

CHEMISTRY 270 – Fall 2011

Organic Chemistry

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Office Hours

M 10:30-12:30; W 11:30-12:30; Th 12-2

Prerequisites

A full year of general chemistry (Chemistry 111 and 112, or their equivalent at another institution) are required prerequisites for Chem 270. Please come and see Dr. Nichols if you are not sure if the classes you have taken meet this prerequisite. The class will be taught assuming everyone has completed and understood material from general chemistry.

Textbooks

- Wade, "Organic Chemistry", 7th edition, (2010) ISBN 0-32-159231-X **REQUIRED**
- Simek, "Solutions Manual for Organic Chemistry 7th Edition (Wade)" ISBN 0-321-59871-7 **not required**
- Pasto, Johnson, and Miller, "Experiments and Techniques in Organic Chemistry": 2nd Custom Edition for California State University, Chico (1992) ISBN 0-555-00460-0 **REQUIRED**
Note that the textbook is also used for CHEM 370 and the lab book is also used for CHEM 370L.

Equipment

- For class: TurningPoint ResponseCard XR clicker – REQUIRED – available at the bookstore
- For lab you will need:
 - Safety Glasses (required, available through SAACS)
 - Carbonless Lab Notebook (required, available through SAACS)
 - Padlock for your lab locker (required, available through SAACS)
 - Molecular Models (recommended, available through SAACS)
 - Lab Coat (optional)

Curriculum

Chem 270 is the first of a 2-semester sequence (Chem 370 is the second part) of organic chemistry. This course is intended for majors in chemistry, biochemistry, biology, environmental chemistry, and for most students who will attend medical, dental, veterinary, and chiropractic colleges. There is also a 1-semester organic chemistry class, Chem 108, for students in nursing, nutrition, agriculture, and exercise physiology. Please consult your advisor in your department to make sure you are in the right class.

Chem 270 covers topics included in Chapters 1-13 of Wade. The topics are listed on the lecture schedule page. Note that Chapters 12 and 13 are done out of sequence, right after Chapter 8. By the end of the semester you will have learned about reactions of some of the functional groups in organic chemistry, as well as how to do structural analysis.

Important Note: CHEM 370 now has a prerequisite of completion of CHEM 270 **with a C-minus or better**. If you earn a grade of D in CHEM 270 you will not be permitted to progress to CHEM 370.

Homework

- To help keep everyone in the class learning as the semester progresses, homework sets will be assigned for each chapter.
- The homework will be in the form of supplementary assignments, which are available for download on webCT.
- Assignments and due dates will be announced in class and posted on the "calendar" section of webCT.
- In some cases, all of the questions in the assignment will be assigned, and in other cases only a select number of problems will be assigned.
- Answers will be made available after the homework is due.
- There are a total of 12 homework assignments, worth 10 points each (the lowest score is dropped).
- Homework is due **IN CLASS** on the due date: it will be considered late if handed in after class.
- Late homework is accepted up to 1 week past the due date but for no more than half credit.

WebCT

- The webCT site will be used for a calendar of assignments and to post answers to the homework and exams.
- In order to receive proper credit for class participation, you will need to register your clicker through webCT. On the CHEM 270 home page, click on ClickerRegister, and when prompted enter the Device ID (a code with 6 hexadecimal characters).
- **Many lab experiments, including the first one, are also on webCT.** These must be downloaded and printed and brought to lab.

Exams: MIDTERM I – Wednesday, September 14
MIDTERM II – Monday, October 10
MIDTERM III – Wednesday, November 9
FINAL EXAM – Friday, December 16, 8:00 – 9:50 am

- Please show up on time for each exam. You do not get extra time if you arrive late.
- Notes and textbooks are not permitted on exams.
- Students who need special accommodations for exams must have proper authorization from Disability Support Services (DSS). Contact the DSS office 898-5959 for more information.
- Questions from exams from previous years will be posted on the webCT site for you to download. The answers to those exams will also be posted in the days preceding each exam.
- There will be no opportunity for a make-up exam once the class has taken the exam.
- *Early exam-taking* will only be permitted under rare circumstances. If you will be unable to take an exam as scheduled please contact Dr. Nichols as soon as possible. All reasons for early exam-taking must be verified in writing. Acceptable reasons include road trips for intercollegiate athletics. Unacceptable reasons include doctor's appointments and multiple exams on the same day.

