

Organometallic Chemistry
Chemistry 741
Fall Semester, 2016
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Room No. 745
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Time: 5:30 PM –6:45 PM (TR)

Office hours: 4:30-5:30 PM (TR) or by appointment.

Text Book: (Required) John F. Hartwig “Organotransition Metal Chemistry”

Text (Optional)

Robert Crabtree “The Organometallic Chemistry of Transition Metals”

Gary Spessard and Gary Miessler “Organometallic Chemistry”, 2nd Edition

Text Assignment (Very Very tentative)

Chapter 1: Structure and Bonding

Chapter 2-4: Survey of the Ligands

Chapter 5: Ligand Substitution Reactions

Chapter 6 & 7: Oxidative Addition Reactions

Chapter 8: Reductive Elimination Reactions

Chapter 9: Insertion Reactions

Chapter 10: Elimination Reactions

Chapters 11 & 12: Nucleophilic and Electrophilic Attack on Coordinated ligands

Chapters 13-20: Selected Topics to Catalytic Processes and Application to Organic Synthesis

Exam and Final Grade:

There will be two written exams on this course worth 100 points each. In addition, each student will make a presentation on the recent developments (reactions, synthesis, reagents, mechanism or application) of organometallic chemistry. The final grade will be based on 300 points (200 points from two exams and 100 points from the presentation). Exam dates will be announced in the class. There will be a frequency distributions curve in the final grading.