

University of Windsor  
Chemistry and Biochemistry  
Chemistry 59-350, Fall Term 2002

Lectures: Tues. and Thurs. 8:30-9:20 am in Dillon Hall room 253

Professor: Dr. Charles Macdonald (office: 355 Essex Hall)

Office Hours: Wednesday 2-5 pm or by appointment

Texts: (\* Available in bookstore)

none required, however these inexpensive books will be of immense use:

*\*Organometallics 1: Complexes with Transition Metal-Carbon s-Bonds*, Manfred Bochmann

*\*Organometallics 2: Complexes with Transition Metal-Carbon p-Bonds*, Manfred Bochmann

Other sources I will use and that you may find helpful:

Introductory Inorganic Chemistry texts (such as those by: Shriver and Atkins; Huheey, Keiter and Keiter; Cotton, Wilkinson and Gaus; Housecroft and Sharpe etc. some of which may be found in the library) and texts on organometallic chemistry (such as Collman, Hegedus, Norton, Finke; Spessard and Miessler) may be useful. I will also provide handouts during class or post notes on my website (<http://mutuslab.cs.uwindsor.ca/macdonald/teaching.htm>) for certain topics.

Grading Scheme

59-350	59-352
Midterm test 20%	Midterm test 20%
Assignments 10%	Assignments 10%
Lab 20%	Seminar 20%
Seminar 20%	Final 50%
Final 30%	

**One must pass the final to pass the course**

The final letter grade will be determined by the following conversion table:

93-100 = A+	87-92.9 = A	80-86.9 = A-
76-79.9 = B+	73-75.9 = B	70-72.9 = B-
66-69.9 = C+	63-65.9 = C	60-62.9 = C-
56-59.9 = D+	53-55.9 = D	50-52.9 = D-
	36-49.9 = F	0-35.9 = F-

Dates:

Assignments: challenging yet instructional problems. Final due date: Tues. Nov. 26.

Term Test: Covers all material in lectures to date.

**Thurs. Oct. 31 (in class).**

Seminar: Students give a 15 minute seminar on an advanced topic in Organometallic chemistry. A 1 page abstract with references is also required. Topics must be approved.

Talks begin: Tues. Nov. 21 (tentative).

**Final Exam Date: 8:30-11:30 Wed. Dec. 11.**

### **Course Outline:**

The course will cover the structure, synthesis, spectroscopic properties, reactivity patterns and applications of transition metal (and some main group metal) complexes which incorporate M-C or M-H bonds, with particular reference to catalysis.