SUBJECT: Introduction to Environmental Engineering - Administrative Instructions (syllabus)

CENG 3371 Introduction to Environmental Engineering
Class Time: Tuesday & Thursday from 2:00 p.m. to 2:55 p.m. (1400-1455)
Classroom Lecture: BRB 1055
Lab section 1: Tuesday from 3:05 pm to 5:50 pm (1505-1750) in RBS 1027
Lab section 2: Thursday from 3:05 pm to 5:50 pm (1505-1750) in RBS 1027)

Professor: Dr. J. Torey Nalbone
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1. Welcome to CENG 3371 (Introduction to Environmental Engineering), the first of two-course series on environmental engineering which includes this course and a design course (CENG 4371). During the upcoming semester, you will find our study of Environmental Engineering to be interesting, challenging, and rewarding. Review the materials at the end of this Administrative Memorandum and review the course schedule (see Attachment 2) and the course topics (Attachment 1).

2. You are welcome to seek additional instruction during my posted office hours or simply arrange a mutually agreeable time to meet with me. For the sake of your grade please take advantage of my office hours; I have them for your benefit!

3. Class Room Procedures:

   a. I will take daily time survey data, so please ensure the Time Survey Sheets are circulated.

   b. It is a basic principle of professionalism that **"Professionals are not Late."** Please come to class on time and leave on time. Interruption of lecture is not acceptable.

   c. Bring study notes, textbook, note-taking material, and calculator to every class. Having your text book available as a ready resource during class will increase your learning. You may not borrow or exchange calculators during graded events. If your calculator fails during a graded exercise, I am not responsible to furnish a substitute. Please refer to Calculator Policy. Class preparation is your individual responsibility; take it seriously

   d. Textbook: Environmental Engineering Principles and Practice. Richard O. Mines, Jr. Wiley 2014. ISBN 978-1-118-80145. **All students are expected to secure a copy of this textbook.** This text will be used for both this course and CENG 4371 (Environmental Engineering Design).

4. Exams and Grading:
   a. Grade Breakout and Cutoffs:

Course Points		**Relative Grade Scale**		
Midterm Exams (2 at 250 each)	500			
Assignments: Problem Sets/Projects/Quizzes	300	A	90.00%	1800
Paper/Presentation	200	B	80.00%	1600
Lab Memos	300	C	70.00%	1400
Professional Practice Grade	200	D	60.00%	1200
Final Examination (comprehensive)	500	F	<60.00%	<1200
	2000 (100%)			

You may fail and receive an "F" in this course if you earn less than 60% overall on Term exams or if you fail to earn at least 60% on the Final exam, **regardless of your course grade**. This distribution is to provide you a comparison of how well you are doing.

b. Professional Practice Grade - During this semester, a portion of your grade in this course (10%) will be derived from what I consider professional expectations. These expectations include a professional demeanor and work ethic (Attitude), consistent daily/lab assignment reading/materials for class/Quizzes (Preparation), commitment to learning and fulfilling obligations demonstrated by on time arrival to class & lab (Attendance) and being engaged in class activities (Participation).

c. Hour Exams and Final Exam:

1) The dates for Hour Exams are included in the course schedule but may be adjusted according to the content covered in the course timely for an exam. Official reasons for missing an exam include official University participation, family emergency or other unforeseen circumstance. Regardless of the reason you are required to notify the instructor prior to the exam and as early as feasible. You are required to take a make-up Exam, regardless of your reason for missing the scheduled Exam. Report any conflict to me as soon as possible prior to the Exam.

2) All the Exams and the Final are closed book and closed notes. You can only use approved FE equivalent calculator (see calculator policy below) and the CENG 3371 reference sheet from the FE/PE exams published by the NCEES or similar, that is supplied by the instructor for each examination.

Calculator Policy
Only NCEES approved calculators will be permitted during tests and your test will be collected and your grade will be a zero if you are using a non-approved calculator.
The approved calculators include the following: (Please check the NCEES website for a complete and current listing, www.ncees.org/exams/calculator-policy/

- Hewlett Packard – HP 33s, HP 35s, and no others
- Casio – All FX 115 models
- Texas Instruments – All TI 30X or TI-36X models.
- If you are unsure about your calculator, it is your responsibility to check with the instructor for approval.

Laptops/PDAs/MP3 players/Cell Phones or other electronic devices

The use of any electronic device, except an approved calculator, is not permitted during exams. Your exam will be collected, and your grade will be a zero if you are caught using a non-approved electronic device/calculators.

The use of phones, MP3 players, and laptops is never permitted during lectures and labs. Except when approved for course textbook access. If you are using an e-book copy of the text please notify the instructor, immediately. Phones ringing or vibrating are distracting during class or if you are texting during class you will relinquish your device for the duration of the class. A second offense will result in a request for you to leave the classroom.

d. Collection of Student Work: Throughout the semester I may collect student work (best, average, and worst) for the ABET course and outcomes notebooks. This will require me to make a copy of your work, keep your original and return a copy of the graded work to you. I will not draw attention as to what level of work you accomplished.

e. Embedded indicators of accomplishment of program outcomes: At times throughout the semester, portions of student work will be analyzed to determine if our program is accomplishing stated program outcomes based on established metrics. If your work is below the minimum established metric (70%), you will be required to repeat the assignment or that portion of the assignment until you achieve the minimum acceptable standard based on the metric.

