CHEMISTRY 7600/760
ASYMMETRIC SYNTHESIS AND CATALYSIS
Fall 2010
Guelph-Waterloo Centre for Graduate Work in Chemistry and Biochemistry

Instructor: Dr. M. Chong (Waterloo campus)
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Lectures: Thursdays 7-9:30 pm, MainLink rooms (EIT 2053/MACN 101) starting September 16, 2010

Textbook: There will be no official textbook for this course. Suggested reference books/readings include:

Principles of Asymmetric Synthesis Gawley, R. E.; Aube, J. Pergamon, Oxford, 1996.
Chemical Reviews, Volume 103, issue 8, 2003. A theme issue on Enantioselective Catalysis
Catalytic Asymmetric Synthesis, 3rd ed. Ojima, I. Wiley, 2010.

Outline: This course will cover aspects of asymmetric synthesis and catalysis ranging from basic principles to state-of-the-art examples drawn from the current literature.
Topics will include:

- Principles of selectivity in organic synthesis
- Asymmetric reductions/hydrogenations
- Asymmetric oxidations
- Nucleophilic additions to carbonyl compounds
- Aldol and related processes
- Diels-Alder and related reactions
- Organocatalysis

Tentative Grading Scheme:

Assignments	25%
Term paper[1]	25%
Final Exam[2]	50%

[1] A review of a pertinent area not covered in detail in the course – presentations may be involved depending on numbers of students.

[2] