

**SYLLABUS
ORGANIC CHEMISTRY 121**

**FALL SEMESTER 2006
TEMPLE UNIVERSITY**

Keep this syllabus. It contains much information essential to your success in this course.

	TIMES	ROOM	INSTRUCTOR
Lecture 1 Sec. 1-3	MWF 9:40 - 10:30 am	BE 162	Dr. R. Przeslawski
Lecture 2 Sec. 4- 6	MWF 10:40 - 11:30 am	BE 162	Dr. M. Wilson
Lecture 3 Sec. 7 - 9	MWF 11:40 - 12:30 pm	BE 162	Dr. J. Williams
Lecture 4 Sec 10 -12	MWF 1:40 - 2:30 pm	BE 162	Dr. J. Williams
Lecture 5 Sec 13 -15	TuTh 10:10 - 11:30 am	BE 162	Dr. J. Cross
Lecture 6 Sec 16 -18	TuTh 11:40 - 1:00 pm	BE 162	Dr. F. Davis
Lecture 7 Sec 19 - 21	Tues 6:10 - 9:00 pm	BE 162	Dr. D. Hill

Laboratory: Chemistry 123 is a separate course, which has Chemistry 121 as a co- or pre-requisite. Direct questions to Organic Coordinator: Dr. Findeisen, BE 406B, afindeis@temple.edu

STUDENTS WHO DO NOT MEET THE PRE-REQUISITES MAY RECEIVE AN "F" GRADE

STUDENTS NOT MEETING THE CO-REQUISITE REQUIREMENT MAY BE DROPPED AND AWARDED A "W".

Course Description: Organic Chemistry (Chem 0121) is the first semester of a two semester sequence. It has General Chemistry (C072, C082, C092, or the equivalent) as a prerequisite. The contents of this course include structure, synthesis, and reactivity of hydrocarbons and some functional groups. Principles of organic spectroscopy and stereochemistry as well as the introduction of kinetics and reaction mechanisms are topics.

Scheduling: Your attendance at all lectures and recitations is expected and essential to your success in this course. In case of emergency, you may attend a lecture or recitation section other than your assigned one; however all quizzes and examinations must be taken in your assigned section. **There will be no make-up of missed quizzes, tests, or examinations.**

Textbook: John McMurry, "Organic Chemistry, 6th Edition" Brooks-Cole Publishing Co., 2004 is required. You should read each chapter before its lecture. "Study Guide & Solutions Manual for Org. Chemistry" by Susan McMurry is recommended. Both are available in the TU Bookstore. Any other organic chemistry text is a useful supplement. Molecular model sets may be purchased in the TU Bookstore.

Grading:	Midterm Exam 1:	200 points	[While point totals can not be translated exactly into letter grades, a score of 850 points or more, will almost certainly be an "A".]
	Midterm Exam 2:	200	
	Final :	400	
	Recitation:	<u>200</u>	
	Maximum Score:	1000	

Examination Policy: All quizzes, tests, and examination are "Closed Books". This means no books, notes, or reference material may be consulted during the Test period. Giving or receiving information during examinations is a violation of the Temple Student Discipline Code and will result, at minimum, in a grade of F for this course. Electronic devices, including calculators, phones, and PDA's are not permitted in the exam room. There will be no make-ups of missed quizzes, tests, or exams.

Recitation: There will be five 20 minute recitation quizzes (50 points each); the lowest will be dropped. **There will be no make-up quizzes, tests, or exams.** Find out from your instructor what the quiz average was. Your recitation grade relative to the quiz average is a good indication of your current performance. All students must be assigned to a recitation section that is designated for your lecture. If you do not have one, see Dr. Findeisen in BE 406B, afindeis@temple.edu Most recitation classes meet in BE 413.

Schedule: Chemistry 121 (September-December 2006)

