

CHEMISTRY 162 (Chemistry and Man)
Course Syllabus and Tentative Schedule, Fall 2012

Instructor: Dr. Daniel Brayton (please just call me Dan)

Office: Bilger 321A

Email: dbrayton@hawaii.edu (best method)

Website: Laulima or "My UH" portal for grades and for supplementary (syllabus, etc)

Lecture: Tuesday and Thursday 10:30 to 11:45 am, PHYSICI 217, CRN = 70602

Office Hours: Please feel free to come in for help during office hours or by appointment.

Tuesdays and Thursdays after class 11:45 am to 1:00 pm.

(I'm on campus Monday through Friday ~10 am to 6 pm)

Course material: Text book "Chemistry a Molecular Approach" by Nivaldo Tro
ISBN 978-0558-29865-4

Grading: The weight of each portion of your grade will be as follows:

-Quizzes, done in group fashion at the end of class every 3 weeks, 15 points total

-2 midterm exams (25 points each) = 50 points total

-Final exam = 35 points

-Total class points 100

The grading scale will be based on the following: (curved if deemed necessary)

90-100% A

70-79 % C

0-59 % F

80-89 % B

60-69 % D

Grade Availability: Students are encouraged to see the instructor about his/her standing at any time during the course. Grades will be discussed in class periodically throughout the semester

Student Learning: I will present course material using PowerPoint presentation, demonstrations and experiments. It is the student's responsibility to put in the effort required to read and learn the material and to complete the assigned homework (minimum of 4 hours/week). Chemistry is a quantitative science and, therefore, throughout the semester you will solve mathematical problems both in class and as homework. To become proficient at problem solving complete the homework problems and develop good study habits. I will be happy to assist you in achieving this goal. I am available during office hours or by appointment if you would like help.

To maximize the learning experience the student should:

1. Read the material before coming to class (for a list of topics covered in class see the schedule below).

2. Attend class faithfully and **take notes** for later review. A PowerPoint presentation is available at the address above under "Course materials".

3. Bring the text to class to follow the lecture (useful to view figure and tables).

4. Complete the **homework problems** which are the odd numbered problems after each section in the chapter under the heading "Questions and Problems". The answers for these problems are at the end of the chapter. The study guide contains the solutions to these problems. You are not required to turn in the homework.

5. Ask questions during class and/or office hours-questions; questions and answers given in class often help other students.

6. Realize that this is a skills building course and so will require a lot of study outside of class.

7. Please turn your cell phones to voice mail or vibrate mode during class.

8. **All exams MUST be completed independently!!!** An "F" grade will be given to anyone caught cheating.

Study Groups: Participation in study groups is an effective way to learn chemistry - learn by helping each other. Get to know each other and form study groups. Students who are part of study groups tend to outperform others.

TENTATIVE Chemistry 100 Lecture Schedule (exam dates are subject to change)

Days	Chapter	Topics
8/20-8/24	11	Liquids, solids, and intermolecular forces
8/27-8/31	11/12	Liquids, solids, and intermolecular forces, Solutions
9/4-9/7	12	Solutions <u>Quiz 1, Thurs 7th</u>
9/10-9/14	12/13	Solutions, Chemical Kinetics
9/17-9/21	13	Chemical Kinetics, Review
9/24-9/28	Mid-term	Review/Mid-term <u>Midterm 1, Tuesday 25th</u>
Midterm Exam 1 (ch. 11-13) 9/25		Chapters 11-13 <u>Midterm 1, Tuesday 25th</u>
10/1-10/5	14	Chemical equilibrium
10/8-10/12	14/15	Chemical equilibrium, acids & bases
10/15-10/19	15	acids & bases <u>Quiz 2, Thurs 19th</u>
10/22-10/26	15/16	acids & bases, Applications of aqueous equilibria Review
10/29-11/2	Review/Midterm	Review/Midterm <u>Midterm 2, Tuesday 30th</u>
Midterm Exam 2 (ch 14-16) on 10/30		Chapters 14-16
11/5-11/9	16 <u>election day</u>	Applications of aqueous equilibria <u>No class Tues 6th</u>
11/12-11/16	16/17	Free Energy and Thermodynamics
11/19-11/23	17	Free Energy and Thermodynamics <u>Thanksgiving weekend</u>
11/26-11/30	18	Electrochemistry <u>Quiz 3, Thurs 30th</u>
12/3-12/6	18/Review	Electrochemistry/Final Review

Exam 4 (final) Tuesday, December 11, 2012 9:45 am to 11:45 am

The final is comprehensive

Suggested Homework problems (from text book, not on-line for 5 % extra credit). One or two problems per chapter will be on a quiz, mid term, or the final!!!

Chapter 11; 49, 51, 55, 59, 67, 69, 73, 75, 79, 81, 83, 85, 87, 145

Chapter 12; 29, 33, 35, 37, 41, 45, 49, 51, 55, 61, 65, 71, 73, 77, 83, 91, 127

Chapter 13; 25, 27, 29, 33, 35, 41, 43, 47, 49, 53, 57, 63, 65, 71, 75, 77, 79, 81, 93, 103, 115

Chapter 14; 21, 25, 29, 31, 35, 39, 45, 47, 55, 59, 61, 67, 77, 83

Chapter 15; 33, 37, 41, 45, 47, 49, 51, 55, 61, 67, 71, 75, 77, 81, 83, 89, 99, 103, 107, 113, 121

Chapter 16; 29, 33, 37, 41, 49, 55, 59, 61, 63, 65, 71, 75, 81, 89, 93, 103, 111, 121

Chapter 17; 29, 31, 37, 41, 47, 51, 57, 61, 65, 71, 75, 81, 89, 93, 99, 105, 111

Chapter 18; 37, 41, 47, 49, 55, 61, 63, 69, 71, 75, 77, 83, 87, 89, 93, 99