

DEPARTMENT OF CHEMISTRY

Chemistry 3410 -- Organic Chemistry II (Fall 2015)

Lecture: MWF 8:00 am – 9:10 am.

Room: Langdale Hall 300

Required Text: 1. “Organic Chemistry”, 9th Edition, By John McMurry
Chapters **14-26 & part of 30** will be covered at a rate of approximately **one chapter per week.**

2. Preparing for Your ACS Examination in Organic Chemistry: The Official Guide

Optional Text: 1. Organic Chemistry I & II: A Student Workbook”,
ISBN # 978-0-7575-8271-4, By Keith O. Pascoe

2. Organic Chemistry II as a Second Language, by David Klein

3. “Introduction to Spectroscopy”, 3rd or 4th Edition, By Pavia, Lapman and Kriz.

Prerequisite: Organic Chemistry 1 (CHEM2400)

Instructor: Dr. Joan Mutanyatta-Comar

Office: PSC 381; Tel.# 404-413-6544

E-mail: jmutanyattacomar@gsu.edu

Office hours: MWF: 9:45 am – 12:00 noon. **Any other time by appointment.**

Communication:

1. Please send emails to me from your GSU e-mail account. Please put the course name in the subject of your email. **(Do not email from D2L)**
- 2. Please check D2L daily for class announcements and updates**

Course Introduction:

Organic chemistry has great relevance for all students in STEM disciplines. It is important for biologists and health professionals because nearly all of biochemistry involves the organic chemistry you'll learn in this class. For chemical engineers, understanding the properties of organic molecules and how reactions occur is critically important to understanding the processes in an industrial plant. Even if you don't buy the relevance of this class to your field, organic chemistry teaches important problem solving skills that are directly relevant to all scientists, engineers, and health professionals.

Learning Objectives: Students in this class will:

- Understand the properties and reactivity of important functional groups including conjugated π -systems, aromatic compounds, alcohols, phenols, ethers, epoxides, thiols, sulfides, nitriles, amines, and carbonyl compounds.
- Be able to write detailed mechanisms for important reaction classes: electrophilic aromatic substitution reactions and carbonyl nucleophilic addition, substitution and condensation reactions.
- Be able to plan multi-step syntheses of organic compounds.
- Learn important spectroscopic features of aromatic compounds, alcohols, amines, ethers, and carbonyl compounds.
- Be able to find and apply information needed to solve a problem and master concepts.
- Demonstrate inquiry skills that will enable them to formulate questions and to develop explanation of organic concepts.
- Demonstrate confidence as independent thinkers and life-long learners.

Grading Scheme: Four in-course exams will be given during the semester. At the end of the semester the lowest grade will be dropped. The average score from the remaining three exams will count **55%** of your final grade. **In-class Quizzes** and **PLTL** (attendance, participation and homework) will count for **10%** and **5%**, respectively, of the final grade. There will be a final exam (**ACS National Exam**) which will count **30%** of the final grade. You are strongly encouraged to take all four 'in-course' exams. The final ACS exam will also have several questions from material covered in "**Organic 1**"

Tentative Letter Grades:

A+	=	>95%
A	=	90%
A-	=	88%
B+	=	84%
B	=	80%
B-	=	78%
C+	=	75%
C	=	69%
C-	=	65%
D	=	61%
F	=	< 54%

Important Dates:

Aug. 24 th	Classes begin
Sept. 7 th	Holiday (Labor Day)
Oct. 13 th	Last day to withdraw with grade "W"
Nov. 23-28 th	Thanksgiving Break
Dec. 7 th	Last day of class
Dec. 9th	Final Exam: Wednesday (8:00 am -10:00 am)

Teaching Schedule

Wk. #	Wk. Of:	M	W	F
01	Aug 24	L	Q + L	Q + L
02	Aug 31	L	L	Q + PLTL
03	Sept 07	H	L	Q + PLTL
04	14	L	Exam 1	L
05	21	L	L	Q + PLTL
06	28	L	L	Q + PLTL
07	Oct 05	L	Exam 2	L
08	12	L	L	Q + PLTL
09	19	L	L	Q + PLTL
10	26	L	L	L
11	Nov 02	L	Exam 3	L
12	09	L	L	Q + PLTL
13	16	L	L	L
14	23	H	H	H
15	30	L	L	L
16	Dec 07	Exam 4	Final Exam	-

