

Fall 2015

ENCE 3327

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University of New Orleans

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ENCE 3327
INTRODUCTION TO ENVIRONMENTAL
ENGINEERING
(Required)

ENCE 3327 Introduction to Environmental Engineering

3 cr.

Topics include: water quality, water and wastewater treatment processes, air pollution control, and solid and hazardous waste management. Laboratory provides hands-on analytical experience with various pollution parameters. Three hours of lecture and three hours of lab.

PREREQUISITES

Prerequisites: CHEM 1017 or CHEM 1014, and ENCE 3318 or ENME 3720.

CLASS SCHEDULE

Class meetings: TTh 9:30 - 10:45, EN 320

INSTRUCTOR CONTACT INFO AND OFFICE HOURS

Guillermo J. Rincon, Ph.D.

Office hours: TW 2:00 – 4:00 pm, EN 832

e-mail: gjrincon@uno.edu

STUDENT LEARNING OBJECTIVES

Students who satisfactorily complete this course will be able to:

- Write mass balances in different types of reactors.
- Outline the role of water treatment units such as coagulation, softening, flocculation, sedimentation, filtration, and disinfection.
- Calculate dissolved oxygen profiles in rivers and lakes.
- Outline the role of wastewater treatment units, both primary and secondary treatment units.
- Describe the sources of air pollution, health effects, and air quality regulations; design important particulate collection devices.
- Describe solid waste quantities, characteristics, collection, and disposal options.
- Outline hazardous waste characteristics, classification, and cradle-to-grave concepts in management.
- Make use of basic laboratory experiments to determine water and wastewater characteristics such as solids (TSS, MLSS, VSS, TDS), pH, DO, BOD, COD, alkalinity, and turbidity; discuss basic concepts in air quality monitoring (particulates).

COURSE TOPICS

TENTATIVE DATE	TOPICS
Aug 20, 25, 27	Mass balances and reactors
Sep 01	Water pollution, DO sag
Sep 03, 08	DO sag, eutrophication
Sep 10, 15	Water chemistry
Sep 17, 22	Water treatment
Sep 24	Review session
Sep 29	First exam (through water treatment)
Oct 01, 06	Wastewater treatment
Oct 08, 13, 15, 20, 22	Air pollution
Oct 27, 29, Nov 03	Solid waste management
Nov 05	Review session
Nov 10	Second exam (through solid waste management)
Nov 12, 17, 19	Hazardous waste management
Nov 24, Dec 01	Noise pollution
Dec 03	Review session
Dec 10, 10:00 – 12:00	Final exam (comprehensive)

TENTATIVE DUE DATES FOR ASSIGNMENTS, EXAMS

ASSIGN/EXAM	TOPIC	DUE DATE
1	Mass balance, reactors	9/03
2	Water pollution	9/15
3	Water chemistry/treatment	9/24
4	Air pollution	10/29
5	Solid waste management	11/05
First test	Through WW treatment	9/29
Second test	Through solid wastes	11/10
Final exam	Comprehensive	12/10

TEXTBOOKS AND OTHER MATERIAL

- Vesilind, Morgan and Heine, *"Introduction to Environmental Engineering: SI Version, 3rd. Edition, Cengage Learning"* (Required)
- Mackenzie L. Davis and David A. Cornwell, *"Introduction to Environmental Engineering,"* (Fifth Edition) McGraw-Hill (*Recommended*).
- Handouts

CRITERIA FOR GRADING, GRADING STANDARDS

There will be three exams (two mid-term tests and the final exam, each with the same weight), worth 70 percent of the grade, and assignments (at least six) worth 30 percent of the grade. The assignments are not optional; they are mandatory. For every day of late submission of an assignment you will lose 10 points (in a 100-point scale).

The final letter grade is computed as follows: The overall numerical grade will be divided by the highest score in class, so that the best possible normalized score will be 100 points. If the normalized score is more than 90 points the grade will be an A; from 80 - 89, the grade will be a B; from 70 - 79, the grade will be a C; from 60 - 69, D; below 60, F.

ATTENDANCE POLICY

Attendance is required. If you cannot attend class for some reason, call the instructor or the engineering administrative assistant and explain why.

ACADEMIC DISHONESTY POLICY

Students are expected to conduct themselves according to the principles of academic integrity as defined in the statement on Academic Dishonesty in the UNO Student Code of Conduct. Any student or group found to have committed an act of academic dishonesty shall have their case turned over to the Office of Student Accountability and Advocacy for disciplinary action, which may result in penalties as severe as indefinite suspension from the University. Academic dishonesty includes, but is not limited to: cheating, plagiarism, tampering with academic records and examinations, falsifying identity, fabrication, or misrepresentation, and being an accessory to an act of academic dishonesty.

ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

It is University policy to provide, on a flexible and individualized basis, reasonable accommodations to students who have disabilities that may affect their ability to participate in course activities or to meet course requirements. Students who seek accommodations for disabilities must contact the Office of Disability Services prior to discussing their individual needs for accommodation with their instructors.



Syllabus Attachment

Fall 2015

Important Dates*

Last day to adjust schedule w/out fee	08/18/2015
Semester Classes Begin	08/19/2015
Last day to adjust schedule w/fee, or withdraw with 100% refund	08/25/2015
Last day to apply for December commencement	09/25/2015
Final day to drop a course or resign	10/14/2015
Mid-semester examinations	10/05-10/09/2015
Final examinations	12/07-12/11/2015
Commencement	12/18/2015

**Note: check Registrar's website for Saturday and A/B sessions, and for items not listed here: <http://www.registrar.uno.edu>*

Fall Semester Holidays

Labor Day	09/07/2015
Mid-semester break	10/15-10/16/2015
Thanksgiving	11/26-11/27/2015

Withdrawal Policy – Undergraduate only

Students are responsible for initiating action to resign from the University (withdraw from all courses) or from a course on or before dates indicated in the current Important dates calendar. Students who fail to resign by the published final date for such action will be retained on the class rolls even though they may be absent for the remainder of the semester and be graded as if they were in attendance. Failure to attend classes does not constitute a resignation. Check the dates on the Registrar's website, <http://www.registrar.uno.edu>. Please consult The Bulletin for charges associated with dropping and adding courses.

Incomplete Policy – Undergraduate only

The grade of I means *incomplete* and is given for work of passing quality but which, because of circumstances beyond the student's control, is not complete. The issuance of the grade of I is at the discretion of the faculty member teaching the course. For all graduate and undergraduate students, a grade of I becomes a grade of F if it is not converted before the deadline for adding courses for credit (as printed in the Important Dates Calendar) of the next regular semester including summer semester.

Repeat Policy

When a student is permitted to repeat a course for credit, the last grade earned shall be the one which determines course acceptability for degree credit. A student who has earned a C or better in a course may not repeat that course unless, (1) the catalog description indicates that the course may be repeated for credit, or (2) the student's Dean gives prior approval for documented extenuating circumstances.

Graduate Policies

Graduate policies often vary from undergraduate policies. To view the applicable policies for graduate students, see the Graduate Student Handbook:

<http://www.uno.edu/grad/documents/GraduateStudentHandbookk2014.pdf>

Academic Dishonesty Policy

<http://www.uno.edu/student-affairs-enrollment-management/documents/academic-dishonesty-policy-rev2014.pdf>

Safety Awareness Facts and Education

Title IX makes it clear that violence and harassment based on sex and gender is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. If you or someone you know has been harassed or assaulted, you can find the appropriate resources here:

<http://www.uno.edu/student-affairs-enrollment-management/>

UNO Counseling Services and UNO Cares

UNO offers care and support for students in any type of distress. Counseling Services assist students in addressing mental health concerns through assessment, short-term counseling, and career testing and counseling. Find out more at <http://www.uno.edu/counseling-services/>. First-year students often have unique concerns, and UNO Cares is designed to address those students succeed. Contact UNO Cares through <http://www.uno.edu/fye/uno-cares.aspx>.

Emergency Procedures

Sign up for emergency notifications via text and/or email at E2Campus Notification: <http://www.uno.edu/ehso/emergency-communications/index.aspx>. All emergency and safety procedures are explained at the Emergency Health and Safety Office: <http://www.uno.edu/ehso/>.

Diversity at UNO

As the most diverse public university in the state, UNO maintains a Diversity Affairs division to support the university's efforts towards creating an environment of healthy respect, tolerance, and appreciation for the people from all walks of life, and the expression of intellectual point of view and personal lifestyle. The Office of Diversity Affairs promotes these values through a wide range of programming and activities. <http://diversity.uno.edu/index.cfm>

Learning and Support Services

Help is within reach in the form of learning support services, including tutoring in writing and math and other supplemental instruction. Visit the Learning Resource Center in LA 334, or learn more at <http://www.uno.edu/lrc/>.

Affirmative Action and Equal Opportunity

UNO is an equal opportunity employer. The Human Resource Management department has more information on UNO's compliance with federal and state regulations regarding EEOC in its Policies and Resources website: <http://www.uno.edu/human-resource-management/policies.aspx>