CHM 342 – Physical Chemistry I Section 10598 Winter 2002

Lecture: Mon.,Wed.,Fri9:20-10:27 PM 386 SEB
Recitation: Thurs. 12:00-12:55 PM 386 SEB

Instructor: Joel W. Russell 244 SEB
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Email: See WedCT below
Office Hours: Mon., Wed., & Fri. 10:30-11:30 AM

Text: *Physical Chemistry, 7th Ed.*, P. Atkins & J. de Paula, Freeman, New York, 2002 (Students with the 6th edition of the Atkins text may use it.)

Lecture and Recitation
CHM 342 investigates the fundamental concepts and their applications of kinetics and the thermodynamics. These topics were introduced in general chemistry but are now probed deeper and more rigorously with a mathematical basis requiring the application of calculus. MTH 154-155 and PHY 158 are prerequisites to CHM 342. Extensions of calculus covered in MTH 155 to multivariable calculus will be introduced as needed.

Students are expected to have scanned material in the textbook prior to its discussion in lecture. Straight-forward topics and problems will only be discussed if several students have questions on them after their pre-lecture review. All topics will be presented with the goal of gaining a deep conceptual understanding and not simply the selection of an appropriate algorithmic problem solving technique. While the course itself is a problem-solving course, you should approach each problem with the goal of seeing how its solution contributes to your understanding of the principles of kinetics and thermodynamics.

The emphasis of lecture discussions will be on the fundamental concepts and examination of new problem-solving strategies. You are encouraged to reread the text after each lecture and carefully work though the sample problems in the text and lecture before starting the homework assignment for that day. Physical chemistry textbooks cannot be read alone but require simultaneous use of pencil and paper to sketch models and work though mathematical derivations. For many problems you will need to use a calculator and/or a spreadsheet program.

The recitation section will allow you to ask questions about topics from the homework, lectures, or textbook. A ten minutes one or two question pop quiz may be given at the end of each recitation period.

Homework will be assigned each class period. Although attendance at all classes is strongly recommended, should you miss a class the assignment for that day will be shown under the calendar on WebCT.

WebCT Support

Four components of the Oakland University WebCT system will be available for use in CHM 342. If other components are subsequently used, you will be informed of this by email. The initial WebCT components are:

- Sylllabus – a copy of this syllabus is available on-line
- Calendar – will be updated for each class to show text sections for next lecture and assignment for that day
- Discussion - a discussion section for each chapter allows students to post comments or questions to assist all students to understand material in that chapter
- Email - the email tool allows you to send private messages to the instructor or to other students

All email concerning CHM 342 to the instructor should be sent via WebCT.

Homework

Homework assignments will be made each day in class and subsequently posted on the WebCT calendar. The calendar will show the text sections covered in class and the homework to be completed after that class. Homework assignments will consist of a mix of exercises and problems whose solutions are shown in the Student Solution's Manual (exercises with a letter "a" designation and problems with a "blue" number) and those without published solutions. You are strongly encouraged to make a serious effort to solve exercises and problems before looking at their solutions in the solutions manual. The solutions manual has a scheduled publications date of January 2 and should be available soon after that in the bookstores. This is a new edition of the solutions manual and may contain errors not detected during proof reading. If you detect any errors in the solutions manual please report them to the instructor.

Grading

Type	Number	Points	Total	Time
Quizzes	3	25 pts	75 pts	30 min.
Hour Exams	3	100	300	67
Final Exam	1	125	150	150
Pop Quizzes	?	4	?	10

The pop quiz points are all extra credit points. To receive the points for a pop quiz you must have no errors in your solution. These quizzes are graded on a "right" for full credit or "wrong" for no credit basis. The maximum number of extra credit points that can be added to your total points from the regular quizzes and exams is equal to (525 – total points)/2.

Course grades will be based upon a grade scale that includes one adjustable parameter. This parameter is the "highest reasonable score (HRS)" and may be less than 525.

% HRS	Grade
95	4.0
85	3.6
75	3.0
60	2.0
45	1.0

Tentative Schedule

Text Chapter	Dates	Quiz/Exam	Dates	
25	1/7 - 1/16			
26	1/16 – 1/25	Quiz 1	1/18	
1	1/28 - 2/1			
2	2/6 - 2/13	Exam 1	2/4	
3	2/15 - 2/18			
4	2/20 – 3/4	Quiz 2	2/20	
5	3/6 - 3/11	Exam 2	3/8	
6	3/13 – 3/18			
7	3/20 – 3/27	Quiz 3	3/22	
8	3/29 – 4/1			
9	4/3 - 4/10	Exam 3	4/5	
27	4/15 – 4/19			
		Final	4/23	12:00-3:00 p.m.

Cheating

Cheating on quizzes and examinations will be treated very seriously and will impact your course grade and possibly your standing as a student. All cases of suspected cheating will be referred to the Academic Standing Committee. After a hearing by the committee students found guilty may face probation, suspension, or dismissal. All quizzes and exams are photocopied prior to their return. If you belief a questions has been misgraded, please return your exam to the instructor. All returned exams will be compared with the photocopies.