

# CHM/1204HF Organometallic Chemistry & Catalysis, 2018

## Instructor Contact Information

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Office Hour: Friday 3–4 pm

**Lecture Time and location:** Tuesday 11:10-12:00, LM157  
Thursday 11:10-12:00, LM157

**Textbook:** THE ORGANOMETALLIC CHEMISTRY OF THE TRANSITION METALS, 6th ed., Robert H. Crabtree, John Wiley & Sons, Inc. 2014. The electronic version is available to University of Toronto students free of charge at <http://onlinelibrary.wiley.com.myaccess.library.utoronto.ca/book/10.1002/9781118788301>

**Course Description:** This course will cover a series of topics on organometallic chemistry and catalysis, including fundamental steps in organometallic reactions such as transmetalation, oxidative addition, reductive elimination, insertion, elimination, and metathesis, as well as their applications in catalytic transformations. Typical bonding modes, structures, and reactivity patterns of various types of organometallic compounds will be discussed, including compounds with  $\sigma$ -bound ligands, compounds with  $\pi$ -bound ligands, and carbene complexes.

**Use of Quercus:** Lecture notes, announcements, and other course related materials will be posted in the Quercus system. Students are expected to check the Quercus system regularly.

## Marking Scheme:

1. Problem Set #1:	15 marks	Due Oct. 18, 2018 at 11:10 am in class
2. Problem Set #2:	15 marks	Due Nov. 22, 2018 at 11:10 am in class
3. Computation Project:	30 marks	Report Due Dec 4, 2018 at 11:10 am in class
4. Final Exam	40 marks	Final Exam Period (3 hours)

The late penalty for all term works is 10% per day.  
All works should be done independently. No plagiarism is tolerated.