

Prof. Marietta Schwartz

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Course Web Page: <http://www.chem.umb.edu/chemistry/orgchem/>

This course satisfies the Natural Sciences Distribution Requirement. It offers the opportunity to continue exploring the laws of the physical and biological world, how they are derived and tested through observation, theory, and experiment, and provides an understanding of the "correctable" nature of scientific knowledge and the interconnections among science, technology, and social concerns. In-class instruction and practice is provided in Quantitative Reasoning and the Use of Technology to Further Learning.

PLEASE NOTE: YOU MUST HAVE PASSED CH 253 OR THE EQUIVALENT TO ENROLL IN THIS COURSE!!

Basic Course Information

Lecture: M W F 11:30 AM — 12:20 PM (Science Building, Lipke Auditorium)

Discussion: M (1:30 PM, S-2-063); T (2:30 PM, S-1-006); W (1:30 PM, S-2-063); F (1:30 PM, S-2-065)

Laboratory: T (10:00 AM - 1:00 PM), W (1:30 - 4:30 PM), Th (1:00 - 4:00 PM) (Science Building, S-2-094)

Texts: Lecture: "Organic Chemistry", Bruice, 5th edition (paperback or hardcover).

Laboratory: "Laboratory Manual for Organic Chemistry", Cerny & Schwartz, Revised Printing (Green Cover), and "The Organic Chem Lab Survival Manual", J.W. Zubrick, 6th edition.

Course Content: Chapters 12-20 in Bruice; plus sections from chapters 21-25 TBA.

Exams: There will be four (4) in-class exams and a final, to be given on the dates listed below.

Friday, February 22

Friday, March 14

Friday, April 18

Friday, May 9

Supplementary Materials

"Pushing Electrons, A Guide for Students of Organic Chemistry", D.P. Weeks, 3rd edition, "Organic Chemistry as a Second Language", David Klein (note: the first edition was one book; the second edition has been split into two books, one for each semester. Either version is fine; this resource is highly recommended.)

General Information

This course consists of **lecture, laboratory, and discussion**. You must be enrolled for all three parts of the course. The laboratory must be satisfactorily completed to receive a passing grade for the course. Discussion attendance and working the assigned problems are not mandatory, but are highly recommended.

There are NO MAKE-UP EXAMS. The exams count for 80% of the grade, and the lab counts for 20%. The lowest score from the first three in-class exams will be dropped.

Incompletes for this course are only allowed under exceptional circumstances, and are never granted automatically. This means that if you think you qualify for an incomplete, you must request one! The basic requirements for an INC are: (1) you must be passing the course, and (2) you must have an insurmountable reason for not being able to finish the course. INCs are never given before the withdrawal deadline has passed.

NOTE: Lab starts the week of February 5th with check-in and orientation. Please be sure to print the lab schedule from the course web page before the first lab meeting. Also be sure to bring your lab manual along to the first lab meeting.

Extra Credit

You may add up to 30 points to your total score by working on the OWL (Online Web-based Learning) system. This is an online homework system that allows multiple tries at questions, with the questions changing randomly. The system can be accessed at <http://owl.oit.umass.edu> and more information (and a link to the site) is available on the course website. Please be sure to check the due dates for the various sections. Note that the assignment numbers on OWL do NOT correlate with the chapter numbers in the textbook. Look at the topics instead of the numbers.

Homework Assignments

A list of selected problems from the end of each chapter is available on the course web page. These problems should be done at a minimum. You are encouraged to do as many of the problems, both within the chapter and at the end of the chapter, as possible. Organic chemistry is learned by doing, not by reading; therefore it is to your advantage to do as many problems as possible. See the course web page for links to online sources of problems as well.

LECTURE SCHEDULE (APPROXIMATE)

Day	Date	Topic	Chapter Number
Monday	28-Jan	Announcements, etc.	-
Wednesday	30-Jan	IR spectroscopy	12
Friday	1-Feb	UV-vis spectroscopy	12
Monday	4-Feb	NMR	13
Wednesday	6-Feb	NMR	13
Friday	8-Feb	NMR	13
Monday	11-Feb	NMR	13
Wednesday	13-Feb	Aromatic Compounds	14
Friday	15-Feb	Aromatic Compounds	14
Monday	18-Feb	No Classes – Presidents' Day	-
Wednesday	20-Feb	Aromatic Compounds	14
Friday	22-Feb	Exam #1	-
Monday	25-Feb	Aromatic Compounds	14
Wednesday	27-Feb	Reactions of Aromatic Compounds	14/15
Friday	1-Mar	Reactions of Aromatic Compounds	14/15
Monday	3-Mar	Reactions of Aromatic Compounds	14/15
Wednesday	5-Mar	Reactions of Aromatic Compounds	14/15
Friday	7-Mar	Carboxylic Acids	16
Monday	10-Mar	Carboxylic Acids	16
Wednesday	12-Mar	Acyl Substitution	16
Friday	14-Mar	Exam #2	-
Monday	17-Mar	Spring Break	-
Wednesday	19-Mar	Spring Break	-
Friday	21-Mar	Spring Break	-
Monday	24-Mar	Acyl Substitution	16
Wednesday	26-Mar	Aldehydes & Ketones I: Nucleophilic Add'n	17
Friday	28-Mar	Aldehydes & Ketones I: Nucleophilic Add'n	17
Monday	31-Mar	Aldehydes & Ketones I: Nucleophilic Add'n	17
Wednesday	2-Apr	Aldehydes & Ketones I: Nucleophilic Add'n	17
Friday	4-Apr	Aldehydes & Ketones I: Nucleophilic Add'n	17
Monday	7-Apr	Aldehydes & Ketones II: Aldol Reactions	18
Wednesday	9-Apr	Aldehydes & Ketones II: Aldol Reactions	18
Friday	11-Apr	Aldehydes & Ketones II: Aldol Reactions	18
Monday	14-Apr	Aldehydes & Ketones II: Aldol Reactions	18
Wednesday	16-Apr	Redox	19
Friday	18-Apr	Exam #3	-
Monday	21-Apr	No Classes - Patriot's Day	-
Wednesday	23-Apr	Redox	19
Friday	25-Apr	Redox	19
Monday	28-Apr	Amines	20
Wednesday	30-Apr	Amines	20
Friday	2-May	Amines	20
Monday	5-May	Lab Quiz	-

Wednesday	7-May	Misc. Biochemical Topics	21-25
Friday	9-May	Exam #4	-
Monday	12-May	Misc. Biochemical Topics	21-25
Wednesday	14-May	Review	-

Please Note: This schedule is most definitely subject to change!