Preparatory Chemistry (CH1000)
Fall Semester, 2005

Lecture: Dr. Paul Charlesworth  402C Chem Sci Bldg  Email: pcharles@mtu.edu
Learning Center: Mrs. Lois Blau  206A Chem Sci Bldg  Email: lablau@mtu.edu
Office Hours: Monday and Wednesday 1:30pm to 3pm (or by appointment).


WebCT Site: http://courses.mtu.edu for online access to your grades.

Introduction:
Preparatory Chemistry (Prep Chem) provides an introduction to the chemical concepts that we believe will be important to your success in future science and engineering careers. It is my hope that by the end of this course you will have both an appreciation of how important chemistry is to our daily lives, and a greater understanding of the subject than when you arrived here.

Role of Instructor:
The role of the instructor will be to guide your studies by presenting material considered important, working through examples, performing demonstrations, and by providing other useful resources and assistance to help you with your studies. The instructor will assess your progress by providing challenges such as assigned homework, in-class quizzes, problem sets, and examinations that are designed to guide your learning. The instructor's role is not to make you learn and understand material; he is simply a guide.

Role of Student:
Your role as a student 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 is a reflection of the amount of effort you make to learn and understand the material. It is quite easy to spend many hours looking at the textbook and not learn anything. Do not fall into the trap of thinking that time-on-task is a measure of learning. You may learn more by studying intensely for two fifteen or twenty-minute sessions each hour than by vaguely staring at your notes for several hours. If you do nothing else during your first few weeks, you should learn how to study independently, how to learn from that studying, and how to check that you have learned what you were studying.
Class Schedule:

Even though this class is designed to provide you with most of what you need, you cannot learn everything in three one-hour sessions. This means you must use the classroom time to guide your private study. Expect to spend six to nine hours writing out your notes, solving problems, and making sure that you understand the theory behind problems you are solving. From time-to-time the coaches will review your progress.

Attendance in lecture is mandatory and I may take attendance from time to time. During your first year it is essential that you develop good study habits, and that includes attending every lecture. You may not receive any warnings for absences, but when it comes to exams and you do not understand the material, remember the choices you make. The simple truth is that you choose whether attend class and study, or skip class and party. If you choose not to study effectively for the recommended minimum of six to nine hours per week that is your choice, but you should prepare for the consequences.

Even with all the work, there will still plenty of time to meet with friends, and enjoy life. You just need to balance you time and get the work done first before you party.

This class covers chapters 3 through 8 of the Zumdahl Introductory Chemistry textbook.

- Chapter 03 - Matter and Energy
- Chapter 04 - Chemical Foundations: Elements, Atoms, and Ions
- Chapter 05 - Nomenclature
- Chapter 06 - Chemical Reactions: An Introduction
- Chapter 07 - Reactions in Aqueous Solutions
- Chapter 08 - Chemical Composition

It is anticipated that each chapter will be covered over periods of about 2 to 3 weeks. The exact pace will be adjusted as the course progresses and your experience grows.

Assignments and Grading:

The majority of assignments for this class will come from the textbook, and handouts, but we may develop assignments that test your ability to work with other resources on campus. The Chemistry Learning Center will probably be the first place to go and can help you with many problems. There are several shelves of books in the Learning Center, a quick Google search can often turn up many answers, and the library has even more shelves of books. Do not give up on a problem, the answer will be there if you look hard enough.

Aside from the usual exams, we will have a Friday quiz that will be collected at the end of the class period and graded by the coaches. You will then collect your quiz from the
coach, who will review your answers with you and provide additional challenges to test your knowledge and understanding.

Each Friday quiz will be worth 25 points. We expect to offer 11 or more of these quizzes and record the 10 best scores for your grade. Should you miss a Friday quiz for any reason, this will count as one of your dropped quizzes.

All exams are expected to be multiple-choice format and cover material up to the Friday before each examination. Plan to take your exam at the scheduled time:

- Exam 1  Wednesday, September 21  6:00 - 7:00 pm
- Exam 2  Wednesday, October 19  6:00 - 7:00 pm
- Exam 3  Wednesday, November 16  6:00 - 7:00 pm
- Final Exam  Monday, December 12  10:15 am - 12:15 noon

If you would like a photocopy of your answer (Scantron) sheet from an exam, complete the request form located outside Mrs. Blau's office (206A ChemSci). A photocopy of your answer sheet will be available the next day.

Grading will be based on a combination of:

- Friday Quizzes (250pts)
- In-Class Assignments (upto 100pts)
- Learning Center Assignments (100pts)
- Three one-hour exams (100pts each)
- A two-hour final exam (200pts).

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 rewards effort and we do not grade on a curve, or "curve" grades. 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 scale is:

- Grade D ≥ 68%
- Grade C ≥ 72%
- Grade B ≥ 88%
- Grade A ≥ 92%.
Textbook Problems and Assigned Homework:
The instructor will assign textbook problems during class periods. You should work through those problems in addition to problem sets and learning center challenges for this class. Textbook problems will not be formally graded, but may be discussed with the instructor, or your coach. Although working through the problems provides no guarantee that you will get a grade A in the class, it certainly increases your chances.

Handouts:
Several handouts will be distributed during the course to complement the text. These RediNotes 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 will be paced based on the assumption that you are using the RediNotes.

Absence Policy and Academic Integrity:
For exams, an UNexcused absence is an automatic zero for any exam that is missed. The Office of Student Affairs or your instructor may grant an excused absence. 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, Dean of Students at 487-2212

- 4 -
Chemistry Learning Center

CH0011 - Development of Chemistry Skills

All students enrolled in CH1000 Preparatory Chemistry MUST be co-enrolled in CH0011.

During the first week of class, please stop by the Chemistry Learning Center, Room 208 of the Chemical Sciences Building between 8:00 - 5:00 pm to sign up for the following at a time that fits with your schedule:

- a weekly, one hour study group -or- an individual, weekly \( \frac{1}{2} \) hour appointment

Grades in CH0011 are satisfactory/unsatisfactory based on attendance. You are expected to attend every weekly session at the time that you sign up for during the first week. However, you are allowed to miss one session during the semester and still receive a satisfactory grade in CH0011.

At your weekly session, you will be working in a small study group with a coach from the Chemistry Learning Center or will meet individually with a coach.

Please bring the following to each CH0011 session:

1) class notes  
2) completed homework  
3) textbook  
4) calculator

You will have an opportunity to earn points toward your course grade as part of these sessions.

Supplemental Instruction

The Chemistry Learning Center offers Supplemental Instruction for all first year chemistry classes, including this class.

This class has been targeted for Supplemental Instruction because it is a historically challenging course that requires large amounts of reading from a difficult text and examinations focus on application and analysis.

Supplemental Instruction (SI) is an academic assistance program that utilizes peer-assisted study sessions. SI sessions are regularly-scheduled, informal review sessions in which students compare notes, discuss readings, develop organizational tools, and predict test items. Students learn how to integrate course content and study skills while working together.
Participation in SI is voluntary, free-of-charge, and open to all students in this course. Research indicates that students who attend regularly do better than those students who attend periodically or not at all.

Your SI leader will attend all lectures. The SI leader is trained in group facilitation methods and general learning techniques. The SI leader facilitates and encourages the group to process the material rather than acting as an authority figure who lectures to participants.

Your SI leader will survey the class during the first week to discover the best times to offer sessions and will let the class know when and where the sessions will be held.

*Supplemental Instruction does not count toward your CH0011 attendance! You will still need to attend your scheduled CH0011 time - attendance at SI is extra.*

**Walk-in Hours and other Resources**

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

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday</td>
<td></td>
<td>7:00 - 9:00 pm</td>
</tr>
<tr>
<td>Monday</td>
<td>12:00 noon - 4:00 pm</td>
<td>7:00 - 9:00 pm</td>
</tr>
<tr>
<td>Tuesday</td>
<td>12:00 noon - 4:00 pm</td>
<td>7:00 - 9:00 pm</td>
</tr>
<tr>
<td>Wednesday</td>
<td>12:00 noon - 4:00 pm</td>
<td>7:00 - 9:00 pm</td>
</tr>
<tr>
<td>Thursday</td>
<td>12:00 noon - 4:00 pm</td>
<td></td>
</tr>
</tbody>
</table>

In addition to your weekly session for CH0011, everyone is encouraged to make use of the Chemistry Learning Center for individual assistance during our walk-in hours. There is no cost for using the services. The Center is staffed by friendly, upper level undergraduate students who have a good background in chemistry and are familiar with the courses. The CLC is a relaxed, comfortable place to get help or to use as a study place. There are additional books and other resources available.

The Chemistry Learning Center is located in Room 208 of the Chemical Sciences Building. If you need additional information, contact Lois Blau, Coordinator at 487-2297 (lablau@mtu.edu) or the website at http://www.chemistry.mtu.edu/pages/clc/index.php.