

Syllabus

Chem 395/425 Special Topics in Organic Chemistry (Spring 2016) "Modern Organometallic Chemistry"

Course Instructor

Instructor: Prof. Hee Yeon Cho
Office: Flanner Hall 209
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Group Website: <http://www.chogroup.org>

Course Schedule

Lecture: Tu/Th 7:00–8:15 PM in Flanner Hall 105
Office Hours: Tuesday 8:20–9:20 PM
Thursday 8:20–9:20 PM
To schedule an alternative appointment, please email me.

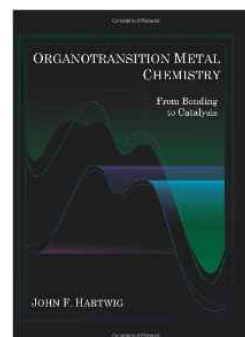
Email

You must use your Loyola email address for all communication during this course. Emails from outside sources are often blocked automatically.

Course Materials and Website

Textbook: Organotransition Metal Chemistry (by John F. Hartwig)
(Required) ISBN-13: 978-1891389535

Course Website: sakai.luc.edu



Grading

1) 3 Quizzes (50 points each)	150	15%
2) 1 Midterm Exam (150 points)	150	15%
3) 1 Final Exam (200 points)	200	20%
Total	500	50%*

(*The remaining 50% of the grade will be given by another instructor.)

1) Quizzes

There are **three** quizzes given in class on the dates listed below. Each quiz will be worth 50 points. There are NO MAKEUP quizzes. NO EXCEPTIONS. Plan accordingly.

Quiz Dates: 1/26, 2/4, 2/23

2) Midterm Exam

The midterm exam will take place on **Thursday, February 11 at 7:00–8:15 PM in Flanner Hall 105**. There are NO MAKEUP midterm exams. NO EXCEPTIONS. Plan accordingly.

3) Final Exam

The final exam will be cumulative with an emphasis on later material. The final exam will take place on **Thursday, March 3 at 7:00–8:15 PM in Flanner Hall 105**. There are NO MAKEUP final exams. NO EXCEPTIONS. Plan accordingly.

Final Grades

Final grades will be given after combining both parts of this course. A guideline for grades is shown below. At minimum, you will receive the grade indicated, however, if the class average is below ~70%, there will be a curved grading system.

A = 94–100%
A– = 89–93%
B+ = 86–88%
B = 81–85%
B– = 78–80%

C+ = 75–77%
C = 66–74%
C– = 63–65%
D = 51–62%
F = 0–50%

Lecture and Quizzes

The class lectures will be the *most critical source* of information for this course. If you miss a lecture, please find notes from another student in class. The quizzes will be on the class materials that you learned in the previous lectures. The quiz problems will reiterate important points made during the lectures and will be similar to exam questions.

Class Etiquette

Come to class on time.
No talking.
No electronic devices.

Students with multiple violations of classroom etiquette will be subject to point deductions throughout the semester.

Course Topics

- I. Introduction & History
- II. Fundamentals of Structure
 - d electrons and oxidation state
 - 18 electron rule
 - crystal field theory & ligand field theory
 - type of ligands
- III. Mechanisms
 - ligand substitution
 - oxidative addition & reductive elimination
 - sigma bond metathesis
 - migratory insertion
 - elimination
- IV. Examples of Catalysis

Goals

To build a fundamental understanding of how structure effects the function of transition metals. This foundation of knowledge will allow the students to attack new problems they are faced with as they progress as scientists. This will be achieved by taking an in-depth mechanistic analysis of several catalytic processes.

Academic Integrity

All students in this course are expected to have read and to abide by the demanding standard of personal honesty, drafted by the College of Arts & Sciences, that can be viewed at:

<http://www.luc.edu/cas/advising/academicintegritystatement/>

Anything you submit that is incorporated as part of your grade in this course (quiz, exam, etc.) must represent your own work. Any students caught cheating will, at the very minimum, receive a grade of “zero” for the item that was submitted. If the cheating occurred during a course exam, the incident will be reported to the Chemistry Department Chair and the Office of the CAS Dean. Depending on the seriousness of the incident, additional sanctions may be imposed.

Dropping and Withdrawal

Be aware of the following dates in the semester:

January 25: Last day to withdraw without a “W” grade

February 1: Last day to withdraw with a 100% Bursar credit

February 15: Last day to withdraw with a 50% Bursar credit

February 22: Last day to withdraw with a 20% Bursar credit

March 28: Last day to withdraw with a “W” grade, thereafter a “WF” will be assigned

Disabilities

Students with a university-documented disability should contact me *immediately*. If your disability requires that quizzes and exams be taken outside of the scheduled time or place, please consult: www.luc.edu/sswd/. Services for Students with Disabilities (SSWD) serves students with disabilities by creating and fostering an accessible learning environment. To accommodate your special requests, I need to receive *an official letter* from the SSWD center at least *a week before* the exam/quiz date.

Course/Instructor Evaluation – IDEA

Loyola has the IDEA program for instructor and course evaluations. At the end of the semester, you will complete an online evaluation of this course based on criteria set by IDEA and by the instructor. For this course, the main objectives are as follows:

- 1) Gaining factual knowledge (terminology, classifications, methods, trends)
- 2) Learning fundamental principles, generalizations, or theories
- 3) Gaining a broader understanding and appreciation of intellectual/cultural activity

Keep these objectives in mind throughout the course.

Changes to Syllabus

There may be changes to the syllabus during the semester. ***You are responsible for all syllabus changes made in class whether or not you attend.***

SPRING 2016, CHEM 395/425 Calendar (Prof. Hee Yeon Cho) *

*** NO MAKE-UP QUIZZES will be given. NO EXCEPTIONS. Plan accordingly.

*** NO MAKE-UP EXAMS (midterm or final) will be given. NO EXCEPTIONS. Plan accordingly.

Week	Monday	Tuesday	Wednesday	Thursday	Friday
1		1/19 Lecture 1	1/20	1/21 Lecture 2	1/22
2	1/25 Last day to drop without a "W"	1/26 Lecture 3 QUIZ 1	1/27	1/28 Lecture 4	1/29
3	2/1	2/2 Lecture 5	2/3	2/4 Lecture 6 QUIZ 2	2/5
4	2/8	2/9 Lecture 7	2/10	2/11 MIDTERM 7:00–8:15 PM	2/12
5	2/15	2/16 Lecture 8	2/17	2/18 Lecture 9	2/19
6	2/22	2/23 Lecture 10 QUIZ 3	2/24	2/25 Lecture 11	2/26
7	2/29	3/1 Lecture 12	3/2	3/3 FINAL EXAM 7:00–8:15 PM	3/4

* After spring break, this course will be taught by another instructor.