Lecture Week of:	Topic (McMurry)	Recitation Problems Assigned for Discussion in Recitation
-----Chapters-----		
Aug. 28:	1,2	Ch.1: 1-4, 6aabc, 8,11, 12, 14-16, 22, 24-26, 28-32,36 43, 44, 44 46
Sept. 4:	3	Ch.2: 1-3, 5, 6,8,15, 17, 18, 20, 21, 26, 30, 35-37, 41, 48-49, 55-57
11:	4	Ch.3: 1, 2, 4,-6, 8-99, 11-13, 15-16, 19,,28, 35, 38-39,43-45aeg, 57-58
18:	5	Ch.4: 1-4, 6-9, 11-12, 14-17, 24-28, 31, 33, 35, 37-38,41,43-44,51, 53, 56 QUIZ #1
25:	6	Ch.5: 1-4, 6-11, 13-16, 21, 24, 24, 28-32, 37, 42, 44-45, 47
The last day to drop the course is 9.11.2006		
MID-TERM EXAMINATION 1 (CHAPS.1-4)		
-Mid-term exams discussed in recitation		
Oct. 2:	7	Ch.6: 1-7, 10-11, 13-16, 19, 24, 29-30, 35, 37-39, 42, 44-46, 48, 54 QUIZ #2
9:	8	Ch.7: 1-10, 12-16, 23, 25-28, 30, 31b, 36, 42-45,, 48, 50, 56
16:	9	Ch.8: 1-14, 20, 23, 25-28, 30-31b, 36, 42-45, 48, 50, 56 QUIZ #3
23:	10	Ch.9: 2-3, 7-9,, 11-12, 14-15, 17-19, 21, 23, 32, 38, 43, 45, 47, 50, 51, 54, 56, 59-60, 67 MID-TERM EXAMINATION 2 (CHAPS.1-8)
-Mid-term exams discussed in recitation-		
10.30.2006 is the last day to withdraw from the course without penalty (Grade of W)		
30:	11	Ch.10: 2-13, 21-23, 29, 31-33, 35, 42 QUIZ #4
Nov. 6:	12	Ch.11: 1-19,20,27,35,39,40,47,55
13:	13	Ch.12:1-4, 10-11, 22-23, 28-29, 31, 37ab, 38-39, 42, 48-49
20:	14	Ch.13: 3, 6-9, 11, 13-14, 16, 18-21, 31-32, 36ab, 37-38, 43-44, 46, 49-53a, 55-56
Thanksgiving Recess Nov. 23-Sunday Nov 26.		
27:	14	Ch.14: 1-13,15,16,20, 27-28, 33, 37, 41 QUIZ #5
Dec. 4:	Review.	Sample exam will be discussed. Classes end Saturday December 9.
11:		Final Exam week

EXAM SCHEDULE:	Lec	Exam	Date	Time	Room
Lec 1	MWF 9:40	Wed	12 -13	8:30 - 10:30	BE 162
Lec 2	MWF 10:40	Fri.	12 -15	8:30 - 10:30	BE 162
Lec 3	MWF 11:40	Mon	12 -11	11:00 -1:00	BE 162
Lec 4	MWF 1:40	Wed	12 -13	11:00 -1:00	BE 162
Lec 5	TuTh 10:10	Tues	12 -12	8:30 -10:30	BE 162
Lec 6	TuTh 11:40	Thurs	12 -14	8.30-10.30	BE 162
Lec 7	Tu 6:10	Tues	12 -12	6:00 - 8:00	BE 162

Office Hours: All faculty will have office hours by appointment. In addition the table below reflects their regular office hours.

	Office	e-mail address	phone number
MWF 12:30 - 1:00pm	RP BE 230	robert.przeslawski@temple.edu	215-204-7916
MWF 11.30am-12.00pm	MW BE 352	mikewiils@temple.edu	215-204-0471
MWF 2:30 - 3:00pm	JW BE 440	john.r.williams@temple.edu	215-204-7144
MWF 3:00-3.30pm	JPC BE 102	icross@temple.edu	215-204-5899
Tu Th 12:30 - 1:00pm	FD BE 450	fdavis@temple.edu	215-204-0477
Tues 5:00 - 6:00pm	DH BE 427	hill@temple.edu	215-204-6209

Incompletes/Withdrawal: The grade of incomplete, I, will be considered only in those cases where at least 40% of the term's work has already been completed, and where there is a valid excuse (medical or similar) for missing the remainder of the course. The fear of earning a poor grade is not considered a valid excuse.

For those students who are assigned a grade of "I", all previous scores will stand and be used in the calculation of the final score when the course is completed. Students wishing to pursue an incomplete must obtain an Instructor Approval for an Incomplete Form (available from the web page) that the student and his or her instructor(s) must complete, before taking it to Dr. Findeisen to be used in drafting the official incomplete contract. Only Dr. Findeisen can sign and process incomplete contracts.

Problems: Answers to all assigned problems can be found in the Study Guide. It is essential that you work through each problem and understand the theory/method used for its solution, and do this BEFORE the recitation in which it is discussed. Mere copying of the answer into your notebook is useless. Experience has shown that students who do more than the assigned problems do well in this course. Exam question will be in similar format to book problems.

Some Friendly Advice - Organic Chemistry is a difficult course. For many, it will be the most difficult and time-consuming of your college career. You can make it easier on yourself by doing the following: (1) Do as many problems as you have time for beyond those assigned. Even if they are from another book, the practice will help. (2) Do study regularly. If you fall behind, it's hard to catch up. (3) You should understand theory and method. You may try to memorize definitions and summaries at the end of each chapter, but there is far too much material to memorize everything.

Unlike many other courses, the concepts introduced each week of the class will remain important during the remainder of the course, right through second semester.

