Chemistry 108B
Summer 2014

Welcome to Chemistry 108B. My TA and I are here to make this challenging subject as fulfilling and enjoyable as possible. Please read carefully the information below, and if you have any questions, please **do not hesitate to contact us**.

Instructor

Dr. Daniel Palleros
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e-mail: drpaller@ucsc.edu
office hours (in Thimann 313):
Mon 3:00-3:45; Tue 2:15-4:00; Wed 2:00-3:00.

Teaching Assistant

Jake Haeckl
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Office hours (in Thimann 101): Mon and Wed 2:30-3:30 and
Tue and Thu 1:30-2:30.

Web site

Ancillary course material (TA's office hours, practice tests, etc.) will be available at the class web site:
http://www.chem.ucsc.edu/courses/palleros/index.htm

Books

The following texts are required:
Organic Chemistry, Eighth edition
J. McMurry
Brooks/Cole, Pacific Grove, 20012.
Study Guide and Solutions Manual, Eighth Edition
S. McMurry
Brooks/Cole, Pacific Grove, 2012.

A **molecular model kit** is highly recommended (any of the models available at the bookstore will work).

Discussion Sections

Attendance to discussion sections is of paramount importance. There are four sets of discussion sections, you should be enrolled in one of them. Each discussion section has limited space (25 people).
1. Mon and Wed 11:35-12:45, Thimann 101
2. Mon and Wed 1:15-2:25, Thimann 101
3. Tue and Thu 12:00-1:10, Thimann 101
4. Tue and Thu 4:00-5:10, Thimann 101

Lectures
See attached schedule

Tests
Mid-terms: Friday **August 8** and Friday **August 22; 9-11 am**
Final Exam: Friday, **August 29; 9 am-12 pm**.

Each mid-term is 2 hr long and the final is 3 hr long. The final exam is comprehensive. Attendance to all three tests is mandatory. **No make-ups will be available for the mid-terms or final exam** (no exceptions; **please do not ask**).

Each test will consist of a series of problems (10-15) similar to the assigned homework problems (in fact, some test problems may be identical to the assigned homework). If you want to take a practice test before the actual test, take about 10 random problems from the assigned homework and do them ***without any help***.

No review sections will be offered before the exams. It is not possible to review many hours of lecture in just a couple of hours without leaving plenty of important material out. For advice on how to study for this class, see "Tips for Succeeding in Organic Chemistry", below.

Students who arrive at the test late, after somebody has already turned it in, will not be able to take the test. No make-ups will be provided.

Due to the fast pace of the class, questions about the grading of the MTs must be addressed in a timely fashion, within a couple of days after the test has been turned back graded.

Homework
The following assigned homework problems will give you the practice you need to fully understand the concepts presented in lecture. Solving these problems (without checking the answers in the Solutions Manual) is an essential part of the learning process. Chances that you would do well on the tests without solving these problems are nil. Because the solutions to the problems can be found in the "Solutions Manual", the homework will ***not*** be turned in for grading.

Assigned Problems
Chapter 16: 1, 3-10, 12-14, 18-23, 29, 31, 35, 36-39, 44, 45, 51, 55, 64, 72.

Chapter 17: 1; 2; 4-10; 12-15; 17; 30-32; 33c; 37; 43; 54; 58; 63.

Chapter 18: 1; 3; 5-8; 10-11; 12a; 14a, c; 17; 25a-d; 26; 28; 30a,c-e; 32; 33; 35; 43; 55.

Chapter 19: 1a,b,f; 2-6; 8-11; 14; 16; 17; 22; 34-36; 38; 39; 40a-e,g,h; 41; 50; 58.

Chapter 20: 1; 2; 7-12; 13a; 14; 22; 25; 33-36; 40a,c,d; 42; 51-53; 55; 57.

Chapter 21: 1a,c-f; 2-5; 7; 9; 11-13; 15-21; 32; 34-36; 38-40; 43; 44; 55; 57; 61-63.

Chapter 22: 1-8; 20-23; 25c; 38; 39; 45a, b, e, f

Chapter 23: 1-8; 27; 49a.

Chapter 24: 1; 2; 4-6; 8-11; 31; 32; 35; 36 a, b, d, e; 38a; 40a, b, c, e, f, g; 47 c, d.

Chapter 25: 1-3; 6-8; 11-14; 16-21; 23; 30; 35-37; 40; 43; 66.

Chapter 26: 1-6; 24; 27; 31; 32; 34; 35a,c,d; 51.

Chapter 27: 8; 9; 25; 34; 35; 39.

Academic Integrity

Academic misconduct in any of its forms (which includes, but it is not limited to, cheating, copying answers during tests, fabrication, facilitating academic dishonesty, etc.) will not be tolerated and will lead to academic and disciplinary sanctions to those responsible of such acts.

DRC students

If you qualify for classroom accommodations because of a disability, please submit your Accommodation Authorization Letter from the Disability Resource Center (DRC) to me as soon as possible, preferably within the first week of the Summer Session. Contact DRC by phone at 831-459-2089 or by email at drc@ucsc.edu for more information.

