EVT 1200—Introduction to Environmental Chemistry
Three Semester Hours

PREREQUISITES:
Recommend general chemistry, algebra, and calculus

COURSE DESCRIPTION:
Environmental chemistry as applied to aquatic, atmospheric, soil, and hazardous waste systems. Topics include environmental chemical cycles; aquatic, atmospheric, and soil chemistry; environmental chemistry of hazardous wastes; and toxicology.

Introduction to Environmental Chemistry aims to excite freshman-level students about the field of environmental chemistry. It presents engineering concepts in an engaging way to high school graduates who have limited skills in introductory calculus, chemistry, and physics. To understand some of the more advanced material presented here, you may need to complete a course in general chemistry, physics, and calculus; most engineering-school freshmen meet this requirement after their first term of college-level study. Some of the topics covered in the course and text could be used as supplemental reading in upper-level environmental engineering courses typically taken by college juniors and seniors.

METHODS OF COURSE INSTRUCTION:
All material for this course is print-based. Instructor and students communicate and exchange materials through postal mail.

E-PRINT OPTION:
In this course, an option exists to use e-mail to submit your lesson assignments. Your assignment will be returned to you either as an e-mail attachment or as a hard copy sent through the postal mail, depending on the preferences of the instructor and/or program.

TEXTBOOKS AND SUPPLIES:
[ISBN: 9781420059205]

Other: You will need a hand-held calculator for both the lesson assignments and the examinations. The Casio FX260SLR scientific calculator, or an equivalent model, is recommended.
NUMBER OF LESSONS:

The course has ten lessons complete with graded assignments and two supervised course examinations. The lessons include:

- Lesson 1: Introduction to Environmental Chemistry
- Lesson 2: Chemistry and the Anthrosphere
- Lesson 3: Fundamentals of Aquatic Chemistry
- Lesson 4: The Atmosphere and Atmospheric Chemistry
- Lesson 5: Midcourse Examination
- Lesson 6: The Geosphere and Geochemistry
- Lesson 7: Green Chemistry and Industrial Ecology
- Lesson 8: Waste Minimization, Utilization, and Treatment
- Lesson 9: Introduction to Toxicological Chemistry
- Lesson 10: Final Examination Information

For this course, there are two supervised exams—a midcourse and a final. The midcourse covers the first four lessons and the final exam covers the last four lessons. You will have two hours to complete each exam. The exams are comprehensive and include fill-in-the-blank, calculation, and problem-solving questions. All work must be shown on the calculation and problem-solving parts of the exam. Specific information about each examination and the form necessary to schedule the examination with a supervisor is included in Lessons 5 and 10.

TYPES OF WRITING ASSIGNMENTS:

The writing assignments in Lessons 1–4 and 6–9 consist of short-answer questions that require you to define a term or identify a concept, and problems that require you to use calculation and problem-solving skills. All assignments have clear directions in each lesson. Please note: for all calculation and problem-solving assignments, you must show work. Each assignment is submitted to your instructor for evaluation and grading.

GRADING CRITERIA:

Your final grade for the course will be weighted on the following factors:

- Lesson Assignments 20%
- Midcourse Exam 30%
- Final Exam 50%