Instructor: Prof. Tom Trainor
Office: Reichardt 176
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Lecture: MWF 9:15-10:15, Reichardt 165
Office Hours: MWF 10:30-11:30, and by appointment

Course Description (from the UAF catalog): Examination of the physical properties that govern the behavior, fate and transport of contaminants released into the environment. Topics include air-water partitioning and exchange, organic solvent-water partitioning, diffusion, sorption, chemical and biological transformation reactions, and modeling concepts.

Course Goal: This course is designed to teach students how to determine what happens to a compound released into the environment. We will focus on organic compounds, but the principles applied to the organic compounds can also be applied to inorganic compounds.

Learning Outcomes: In Chemistry 631, you will become familiar with the principles and techniques used to describe the behavior, fate, and transport of a compound released into the environment. You will also learn how to obtain the physical and chemical properties of any compound for use in determining the compound’s fate and potential impacts. At the end of the course, you should be able to perform a risk assessment for any compound released into the environment.

Grading: Your course grade will be determined by your performance on a combination of assignments identified below.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Weight</th>
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<tbody>
<tr>
<td>2 Midterms</td>
<td>40%</td>
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<tr>
<td>Final</td>
<td>20%</td>
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<tr>
<td>Homework</td>
<td>20%</td>
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<tr>
<td>Oral Presentation</td>
<td>10%</td>
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<tr>
<td>Paper</td>
<td>10%</td>
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Important Dates:
Last day to get 100% refund of tuition and fees.................................Friday, Jan. 31
Last day to drop class (course not on academic record) ......................Friday, Jan. 31
Last day for student- or instructor-withdrawal (“W” on transcript) .........Friday, Mar. 14
Last day of instruction: ..............................................................................Monday, May 5
Final exam: .................................................................................................... 8:00 A.M., Friday, May 9
**Exams:** Each midterm exam is worth 20% of your grade. The exams during the semester are an hour in length and will be given in class. The final exam is two hours long and is cumulative.

The exams will be closed book. You may bring a calculator to the exam, but will not be allowed to have equations programmed into it.

I do give partial credit, so always write something down on your exam. Also, if you do not know how to set the problem up mathematically, write down in words what you would do to solve the problem. If I see that you understand how to do the problem, I will give you some credit. In addition, please write down the steps you took to get to your answer. If you made a minor mathematical error but showed your steps, I can see where you went wrong and you will lose very little credit. However, if you made a minor mathematical error but did not show me any steps, I do not know if you know how to do the problem and you will lose most of the credit.

Make-up exams will be allowed, if you have a good reason. Good reasons include: attending a conference, actively participating in UAF sporting events, unavoidable work conflicts, illness, family or personal difficulties, etc. However, you must let me know as soon as you learn of the conflict (conference, sports or work) or as soon as is possible (illness, family or personal difficulties) and we will make arrangements for you to take a make-up exam.

**Homework:** Homework is a very important component of this class. You must practice using the concepts and solving problems to do well in the course. The homework problems provide you with an opportunity to learn how to approach a problem and the mechanics of actually doing the problem. The exam questions will often be similar to the homework questions, so doing the homework prepares you for the exams.

If you have any difficulties with the homework, please see me. You are strongly encouraged to work in groups to solve the homework problems.

**Class projects:** Due date: April 28. The papers should consist of a literature review on your chosen topics. I expect 10-15 pages (not including references) will be sufficient. The introduction should provide a concise description of the chosen topic and the broader environmental context. The body of the paper should discuss the issues in the context of environmental partitioning and transformations (and transport), providing a review of information from the literature relevant to “understanding” environmental fate and transport. Your conclusions should provide a critical assessment of the literature on your topic, and suggestions for future investigations.

You will be asked to present a 15 minute synopsis of your topic in class (10 minute talk and five minutes for class discussion).
**Course Policies:** I expect that the students in CHEM/ATM 631 will behave in a professional manner. If you are going to miss a homework assignment or exam due to a legitimate absence such as illness, a death in the family, school activities, etc., clear it with me prior to the absence or as soon as possible during or after the absence.

**Blackboard:** CHEM/ATM 631 has a site on Blackboard (http://classes.uaf.edu/). On the site, you will find the syllabus, homework assignments, and other relevant documents.

**Chemistry and Department Policy on Cheating:** Any student caught cheating will be assigned a course grade of “F”. The student’s academic advisor will be notified of this failing grade and the student will not be allowed to drop the course. Unauthorized collaborations during exams and plagiarism are examples of cheating.

**As a UAF student, you are subject to UAF’s Honor Code**
(http://www.uaf.edu/catalog/current/academics/regs3.html#Student_Rights):

“Honesty is a primary responsibility of you and every other UAF student. The following are common guidelines regarding academic integrity:

1. Students will not collaborate on any quizzes, in-class exams, or take-home exams that contribute to their grade in a course, unless the course instructor grants permission. Only those materials permitted by the instructor may be used to assist in quizzes and examinations.

2. Students will not represent the work of others as their own. A student will attribute the source of information not original with himself or herself (direct quotes or paraphrases) in compositions, theses, and other reports.

3. No work submitted for one course may be submitted for credit in another course without the explicit approval of both instructors.

Alleged violations of the Code of Conduct will be reviewed in accordance with procedures specified in regents' policy, university regulations and UAF rules and procedures.”

**Students with Documented Disabilities:** If you have a documented disability and need reasonable academic accommodations, you should discuss these with me during the first two weeks of class. You will need to provide documentation of your disability to the UAF Office of Disability Services at 208 Whitaeker. If you have questions, please contact the director of Disability Services at 474-5655, TTY 474-1827, uaf-disabilityservices@alaska.edu, or through www.uaf.edu/disability/.