

CHE 676
Introduction to Organic Synthesis: Methodology
Fall 2017

Instructor: Professor John D. Chisholm
Office: 4-006 CST
Office Hours: By appointment, between 9 AM and 5 PM

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Credits: 3

Class meets TTh 11:00 AM - 12:20 PM in LSB 100

Website: <http://blackboard.syr.edu>

Course Description: This course is designed to be an intensive survey of the chemical methods and strategies utilized in modern synthetic organic chemistry. Emphasis will be placed on functional group transformations and carbon-carbon bond forming reactions.

Prerequisite: One year of college level organic chemistry (like CHE 275 and CHE 325).

Learning Objectives: After taking this course, students will:

- demonstrate an awareness of common reagents employed in modern organic synthesis.
- recognize and be able to comment on multiple different synthetic methods for a given transformation.
- be able to identify aspects of selectivity and specificity within a given transformation.
- understand the selectivity imparted by the Felkin-Anh model, chelation control, and 1,3-allylic strain in organic systems.
- be able to use chair transition state models to explain the stereochemical outcome of reactions when appropriate.
- be able to apply the above models to predict the observed outcomes in organic reaction systems.

Text: Zweifel, George S.; Nantz, Michael H. "Modern Organic Synthesis: An Introduction." W. H. Freeman and Co. 2017 2nd edition ISBN# 9781119086536. Sections of the textbook for reading will be assigned in class. Additional reading material from the primary literature may also be assigned.

Grading: To earn a passing grade (B) in the course students must achieve 50% of the points in the course. Your grade will be based solely on your performance on the 3 exams and 6 problem sets. No other means of receiving credit will be given. The grading scheme will be based on a curve, using the following point distribution:

3 Hour Exams (100 points ea)	300 pts	
6 Problem Sets (50 points ea)	300 pts	600 pts total

Problem Sets: Six problem sets will be given during the semester. No problem sets will be due during an examination week. Problem sets are due at 5:00 PM on the day they are marked due in the course calendar (see below). Please turn in the problem sets to in my mailbox in CST 1-014. Late problem sets will have 5 points deducted for every day they are turned in late. Please have any late problem sets initialed by one of the office staff to verify when they are submitted.

If you require any special consideration or accommodation due to a disability please see Dr. Chisholm immediately.

University Attendance Policy: Attendance in classes is expected in all courses at Syracuse University. Students are expected to arrive on campus in time to attend the first meeting of all classes for which they are registered. Students who do not attend classes starting with the first scheduled meeting may be academically withdrawn as not making progress toward degree by failure to attend. Instructors set course-specific policies for absences from scheduled class meetings in their syllabi. It is a federal requirement that students who do not attend or cease to attend a class to be reported at the time of determination by the faculty. Faculty should use "ESPR" and "MSPR" in Orange Success to alert the Office of the Registrar and the Office of Financial Aid. Students should also review the university's religious observance policy and make the required arrangements at the beginning of each semester.

University Policies: Students should review the University's policies regarding Disability-Related Accommodation; Diversity and Disability; the Religious Observances Notification and Policy; and Orange SUccess, which can be accessed via the Office of the Provost's website at: <http://provost.syr.edu/>.

Academic Integrity Policy: Syracuse University's Academic Integrity Policy reflects the high value that we, as a university community, place on honesty in academic work. The policy defines our expectations for academic honesty and holds students accountable for the integrity of all work they submit. Students should understand that it is their responsibility to learn about course-specific expectations, as well as about university-wide academic integrity expectations. The policy governs appropriate citation and use of sources, the integrity of work submitted in exams and assignments, and the veracity

of signatures on attendance sheets and other verification of participation in class activities. The policy also prohibits students from submitting the same work in more than one class without receiving written authorization in advance from both instructors. Under the policy, students found in violation are subject to grade sanctions determined by the course instructor and non-grade sanctions determined by the School or College where the course is offered as described in the Violation and Sanction Classification Rubric. SU students are required to read an online summary of the University's academic integrity expectations and provide an electronic signature agreeing to abide by them twice a year during pre-term check-in on MySlice.

CHE 676 Course Calendar
Fall 2017

<u>Day</u>	<u>Date</u>	<u>Lecture/Exam</u>	<u>Problem Sets</u>
Tue	Aug 29	Lecture 1	
Thu	Aug 31	Lecture 2	
Tue	Sept 5	Lecture 3	PS-1 out
Thu	Sept 7	Lecture 4	
Tue	Sept 12	Lecture 5	PS-1 in
Thu	Sept 14	Lecture 6	PS-2 out
Tue	Sept 19	Lecture 7	
Thu	Sept 21	Lecture 8	PS-2 in
Tue	Sept 26	Lecture 9	
Thu	Sept 28	Examination 1	
Tue	Oct 3	Lecture 10	PS-3 out
Thu	Oct 5	Lecture 11	
Tue	Oct 10	Lecture 12	
Thu	Oct 12	Lecture 13	PS-3 in
Tue	Oct 17	Lecture 14	PS-4 out
Thu	Oct 19	Lecture 15	
Tue	Oct 24	Lecture 16	
Thu	Oct 26	Lecture 17	PS-4 in
Tue	Oct 31	Lecture 18	
Thu	Nov 2	Examination 2	
Tue	Nov 7	Lecture 19	PS-5 out
Thu	Nov 9	Lecture 20	
Tue	Nov 14	Lecture 21	PS-5 in
Thu	Nov 16	Lecture 22	PS-6 out
Tue	Nov 21	Thanksgiving (No Class)	
Thu	Nov 23	Thanksgiving (No Class)	
Tue	Nov 28	Lecture 23	
Thu	Nov 30	Lecture 24	PS-6 in
Tue	Dec 5	Lecture 25	
Thu	Dec 7	Examination 3	

If you are unable to make one of these exams please see Dr. Chisholm immediately.