5. Homework: Homework problems will be assigned on an almost daily basis. Students may *discuss* their homework solutions with one another, but each student must submit their own, **independent** solutions (i.e. you may not just copy someone else's homework). **Individual homework must be done individually.** If you receive assistance from a fellow student on a particular problem you must cite that assistance within your solution. The production of a neat, organized, high-quality homework assignment cannot be overestimated nor can its importance to your course grade be overstated. A homework assignment should be something you are proud of and not something hastily "slapped together". Toward this end, considerable emphasis will be placed on not only getting the correct answer but also on how the solution is presented. All homework is mandatory and becomes part of your grade, failure to submit any required homework will result in an incomplete. As an engineer your goal is to make a clear, logical, and professional presentation of your work, which is both accurate and correct. As such both your presentation and the accuracy of your work is important, and both will be graded. It is critical that you show all of your work and leave "foot prints" or "bread crumbs" so that it can be easily followed. No guess work should be required to see what you did. All submissions are due at the beginning of class on the due date. The homework due date is marked on the attached schedule sheet and on the assignment sheet. **Late homework assignment will not be accepted unless previous arrangements have been made**. Therefore, in legitimate cases late assignment may be accepted with prior discussion with your professor (coordinated late submission). See late submissions below for grading adjustments for late work. *Completion credit may be given for homework turned in more than three days late this is entered in the grade book as half (50%) of the lowest grade earned on the assignment by the other students in the class. Failure to turn in all assignments may result in the grade of INCOMPLETE as a course grade*.

REMEMBER: **ALL** assistance you receive on your homework MUST be documented and attributed to the source from where you received the assistance (see below).

a. Homework - Problem Sets (PS)/projects

1) **All homework assignments are due at the beginning of the lecture on the date found either in the class schedule or on the assignment itself.**
2) You must use Engineering paper only for problems sets assigned or full-page printouts from Mathcad, Excel, etc. Problems submitted on other types of paper will not be graded and returned for resubmission**.** These resubmissions will be subject to grade reductions listed below. You may neatly tape or glue short computer printouts onto Engineer paper at the appropriate place in the logical flow of the problem or print out directly to engineering paper. Only use one side of a page. Clearly present a brief problem statement or a sketch with your solution. Clearly and concisely explain each step. For narratives of more than a line or two, use your word processor or the text capability if you are using MathCAD or Excel. If you are writing out a paragraph or more, you must type it in a word processing package.

3) Late Submissions. It is a basic principle of professionalism that **"Professionals are not Late."** A "COORDINATED LATE" submission occurs when you will miss the suspense for a graded homework assignment and you contact me in advance. Notification immediately before the submission will not suffice. Point deduction up to the amounts below **may** be assessed for a "COORDINATED LATE" submission:

1. Same Day late (after class) a deduction of 50% of the earned grade
2. 24-48 hours late a deduction of 75% of the earned grade
3. 48-72 hours late a deduction of 100% of the earned grade

see description of completion credit above; however, all **assignments must still be submitted,** or you will receive and incomplete in the course.

Obviously, there are circumstances that will occur and make a timely submission impossible and I will work with you when and if they occur.

4) All homework in this course must be properly documented. As you are having your work reviewed it is likely that you might receive help from your classmates, just simply document it. Information from the course textbooks (equations and outlines of procedures), class notes, or me is considered immediately available to all students and need not be acknowledged or documented. **YOU ARE REQUIRED TO ACKNOWLEDGE AND DOCUMENT ALL OTHER ASSISTANCE AND REFERENCES USED.** Documentation will be accomplished in accordance with any manual for writing, footnote or endnote, for papers, but for written homework, just place the documentation right at the point you received help using Who and what assistance.

b. Assigned readings. Doing the assigned reading prior to class will help you to understand the material presented during the instruction and will fill in gaps for things we do not cover (***I will not cover everything***). It will also make you more familiar with terms and concepts to be covered. To help motivate you to do the reading there can be unannounced quizzes that cover the assigned sections of the text.

Academic Policies – repeated form standard
All Academic Policies may be found on the CANVAS site for this class in the UT Syllabus Module.

Attachment 1

COURSE TOPICS

(Subject to change during course progression)

Topics Covered
Includes Lab

SUBJECTS	LESSONS
Course Administration and Introduction to Environmental Engineering	1
Environmental Public Policy and Ethics	2
Water Chemistry	2
Environmental Biological considerations	2
Materials Balance/Kinetics	2
Risk Assessment	2
Sustainability	1
Water Resources Engineering and Groundwater	3
Water Treatment	5
Wastewater Treatment	5
Air Pollution	4
Solid Waste/ Hazardous Waste	2
Site Tours	3
Laboratory Exercises	8
Exams	3
Total Lessons	**46**

Attachment 2

CENG 3371 Introduction to Environmental Engineering
Course Objectives:

1. List and define the major quality parameters for environmental media.
2. Describe the components of a sustainable environment.
3. Discuss and evaluate the ethical and public policy issues associated with environmental quality.
4. Define, describe and discuss the necessity of water quality parameters.
5. Discuss important regulatory aspects of water quality, air quality and solid waste management.
6. Relate water quality parameters to environmental health.
7. Describe and evaluate environmental parameters to human (population) health.
8. Predict and evaluate changes in the environment owing to the release of effluents or pollution.
9. Describe and analyze the water treatment processes.
10. Describe and analyze the wastewater treatment processes.
11. Describe and evaluate the atmospheric (meteorological) effects on air pollutants
12. Describe and analyze systems for managing solid waste and measures to protect the environment
13. Apply engineering and science knowledge in the evaluation of contamination control.
14. Distinguish specific engineering and science skills necessary in the area of Environmental Engineering.