Instructor: Linda Schweitzer, Ph.D.  Associate Professor, Dept. of Chemistry
Office: 289 SEB “open door” or by appointment
Phone: 248-370-2092  Email: schweitz@oakland.edu
Textbook: None required - see below for recommended reference books
Grading: Assignments (15%); 3 exams (20 % each); Final exam (25%)
Final Exam: Wed. April 23; 7-10 PM
Break Periods: no class on Jan.21 (MLK day); no class Feb. 25, 27 (Winter Break)

Topics
Introduction - Mass balance and units used in chemistry
Principles of Environmental Chemistry and Thermodynamics
Chemical Distribution among Phases (air, water, soil, sediments, biota)
Transformations [how chemicals change in the environment]
Physical Transport in Aquatic Systems – surface and groundwater
Atmospheric transport and physical removal processes
Environmental forensics – case studies

Expectations:
Fate and Transport is traditionally an engineering course, however, this is not an engineering department. The course is designed to balance the needs of the students in the environmental program with what might be traditionally offered as an engineering course. The objectives are as follows:
1. Develop a general knowledge and vocabulary of the field of fate and transport
2. Be able to do practical calculations using algebra; concepts up to intro calculus
3. Gain an understanding of the properties of inorganic and organic chemicals
4. Be able to work with simple computer models [tutorials given in class]
5. Be able to read and understand current journal articles emphasizing applications of fate and transport of contaminants in the environment

Grading: based on the following:
Take the percentage grade and divide by 23.75. This means that 95% and above = 4.0.
All students theoretically can get a good grade. Grading is not on a curve, and is meant to be as objective as possible. While attendance is not part of the grade, in-class exercises and tutorials will be given, so high attendance is expected.

Policy on Academic Misconduct
The University's regulations that relate to academic misconduct will be fully enforced. Any student suspected of cheating will be referred to the Academic Conduct Committee.

Suggested Reference Books (all required materials will be handed out in class)
1. Environmental Organic Chemistry – Authors: Schwarzenbach, Gschwend, Imboden; Wiley and Sons (publisher)