Evaluation:	Homework (11 @ 10 pts each)	110 points
	Participation (with Clickers)	40 points
	Lab	250 points
	Midterms (3 @ 100 pts each)	300 points
	<u>FINAL</u>	<u>300 points</u>
	TOTAL	1000 points

Grading	85-100%	A	60-64%	C+
	80-84%	A-	55-59%	C
	75-79%	B+	50-54%	C-
	70-74%	B	40-49%	D
	65-69%	B-	0-39%	F

NOTE: In order to pass the course you must get a grade of at least a D or better in BOTH the lecture and laboratory portions of CHEM 270.

Clickers

- You are required to purchase a TurningPoint clicker (the standard one used by our campus) for CHEM 270. Every class day (except for exams and the first week) I will use them multiple times to get feedback from you – to determine whether or not most students understand a particular chemical concept.
- I expect everyone to bring their clicker to class each day and answer questions when prompted. One point is given for participation with the clicker each day.
- At the beginning of each class I will have one quiz-type question on the large video screen at the top of the room. Answer that question when you arrive: this will let you know if your clicker has been set to the right channel and if your response is being accepted.
- The Friday of the first week (Aug 26) we will have a 15-minute tutorial, complete with a handout, on how to use the clicker. Starting that Friday, students will accumulate points based on their participation with the clickers. Please download the tutorial and bring to class on Aug 26.
- Everyone must have purchased their clicker by that Friday.

Waiting List Policy

Every section of Chem 270 is full. Many sections also have a waiting list. If you are on the waiting list, please come to the first week's lectures and to ANY of the lab sections you could possibly attend during the first week of classes. If someone on the class list doesn't show up, waitlisted people will be added in order to fill any available spaces. If you are enrolled, and you arrive at the first lab section of the semester more than 15 minutes late, you will be DROPPED from the course and someone else will be added in your place. Please don't miss that first lab!

Laboratory

- Attendance at the once-a-week labs is mandatory. Since the sections are very full, there will be little opportunity to make up a missed lab – and no labs can be made up once the last section of the week (Thursday) has completed the lab. If you must miss your lab, it is completely up to the discretion of the instructor whether he/she will let you sit in during another section's lab period. Please don't make a habit of switching sections.
- Missing three (3) lab periods for any reason means automatic failure in the course.
- Before attending your lab class you must **print** out a copy of that week's experiment(s), which are found on the webCT site. In many cases the lab will be from the Pasto textbook.
- Lab reports are DUE at the beginning of the lab period in the week following the completion of each experiment. Labs which are late will count for no more than 5 points. Labs which are more than 1 week late will not be accepted.
- You must pass BOTH the lecture part of the class and the lab portion of the class to pass overall.
- Lab grades will be standardized to a "B" average (72%) to accommodate for different grading styles among the different lab instructors.

Lab Grading:	Lab reports (13)	150 points (10 each, but two** are worth 20)
	Lab quizzes (3)	70 points total
	<u>"Style points"</u>	<u>30 points</u>
	TOTAL	250 points

