.

Assignments will be posted weekly on D2L. Assignments are mandatory for submission for the 2-Unit, however, they are NOT mandatory for the 1-unit course but are encouraged.

	2-Unit
Week 1	Resume
Week 2	Ethics/Regulations
Week 3	Population Growth
Week 4	Mass & Energy Balances
Week 5	Mass & Energy Balances
Week 6	Risk Assessment
Week 7	Risk Assessment
Week 8	Hazard Waste
Week 9	Water Pollution
Week 10	Water Pollution
Week 11	Wastewater Treatment
Week 12	Water Treatment
Week 13	Air Pollution
Week 14	Global Atmospheric Change
Week 15	Recap

Final Examination or Project

The date and time of the final exam or project, along with links to the Final Exam Regulations, https://www.registrar.arizona.edu/courses/final-examination-regulations-and-information, and Final Exam Schedule, http://www.registrar.arizona.edu/schedules/finals.htm

Grading Scale and Policies

For 1-Unit:
Attendance will be worth 40% of your grade

- Quizzes 40%
- Final Exam 20%

For 2-Unit:
Attendance will be worth 40% of your grade

- Quizzes 20%
- Assignments 20%
- Final Exam 20%

Grading scale: A = 90-100%; B = 80-90%; C = 70-80%; D= 60-70%; E < 60%

Scheduled Topics/Activities

The course topics are outlined below. The course is structured in two 1-hour weekly meetings. If the students take the course as a one-unit course, then they are required to attend one 1-hour meeting (the first one of the week). The first hour is a lecture where students will learn the basic engineering concepts related to the weekly topic while the second hour is a combination of guest speakers, site visits and more in-depth problem solving of the topic discussed.

Week	1 Unit (meets once a week)	2 Unit (meets twice a week)
1	Intro to Environmental Engineering	Intro to Environmental Engineering
		Guide to a Resume
2	Environmental Legislation & Ethics	Environmental Legislation & Ethics
		Examples & Case Studies of Environmental Ethics
3	Population Growth Models	Population Growth Models
		Readings
4,5	Mass & Energy Balances	Mass & Energy Balances
		Readings
6,7	Risk Assessment	Risk Assessment
		Readings
8	Hazardous Waste	Hazardous Waste
		Readings
9,10	Water Resources and Pollution	Water Resources and Pollution

		Readings
11	Wastewater Treatment	Wastewater Treatment
		Readings
12	Water Treatment	Water Treatment
		Readings
13	Air Pollution	Air Pollution
		Readings
14	Global Atmospheric Change	Global Atmospheric Change
		Reading IPCC
15	Research/Recap	

Threatening Behavior Policy

The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself. See http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students.

Accessibility and Accommodations

At the University of Arizona we strive to make learning experiences as accessible as possible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, you are welcome to let me know so that we can discuss options. You are also encouraged to contact Disability Resources (520-621-3268) to explore reasonable accommodation. For additional information on the Disability Resource Center and reasonable accommodations, please visit http://drc.arizona.edu.

If our class meets at a campus location: Please be aware that the accessible table and chairs in this room should remain available for students who find that standard classroom seating is not usable.

Code of Academic Integrity

Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog. See: http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity.

The University Libraries have some excellent tips for avoiding plagiarism, available at http://new.library.arizona.edu/research/citing/plagiarism.

Selling class notes and/or other course materials to other students or to a third party for resale is not permitted without the instructor's express written consent. Violations to this and other course rules are subject to the Code of Academic Integrity and may result in course sanctions. Additionally, students who use D2L or UA e-mail to sell or buy these copyrighted materials are subject to Code of Conduct Violations for misuse of student e-mail addresses. This conduct may also constitute copyright infringement.

UA Nondiscrimination and Anti-harassment Policy

The University is committed to creating and maintaining an environment free of discrimination; see http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy

Our classroom is a place where everyone is encouraged to express well-formed opinions and their reasons for those opinions. We also want to create a tolerant and open environment where such opinions can be expressed without resorting to bullying or discrimination of others.

Additional Resources for Students

UA Academic policies and procedures are available at http://catalog.arizona.edu/policies

Student Assistance and Advocacy information is available at http://deanofstudents.arizona.edu/student-assistance/students/student-assistance

Confidentiality of Student Records

http://www.registrar.arizona.edu/personal-information/family-educational-rights-and-privacy-act-1974-ferpa?topic=ferpa

Subject to Change Statement

Information contained in the course syllabus, other than the grade and absence policy, may be subject to change with advance notice, as deemed appropriate by the instructor.