



ENVS 308 01E, Water Quality, Section # 23360

COURSE SYLLABUS: Spring 2020

INSTRUCTOR INFORMATION

Instructor: [Dr. Lucina Kuusisto](#)

Class Time and Location: T R from 2:00-3:15 PM; Location: STC 123

Office Location: Science Building (STC), 208

Office Hours: T R from 3:30-4:30 PM

Office Phone: 903.886.5221

Office Fax: 903-886-5997

University Email Address: Lucina.Kuusisto@tamuc.edu

Preferred Form of Communication: **Email**

Communication Response Time: Weekdays: 1-24 hours; Evenings, Weekends: 5~48 hours

COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings

Textbook(s) Required: Title: [Basic Environmental Technology: Water Supply, Waste Management and Pollution Control, 6th Edition](#)

Year: 2015

Title status: Available

Imprint: Pearson

Author: Nathanson & Schneider

Isbn10: 0132840146

Isbn13: 9780132840149

Item id: PGM301691

Software Required: [MS Office](#)

Optional Texts and/or Materials: [Handouts and Academic worksheets](#)

Course Description

ENVS 308 01E Water Quality: Design of engineered environmental systems for water and wastewater treatment in domestic or industrial applications. Topics include water chemistry; material balances; chemical, physical and biological processes, theory of

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ENVS 308 01E Water Quality

processes used to treat water and wastewater; applications of theory to design and operate treatment systems, including biological treatment, adsorption, coagulation, precipitation, decantation, filtration and disinfection.

Student Learning Outcomes

1. After successfully completing this course the student will be able to learn and comprehend the fundamental principles of hydraulic pressure, water purification processes, water chemistry, physicochemical and biological analyses of water, water distribution, advanced water treatment processes, and water reuse.
2. Acquire precise information for correct decision-making skills
3. Perform calculations to design and size water treatment facilities
4. Sketch and size the layout of water treatment processes
5. Calculate the dosage of chemicals for water treatment

COURSE REQUIREMENTS

Minimal Technical Skills Needed

Algebra, engineering math, basic chemistry

In addition, use the learning management system, using Microsoft Word and PowerPoint, using presentation and graphics programs, etc.

Instructional Methods

Conduct lectures, resorting to videos and visual-aid presentations, e.g., "PowerPoint" and "You tube", solve math problems together with the students in the classroom, expect student participation in the classroom discussions, assign Exams, Quizzes, and homework, etc.

Student Responsibilities or Tips for Success in the Course

Turn-in all the assigned academic work; actively participate in verbal discussions; take notes and copy written explanations during class periods; take assigned written Exams; log into the course website, regularly; complete the assigned weekly study.

GRADING

Final grades in this course will be based on the following scale:

A = 90%-100%

B = 80%-89%

C = 70%-79%

D = 60%-69%

F = 59% or Below

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ENVS 308 01E Water Quality

Subjects per Chapter

1. Basic Concepts: Water cycle and volume calculations
2. Hydraulics: Water properties, hydraulic pressure, and unit calculations
3. Hydrology: Statistics of events, based on IDF (Intensity, Duration, and Frequency)
4. Water Quality: Conventional chemical reagents and catalysts used to treat water
5. Water Pollution: Pollutants of concern in water
6. Drinking Water Purification: Conventional physical-chemical processes to purify water
7. Water Distribution Systems: Fluid flow, pump stations, pipe specification calculations
8. Sanitary Sewer Systems: Typical sanitary sewer treatment technologies
9. Storm Water Management: Channel flow and runoff calculations

Assessments

Course Grading:

Exams (2 x 15% each)	30%
Homework Modules (8 x 2.5%)	20%
Presentation	20%
Final Exam	<u>30%</u>
Total	100%

NOTE #1: Late assignments are not accepted. Very, very extreme circumstances may or may not provide a warranted exception. This course moves very fast and there is not enough time to catch up. In case of extreme circumstances, I may accept late work. However, 10 points will be deducted from late assignments.

Exam #1: Chapters: 1, 2, 3, & 4

Exam #2: Chapters: 5, 6, 7, 8, & 9

Final Exam: Comprehensive

Homework Modules: Solve assigned problems from Textbook, as specified on the Course **Schedule** Section of this Syllabus

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Written Summary of Chapter 6 (Please include a process flow diagram);

Presentation (20%): Research Written Report (10%) and Oral Presentation (10%): Each student will choose 1 type of treatment technology.