Grading

Each midterm (graded 0-100) contributes 30% to the overall score. The final exam (graded 0-100) contributes 40%,

overall score = 0.30 x 1st MT + 0.30 x 2nd MT + 0.40 x final

Example: A student got a score of 85% on the first midterm, 68% on the second midterm, and 75% on the final. The overall score is:

overall score = 0.30 x 85 + 0.30 x 68 + 0.40 x 75 = 76

The grades will be curved. A typical distribution of letter grades is as follows: A range: 90-100%; B range: 75-89%; C range: 55-74%. Usually, an overall score of at least 55% is required to pass. Consider this distribution of letter grades as a rough guide only.

Lecture Schedule

Date	Chapter
Mon July 28	16.1-16.3 Aromatic Chemistry
Tue July 29	16.4-16.5 Aromatic Chemistry
Wed July 30	16.6; 16.9; 16.10; 16.11 Aromatic Chemistry
Thu July 31	17.1-17.4 Alcohols & Phenols
Fri August 1	17.5-17.10 Alcohols & Phenols
Mon August 4	18.1-18.6; 18.8 Ethers, Epoxides, Thiols & Sulfides
Tue August 5	19.1-19.6 Aldehydes and Ketones
Wed August 6	19.7-19.13 Aldehydes & Ketones
Thu August 7	No lecture
Fri August 8	**First midterm (chapters 16-19)**
Mon August 11	20.1-20.7 Carboxylic Acids and Nitriles
Tue August 12	21.1-21.4 Carboxylic Acids Derivatives
Wed August 13	21.5-21.7 Carboxylic Acids Derivatives
Thu August 14	22.1-22.5 Carbonyl-alpha Substitutions
Fri August 15	No lecture
Mon August 18	23.1-23.4 Carbonyl Condensation Reactions
Tue August 19	24.1-24.6 Amines
Wed August 20	25.1-25.3 Carbohydrates
Thu August 21	No lecture
Fri August 22	**Second midterm (chapters 20-24)**
Mon August 25	25. 25.4-25.6 Carbohydrates
Tue August 26	26.1-26.3 Amino Acids
Wed August 27	27.5; 27.6 Lipids: Terpenes and Steroids
Thu August 28	No lecture
Fri August 29	**Final exam (chapters 16-27).**

Tips for Succeeding in Organic Chemistry

Organic chemistry is unlike any other subject you have studied so far. To enjoy it and succeed in it not only you will have to work hard, but you will also have to develop special study habits. Learning organic chemistry is like learning a new language. It can only be done gradually. Read the following guidelines and try to follow them. They will give you an added edge on the road to success.

1. **Attend** lectures and discussion sections and try to **understand** the material presented in class. There is a logic behind organic chemistry that we will explain in class. Understanding this logic is the first step to success. Ask questions. Participate in class. Make use of office hours. Make sure that all the important issues are clear to you. Remember that **we are here to help you**.

2. **Read** the material from your textbook and compare it with your lecture notes. Make your own notes as you read the material. Highlight reactions and mechanisms. Make sure that you follow the logic behind them and that you understand why things happen the way they do. **Do not memorize things that you do not understand**. They will not help you. However, you will have to memorize a good number of things. Make sure you understand them perfectly.

3. **Study** the subject until it **sinks in**. You should be able to write the reactions and the mechanisms without checking the book. To this end, write the reactions and mechanism on a piece of paper **repeatedly** until you know them by heart. Remember that you are learning a new language, and the reactions are the new "words". If you don't know them fluently, you won't be able to use them properly.

4. **Make your own summary sheets**. Nobody learns organic chemistry by just looking at flash cards or a computer screen. The only way to learn organic chemistry is by **writing** and **rewriting** the reactions and mechanisms until they stick. It also helps to have **all** the reactions and their mechanisms summarized on a large piece of paper, so you can compare them. Comparison is the key to understanding.

5. To foster the "sinking in" process, **solve the assigned homework problems**. Solving these problems is crucial. **Chances that you would succeed in this class without doing the homework problems are nil.** Do not check the answers in the Solutions Manual until you have given them your best consideration. Mark those problems that were most challenging to you, so you can come back to them at a later time.

6. **Do not fall behind. Do not fall behind. Do not fall behind.** Set times during the day to study O-chem and stick to your schedule. Discipline is the key ingredient for success. The newly learned concepts will sink in if you give them enough time to settle. Do not wait until the night before the test to catch up with several days worth of work. It will not work out.

7. Review the assigned homework problems before the tests. **Try to solve them again without help**. Try to **do them out of order** (without the context of the book). This will help in the "sinking in" process. Work on those "challenging" problems, until you can solve them without help.

8. Consider the possibility of a **study group**. This is not a "must" (in fact many students succeed without ever participating in study groups) however, many students find study groups particularly useful in organic chemistry. Remember that we really learn a subject by teaching it. A study group will give you the chance to practice this as you discuss the new ideas with your peers.