GENERAL INFORMATION -

Specific Goals and Objectives:

The primary objective of this course is to introduce the student to the fundamental principles of organic chemistry. More specific objectives are:

- To learn the details of chemical bonding and the different hybridizations (sp^3 , etc.)
- To learn about isomers (constitutional, configurational and conformational)
- To learn in a systematic manner through mechanisms a variety of organic reactions involving carbocations, free radicals, carbenes, S_N1 , S_N2 , E_1 , E_2 , and electrocyclic reactions.
- To learn about resonance.
- To be familiar with the nomenclature, preparation and reactions of the functional groups: alkanes, alkenes, alkynes and alkyl halides.
- To understand the three dimensional shapes of simple organic molecules (stereochemistry, how their shapes affect reactivity through the use of molecular models.
- To begin to be able to do multiple step transformations of simple organic molecules, i. e. begin to learn organic synthesis.

Student Learning Outcomes:

Students will be able to:

- Recognize simple alkanes, alkenes, alkynes and alkyl halides and know the hybridization of each functional group.
- Be able to name in a systematic manner (IUPAC) simple organic compounds such as alkanes, alkenes, alkynes and alkyl halides.
- To be able to recognize and distinguish the three major types of isomers (constitutional, configurational and conformational).
- To be able to construct models (using model kits) of simple organic compounds such as alkanes, alkenes, alkynes and alkyl halides.
- To understand the following simple mechanisms: electrophilic addition, free radical halogenation, S_N2 , S_N1 ,
- E_1 , E_2 and electrocyclic reactions such as the carbene and Diels-Alder reaction.
- To know about 30 organic reactions and be able to use them in organic synthesis.
- To develop an appreciation for the concept of resonance.

Closed Sections: If the recitation or laboratory section(s) you would like are closed you should continue to check the Diamond Line & On-Line Course schedule (see Drop/Add above). You should also examine your schedule carefully to determine if any of the other open sections fit your schedule. To do this, the student must attend the first week of recitation and/or lab for the section(s) they wish to add. After considering the availability of space, a limited number of students MAY be issued at that time on first come

first serve basis. Only Dr. Findeisen may revise Organic schedules. Students should have a second and even third choice in case they are unable to obtain their first choice.

Readings: Even though you may not understand the material fully the first time, you should read through each chapter BEFORE it is scheduled to be discussed in the lecture (see attached calendar). You will be held responsible for all the text material in the following chapters, except for any sections that your instructor specifically tells you that you may exclude. Unforeseen circumstances may require that adjustments be made to the schedule. Check the web page for announcements, changes, and updates.

Homework: In order to obtain a practical understanding of how chemical theory is applied, you will need to work through the assigned end-of-the-chapter problems. You should be ready to discuss them when your recitation class is scheduled to deal with the chapter material (see attached calendar). The listed problems represent the minimum necessary for you to develop a working foundation in chemistry. You are encouraged to work additional problems and seek help outside the classroom. Unexpected circumstances may cause your instructor to make changes to this schedule. Check the web page for announcements. If you miss a class, be certain to find out if there have been any schedule changes.

HELP!!! Make certain you take full advantage of all the academic support services available at Temple on the Main Campus and at Ambler. These include instructor office hours, the Math and Science Resource Center (MSRC, 1810 Liacouras Walk - Rooms 201 & 208), on the Main Campus in addition to Supplemental Instruction sessions. The services provided at the MSRC include one-on-one tutoring, computer lab, weekly group tutorials/supplementary instruction, final exam review sessions, and a resource library. The center is open 6 days a week AND IS FREE. For additional information check <http://www.temple.edu/msrc>
Disability Resources and Services: Any student who has a need for accommodation based on the impact of a disability should contact their instructor privately to discuss the specific situation as soon as possible. Contact Disability Resources and Services at 215.204.1280 in 100 Ritter Annex to coordinate reasonable accommodations for students with documented disabilities.

Problems: You should first attempt to resolve any problems that you are having with your laboratory or recitation instructor(s). If after speaking with the instructor you have not resolved the issue, you should speak with the course coordinator before speaking to your lecturer. As coordinator he will attempt to mediate, but the ultimate decision is often determined by department policy. DO NOT expect your instructor to make new policy. *However, if you are having problems with the professional conduct of your instructor you should contact the course coordinator immediately.*

Make-ups: There will be no make-ups of missed recitation quizzes, tests, or final examinations.

Cheating: All students are expected to adhere to the highest levels of academic integrity. Any students found cheating (i.e. copying answers to exam, quiz, or homework; submitting experimental data that they did not collect; presenting graphs and calculations; or otherwise taking credit for work that they did not perform) will receive a failing grade in the course. They will also be reported to the Dean's office in the College of Science and Technology.

