

ESE 6402 (18796)/ CHEM 5319 (18955)
Contemporary Topics in Analytical Chemistry
10:00 pm - 11:50 pm T R
Classroom Building 302

Instructor:

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Office hours: by appointment

Textbook: (optional)

Paul R. Loconto, "Trace Environmental Quantitative Analysis: Principles, Techniques and Applications, Second Edition", CRC Press, ISBN-10: 0824758536, ISBN-13: 978-0824758530

Learning Objectives:

- To develop chemistry understanding around the themes of environmental quantitative analysis.
- To establish a knowledge of trace analysis, contemporary instrumental analysis, and statistics.
- EPA methods for analyses of compounds of concern.
- To be acquainted contemporary literatures in environmental issues of interest.

Contents:

- Introduction to Trace Environmental Quantitative Analysis
- Calibration/Detection Limits
- Verification/EPA Methods
- Quality Assurance/Quality Control
- Statistical Treatment of Analytical Data
- Sample Preparation Techniques to Isolate and Recover Organics and Inorganics
- Determinative Techniques to Measure Organics and Inorganics

Evaluations:

- 1) Assignments (20%)
- 2) In Class presentation (30 %)
- 3) Final presentations/reports (15%/15%)
- 4) Midterm and final exam (20%/20%)

A: 90% - 100%, B: 80% - 89%, C: 70%-79%, D: 60%-69%, F: <60%

Academic honesty:

Materials (written or otherwise) submitted to fulfill academic requirements must represent a student's own efforts. Any act of academic dishonesty attempted by a UTEP student is unacceptable and will not be tolerated. 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. Violations will be taken seriously and will be referred to the Dean of Students Office for possible disciplinary action. Students may be suspended or expelled from UTEP for such actions.

Students with Disabilities

If you have or believe you have a disability, you may wish to self-identify. You can do so by providing documentation to the Center for Accommodations and Support Services (CASS) located in Union E Room 203. Students who have been designated as disabled must reactivate their standing with CASS on a yearly basis. Failure to report to this office will place a student on the inactive list and nullify benefits received. If you have a condition which may affect your ability to exit safely from the premises in an emergency or which may cause an emergency during class, you are encouraged to discuss this in confidence with the instructor and/or the director of Disabled Student Services. You may call 747-5148 for general information about the Americans with Disabilities Act (ADA).

Course withdraw policy

- Classes dropped prior to the official census date will be deleted from the student's semester record.
- After this date, the University permits any student to drop with an automatic "W" by the course dropping deadline.
- After this date students who withdraw must receive grades of "F".

This Syllabus is subject to change. Any changes will be announced in class and posted on the course Blackboard site during the semester. You are solely responsible for getting the most updated information.

Tentative Schedule: (The contents are subject to change. Any changes will be announced in class.)

Week	contents	Note
1. (8/27; 8/29)	Introduction	
2. (9/3; 9/5)	Sample Preparation Techniques	
3. (9/10; 9/12)		9/11 Census Day – Last Day to drop without W
4. (9/17; 9/19)		
5. (9/24; 9/26)	Determinative Techniques	
6. (10/1; 10/3)		
7. (10/8; 10/10)		
8. (10/15; 10/17)	Midterm Exam (10/15)	
9. (10/22; 10/24)	Calibration, Verification, Limit of Detection/Limit of Quantification	
10. (10/29; 10/31)		11/1 Course drop deadline.
11. (11/5; 11/7)	Quality Assurance/Quality Control	
12. (11/12; 11/14)		
13. (11/19; 11/21)	Statistical Treatment of Data	
14. (11/26; 11/28)		Nov 28-29 th , Thanksgiving Holiday - University Closed
15. (12/3; 12/5)	Final Presentations	12/6: Dead Day
16.	Final Exam (Tuesday, December 10th) 10 am – 11:50 am	