Notes:

- a) If you miss an exam for any reason that score will be dropped automatically. **NO MAKE-UP TESTS WILL BE GIVEN.** Students missing an exam will be expected to submit a written note explaining why the exam was missed. A student will not be excused from more than one test for any reason.
- b) **If you have concerns regarding the grade assigned to your exams you must submit your answer sheet for re-grading along with a written explanation of the concern. This submission must be made within one week of the date the exam was returned.**
- c) Students need to show their GSU Panther I.D. card when taking exams.
- d) The instructor reserves the right to assign seating during exams and quizzes.
- e) **Final grades are only available on GoSolar. They will not be posted on D2L. Please note that grades cannot be given to students by phone or email.**

Class Preparation and attendance: Students are **expected** to attend all lectures. As a courtesy to your fellow students, please arrive on time and do not leave during the lecture. Students are solely responsible for the timely completion of all assignments, absence being no excuse. **Suggested reading assignments given during the course of a lecture should be completed before the next lecture.**

Chemistry Departments Student Integrity Policy: The Department of Chemistry follows the University policy on academic honesty published in the “Faculty Affairs Handbook” and the “On Campus: The Undergraduate Co-Curricular Affairs Handbook”. All tests taken must represent the student’s individual, unaided effort. To receive or offer information during any examination will be considered cheating.

Any suspected offense may be referred to the Department’s Chairman for appropriate action.

Class will never be cancelled unless an official from the Chemistry Department gives the class personal notification. Don’t assume a note to be enough without checking the Department’s office.

The University requires that faculty members must, on a date after the mid-point of the course to be set by the Provost (or his designee)

1. Give a **WF** to all students who are on their rolls but are no longer taking the class and
2. Report the last day the student attended or turned in an assignment. Students who are withdrawn may petition the Departmental Chair for reinstatement into their classes.

NOTE:

Students are requested not to bring cellular telephones and/or pagers to exams. Persons violating this request will be asked to leave the room. No programmable calculators will be allowed in the classroom. Cell phones and laptops are allowed during lectures BUT NOT during exams.

COURSE ACTIVITIES:

A. In-class participation activities:

1. **Knowledge Checks:** The instructor will pose a multiple-choice question and students will answer with an “ABCDE” card. If there are a small percentage of students with the right answer, students will be asked to discuss their answer with another student. Students will then be allowed to vote again. These knowledge checks will help students monitor what they know and will help the instructor monitor what the class knows and what topics may need further instruction.
2. **Pair and Group Problem Solving Worksheets**

B. Peer-Led Team Learning (PLTL)

Peer Led Team Learning (PLTL) is a program designed to provide an active learning experience in which students can gain the skills and confidence to be successful learners in Organic Chemistry and, potentially, future courses. In weekly PLTL sessions, small groups of students will work together to solve problems. An undergraduate PLTL leader who has training in group dynamics and mastery of course content will lead them.

In this course a group of no more than 16 students will meet on Fridays with their peer leader in an assigned classroom. You will be given a readiness survey at the beginning of each PLTL session.

Attendance:

You will attend PLTL session on Fridays (see Tentative Schedule). PLTL sessions are mandatory. If you miss a session you will receive a grade of "0" for that week. Three or more unexcused absences will result in a grade "0" for PLTL.

Tardiness:

If you are more than 10 minutes late for a session, you will earn "0" points for the day. You must arrive to your PLTL session on time to complete the readiness survey with your leader. The readiness survey is provided at the start of the session and collected exactly 5 minutes after your session begins. Under no circumstances will the readiness survey be collected after 5 minutes. This is worth 5 points per session.

Leaving Early:

There are no excuses for leaving early. Leaving early will reflect in a student receiving "0" points for the day, unless you have a reason that is deemed excusable.