Overall Weighted Average Grade will be computed by adding the percentage of each grade earned from each assignment, as stated on the Course Grading table, shown above. **ONLY** unofficial grades will be posted on D2L. Official grades are in my grade book. It is most strongly recommended that each student retain their grades until the final grade has been entered into the university system to ensure all was recorded correctly.

TECHNOLOGY REQUIREMENTS

LMS

All course sections offered by Texas A&M University-Commerce have a corresponding course shell in the “myLeo” Online Learning Management System (LMS). Below are technical requirements

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LMS Requirements:

<https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

LMS Browser Support:

https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm

YouSeeU Virtual Classroom Requirements:

<https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements>

ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@tamuc.edu.

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

COMMUNICATION AND SUPPORT

If you have any questions or are having difficulties with the course material, please contact your Instructor.

Technical Support

If you are having technical difficulty with any part of “Brightspace”, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

Interaction with Instructor Statement

Weekdays: 1-24 hours; Evenings, Weekends: 5--48 hours

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

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very fast and there is not enough time to catch up. In case of extreme circumstances, I may accept late work. However, 10 points will be deducted from late assignments.

NOTE #2: Missed Homework and Exams are not acceptable. Very, very extreme circumstances may or may not provide a warranted exception. This course moves very fast and there is not enough time to catch up. In case of extreme circumstances, I may let you take a missed Exam or submit a missed Homework. However, 20 points may be deducted from the missed Exam or from the missed Homework.

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

University Specific Procedures

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the [Student Guidebook](http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx).
<http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum:
<https://www.britannica.com/topic/netiquette>

TAMUC Attendance

For more information about the attendance policy please visit the [Attendance](#) webpage and [Procedure 13.99.99.R0.01](#).
<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

Academic Integrity

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

[Undergraduate Academic Dishonesty 13.99.99.R0.03](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

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[Graduate Student Academic Dishonesty 13.99.99.R0.10](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf>

Students with Disabilities-- ADA Statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services

Texas A&M University-Commerce

Gee Library- Room 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: studentdisabilityservices@tamuc.edu

Website: [Office of Student Disability Resources and Services](#)

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

Nondiscrimination Notice

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns on Campus](#) document and/or consult your event organizer.

ENVS 308 01E Water Quality

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1

COURSE OUTLINE / CALENDAR

Meet from January 13 through May 8th, 2020

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ENVS 308 01E Water Quality

Course Schedule

Week	Date	Chapter	Assignment
1	Jan 14	1	
Thurs	01/16		Homework #1: Ch. 1: 15, 16, 17, 19, 21, 22, 23, 31
2	Jan 21	2	
Thurs	01/23		Field Trip #1: Bernoulli's Principle & Diff. Equation
3	Jan 28	2	
Thurs	01/30		Homework #2: Ch. 2: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 17, 18, 19, 20, 21
4	Feb 4	2	
Thurs	02/06		Field Trip #2: Friction loss
5	Feb 11	2 & 3	
Thurs	02/13		Homework #3: Ch. 3: 1, 3, 5, 7, 9
6	Feb 18	2 & 3	
Thurs	02/20		Field Trip #3: Archimedes' Principle of buoyancy
7	Feb 25	Exam#1	Chapters: 1, 2, & 3
Thurs	02/27		Reaction Rates
8	March 3	4	
Thurs	03/05		Field Trip #4: Sedimentation
Break	3/10-12	Spring Break	
9	March 17	4 & 5	
Thurs	03/19		Homework #4: Ch. 4: 1, 2, 3, 5, 8, 9, 10, 13, + Review Qs: 29, 30, 31
10	March 24	4 & 5	
Thurs	03/26		Field Trip #5
11	March 31	Exam#2	Chapters: 4 & 5
Thurs	04/02		Homework #5: Ch. 5: Review Qs: 2, 3, 5, 7, 8, 9, 19, 23, 24, 25
12	April 7	6	
Thurs	04/09		Student Presentation
13	April 14	6 & 7	
Thurs	04/16		Homework #6: Ch. 6: Review Qs: 2, 5, 8, 13, 16, 18, 24, 25, 26, 28, 30, 31, 34, 35
14	April 21	9	
Thurs	04/23		Homework #7: Summary + Flow Chart
15	April 28	9	
Thurs	04/30		Homework #8: Ch. 9: 1, 2, 3, 7
#16	May 5 th	Final	Comprehensive

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