Studio Laboratory I (CH1110-OB)  
**Fall Semester, 2007**

**Instructor:** Dr. Paul Charlesworth  402C ChemSci Bldg  Email: pcharles@mtu.edu  
**Learning Center:** Mrs Lois Blau  206 ChemSci Bldg  Email: lablau@mtu.edu  
**Office Hours:** Monday and Wednesday 1:30pm to 3pm (or by appointment).  
**Text:** Chemistry The Central Science by Brown, Lemay, and Bursten.

**Introduction:**

Studio Laboratory provides an overview of the chemical concepts and laboratory techniques that the chemistry department believes are important to your chemistry careers. The studio laboratory is not designed to provide the background for other majors. Studio Laboratory I is the first semester of a one-year course for chemistry majors.

**Roll of Instructor:**

The role of your instructor will be to guide you through your studies by:

- Presenting outlines of material considered important  
- Developing appropriate laboratory session  
- Helping you understand concepts by working through examples  
- Providing other useful resources and assistance to help you with your studies

Your instructor cannot provide you with all the information you need to learn and understand material for this class. The Studio Laboratory environment requires that you independently read the textbook sections relating to the material covered. In most cases, your instructor will provide a guide to reading, but in other cases, you will be expected to take the lead. If you do not understand something, read about it in a book. If, after reading several books, you still do not understand something then you should ask someone for assistance. Taking the path of least resistance by asking how a problem is solved, does not teach you anything about answering questions and solving problems.

Your instructor will also assess your progress by providing challenges such as assigned homework, in-class quizzes, problem sets, and examinations. The design of the Studio Lab is to encourage learning through experimentation, understanding, and writing, rather than cramming for an examination.

*A typical week will be laid out as follows:*

- **Tuesday** - 1pm Recitation (Collect homework, answer questions, quiz on previous week)  
  - 2pm Laboratory Session (Introduce new chapter)  
- **Thursday** - 2pm Laboratory Session (Homework on chapter distributed).
Roll of Student:
Your roll as a student at Michigan Tech is to participate in class, show respect for others, and accept responsibility for your own learning. It is up to you, as the student, to decide how hard you want to work, and therefore how well you will perform when challenged by your instructor. Although there are times when you may not agree, your performance in the class will be a reflection of the amount of effort you make to learn and understand the material, rather than the lectures you attend.

Class Schedule:
The material presented in class is only sufficient to provide you with a guide on which you base your private study. If you take very good notes in class, learn that material well, and apply it to the laboratory experience, you will be fine. However, if you want a good grade then you will need spend a few more hours writing out your notes, working problems, and making sure that you understand the theory behind problems you are solving and the experiments you performed.

Attendance in laboratory is mandatory. If you miss more than two laboratory sessions, you risk an automatic fail in this class. You are all able to make your own decisions about attending class and studying. If you choose to skip laboratory and not to study the recommended minimum of six to nine hours per week for this class that is your choice, but there are consequences.

- Week 01: Chemical Compounds and Reactions
- Week 02: Gravimetric analysis
- Week 03: Titrimetric analysis
- Week 04: Spectrophotometric analysis
- Week 05: Synthesis and Analysis
- Week 06: Chromatography and Separation
- Week 07: Written Examination I and Practical Examination I
- Week 08: Chapter 05 - Thermochemistry
- Week 09: Chapter 08 & 09 - Chemical Bonding
- Week 10: Chapter 10 & 12 - States of Matter
- Week 11: Chapter 12 - Modern Materials (Polymers)
- Week 12: Chapter 13 - Properties of Solutions
- Week 13: Chapter 14 - Kinetics (Time Permitting)
- Week 14: Practical Examination II and Checkout
- Week 15: Written Examination II
Recitations:

Recitations are scheduled for Tuesday of each week and will be structured to provide you with opportunities to ask questions and improve your understanding of material from your previous weeks experiments.

Your recitation will be structured as follows:
1. Collect homework from previous Thursday
2. Questions
3. Graded worksheet or quiz

Assignments and Grading:

Grading will be based on a combination of:

- Recitation quizzes (200pts)
- Homework (200pts)
- Laboratory Assignments (200pts)
- Examinations (400pts)

Your grade will be based upon the percentage of the total points available that you accumulate as shown below. Improvements throughout the term may be taken into consideration when grades are assigned.

The grading scale is based on over 5 years of refinement and rewards effort. It is designed so that, in theory, it is possible for everyone to obtain a grade A in this class if you work hard enough! If you do not obtain the grade you desire, it is your fault. Excuses will not be accepted. The grading is as follows:

- Grade D ≥ 68%
- Grade C ≥ 72%
- Grade B ≥ 88%
- Grade A ≥ 92%

Handouts:

Several handouts on topics will be distributed during the course to complement the text. The class PowerPoint slides will be printed at a rate of four slides per page and sent to you through the campus email. It is hoped that we will have them ready during the week before the class you need them for, but this may not always be possible. It is assumed that you all have a computer or printer.

These notes are NOT designed to replace taking good notes, but they will reduce your need to copy everything from the slides and so allow you to pay more attention to classroom discussion. The lecture component of each studio lab session will be paced based on the assumption that you are using the RediNotes.
Chemistry Learning Center (CLC):
The CLC is a free service provided by the Department of Chemistry and the University to provide support for students enrolled in first year chemistry lecture courses. The Center is located in room 208 of the chemical sciences building and staffed by upper level undergraduates (coaches), who have a good background in chemistry and are familiar with the courses. Services offered include weekly appointments, walk-in assistance, reference library, computer-assisted learning and a comfortable place to study chemistry. Stop by for more information.

CH0011 - Development of Chemistry Skills (0 credit): Students who would like to have a scheduled weekly individual appointment with a coach must be enrolled in CH0011. Students enrolled in CH0011 should visit the CLC during the first week of class to sign up for a weekly appointment time. You must attend your first weekly appointment, which begins the second week of classes. Grades in CH0011 are satisfactory/unsatisfactory based on attendance. You are expected to attend every appointment. However, you are allowed to miss one appointment if an emergency comes up and still receive a satisfactory grade. Walk-in hours are also available.

Walk-in Hours and other Resources
Beginning on Tuesday, September 6th, the Chemistry Learning Center walk-in hours for Fall Semester are:

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<td>Thursday</td>
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Absence Policy and Academic Integrity:
For exams, an UNexcused absence is an automatic zero for any exam that is missed. An excused absence may be granted by the Office of Student Affairs or your instructor. If you know that you will have an official university excused absence on a day that an exam is scheduled (university athletic event or religious holiday), you are required to make arrangements as early as possible in advance of the exam date. Other examples of excused absences granted in the past are serious illness or a death (including your own). Please note that studies have shown that poor performance of students in classes often leads to the unexplained deaths of grandparents around exam time and we suggest you work hard to protect the life of your loved ones. Excused absences will not be given to travel home or to attend a social event. Plan to take your exam at the scheduled time.

Both students and faculty are responsible for insuring the academic integrity of the University according to the procedures in "Academic Integrity at MTU - A Guide for Students and Faculty." Specific violations in this course would be the intentional use of any unauthorized study aids, equipment, or another's work during an examination (cheating) or allowing/helping another individual to cheat (facilitating academic dishonesty). Possible sanctions include an academic integrity warning, an "F*" grade indicating failure due to academic dishonesty, suspension or expulsion.

MTU complies with all federal and state laws and regulations regarding discrimination, including the Americans with Disabilities Act of 1990 (ADA). If you have a disability and need a reasonable accommodation for equal access to education or services at MTU, please call Dr. Gloria Melton, Associate Dean of Students at 2212.