** The Grape Juice (weeks 1 and 3) and Orange Oil (weeks 11-12) experiments are worth 20 points.

What I Expect in Chemistry 270

- Read the textbook and keep up with the lectures. The topics under discussion each week are laid out in the calendar so there is no excuse for not being prepared for class.
- Attend all lectures. Even though no credit is directly given for attending lectures, studies show that attendance directly affects performance.
- Do the assignments and do them on time. The assignments are worth only a few points, but more importantly they are practice for the exams, which are worth plenty of points. Copying homework answers from your friends may get you some of the 10 points the homework assignment is worth, but since you wouldn't be taking the time to learn the material, your performance on the exams will suffer. Don't get lazy and fall into the TRAP of copying homework!
- Don't forget or lose your clicker. Write your name on a piece of tape and stick it to the clicker in case you lose it so if found it can be returned to you.
- Plan to invest *6-8 hours per week* out of class to studying for Chem 270 in order to succeed. Successful studying involves ACTIVE learning: by doing problems, asking questions, and so on.
- Turn your cell phones and pagers OFF during class hours. I have low tolerance for such things. If there is a circumstance (emergency) that requires you to leave your phone on please inform me at the beginning of the class.
- Be prepared to participate in class. BRING YOUR CLICKER.
- If you are confused about something in class, ASK! If you are still confused after class, ask again, in office hours, in lab, by e-mail, or however, until you are satisfied.
- Work together! Obviously on exams you are working on your own, but studies show that studying together and doing homework together are excellent ways for everyone to earn higher grades. You and the other students are not competing with each other: the grades in the class are not on a "curve".
- Be honest. Copying answers during exams and other forms of academic dishonesty are serious offenses and will not be tolerated. Instances of cheating will be reported to Student Judicial Affairs, and serious academic penalties are possible. Please refer to the catalog for further information. I will take several precautions to help prevent cheating, including:
 - Giving out different versions of exams, which contain different questions.
 - Noting who sits next to whom in an exam setting and cross-checking answers. If you studied with someone *do not* sit next to them in the exam: it can lead to suspicion.
 - Checking ID of students during exams.

CHEM 270 CALENDAR FALL 2011

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Aug 22 Chapter 1 Intro & Review		Aug 24 Chapter 1 Intro & Review		Aug 26 Chapter 1 Intro & Review
Aug 29 Chapter 2 Organic Molecules		Aug 31 Chapter 2 Organic Molecules		Sep 2 Chapter 2 Organic Molecules
LABOR DAY NO SCHOOL		Sep 7 Chapter 3 Alkanes		Sep 9 Chapter 3 Alkanes
Sep 12 Chapter 3 Alkanes		Sep 14 MIDTERM I		Sep 16 Chapter 4 Reactions
Sep 19 Chapter 4 Reactions		Sep 21 Chapter 4 Reactions		Sep 23 Chapter 5 Stereochemistry
Sep 26 Chapter 5 Stereochemistry		Sep 28 Chapter 5 Stereochemistry		Sep 30 Chapter 6 Alkyl Halides
Oct 3 Chapter 6 Alkyl Halides		Oct 5 Chapter 6 Alkyl Halides		Oct 7 Chapter 6 Alkyl Halides
Oct 10 MIDTERM II		Oct 12 Chapter 7 Alkenes		Oct 14 Chapter 7 Alkenes
Oct 17 Chapter 7 Alkenes		Oct 19 Chapter 8 Alkene Reactions		Oct 21 Chapter 8 Alkene Reactions
Oct 24 Chapter 8 Alkene Reactions		Oct 26 Chapter 12 IR Spectroscopy		Oct 28 Chapter 12 IR Spectroscopy
Oct 31 Chapter 13 NMR		Nov 2 Chapter 13 NMR		Nov 4 Chapter 13 NMR
Nov 7 Chapter 13 NMR		Nov 9 MIDTERM III		VETERANS DAY NO SCHOOL
Nov 14 Chapter 9 Alkynes		Nov 16 Chapter 10 Alcohols		Nov 18 Chapter 10 Alcohols
			THANKS	GIVING
Nov 28 Chapter 10 Alcohols		Nov 30 Chapter 11 Alcohol Reactions		Dec 2 Chapter 11 Alcohol Reactions
Dec 5 Chapter 11 Alcohol Reactions		Dec 7 Chapter 11 Alcohol Reactions		Dec 9 Review
				Dec 16 FINAL EXAM 8:00 – 9:50 am