Point System:

Each week your PLTL Leader is required to give you points based on whether you came prepared and whether you participated, and on the correctness/completeness of your readiness survey.

The point breakdown is as follows:

- ✓ **5 max. points** for readiness survey = 1 point for each correct readiness survey question.
- ✓ **5 max. points** for bringing your textbook or lecture handouts or lecture notes
- ✓ **10 max. points** for discussion= students did not participate (0 points), students decently participated in the PLTL discussion (5 points) or student participated exceptionally (10 points).
- ✓ Total possible points per session: **20 points**

PLTL will drop the lowest grade of the semester. Points will be added, divided by the number of total sessions, multiplied by 100 to generate your grade as a percentage. If you successfully complete PLTL (grade of at least 70.00%) then your PLTL grade will be 5%

Conduct:

You must be respectful to your PLTL Leader and your peers as according to the "GSU Student Handbook Code of Conduct". Inconsiderate, disrespectful, dishonest, or disruptive behavior, as the instructor or your fellow classmates perceive it, or as is described in the Student Handbook, is unacceptable for adults in this course. The PLTL leaders reserve the right to ask you to leave or have you removed if such behavior is present. Such behavior may bring about official disciplinary procedures as outlined in the Student Handbook.

Cheating will NOT be tolerated! If you forge another student's signature, that is not only cheating, but against the law and consequences will ensue. Also, if you provide fake documentation to excuse an absence there will be severe consequences as decided by your instructor for your lecture course.

Athletes:

You MUST bring proper documentation to your instructor, NOT your PLTL Leader, BEFORE you leave for a game/tournament to be able to make-up the work for that week. Tournaments are scheduled months in advance so there is no excuse to not have provided proper documentation before the event.

Keys to success in organic chemistry:

You have all successfully completed Organic Chemistry I (CHEM2400), so you have an idea of what it takes to succeed in Organic Chemistry II (CHEM3410).

- **Attend class:** There is a very good correlation between class attendance and how well a student will do in this course. Some students may be able to teach themselves from the book, but generally, students who struggle most rarely come to class. Come to every class and to every PLTL session.
- **Be prepared:** You will get the most out of class if you have read the sections and watched the videos to be covered that day.
- **Ask questions:** If you don't understand something, ask the instructor in class, after class, or during office hours.
- **Keep up:** This course is cumulative and covers a lot of content. You will find it much easier if you study a little bit each week, or even better after each lecture. Study however you find most useful: flashcards, review outlines, practice problems, reaction lists, etc.
- **Practice, Practice, Practice:** Organic chemistry, like any skill, is best learned by doing. The best possible advice is to work as many example problems as you can find. Start with assigned worksheets, problems from the textbook, recommended workbook, PLTL worksheets, but also look for other sources of problems. When working problems, make sure that you understand why the correct answer is the right one.

- **Learn fundamental concepts:** Organic chemistry is very difficult to learn by rote memorization. If you understand the concepts, you will find it much easier to keep track of the large amount of information, and more importantly be able to apply it on the tests. Again, practice, practice, practice.
- **Get help early if you need it:** If you get behind, it can be very difficult to catch up. If you feel you are falling behind, increase your effort. Also consider getting outside help. I am happy to work with you during office hours. If you feel you need more extensive help, consider hiring a tutor. I can recommend some excellent tutors but a list of active tutors is also available from the Chemistry Department web page.
- **Make extensive use of available resources:** office hours, review sessions, PLTL sessions, SI sessions, CHEM3411 class etc.

CHEM 3411:

This is a tutorial class to help you with the lecture. You should register. The credits count toward your GPA but not towards your degree. Grading is based on your attendance. [Check GoSolar for more details.](#)

***Students who wish to request accommodation for a disability may do so by registering with the Office of Disability Services. Students may only be accommodated upon issuance by the Office of Disability Services of a signed Accommodation Plan and are responsible for providing a copy of that plan to instructors of all classes in which an accommodation is sought.**

***Your constructive assessment of this course plays an indispensable role in shaping education at Georgia State. Upon completing the course, please take time to fill out the online course evaluation.**

***Deviations from this syllabus may be required.**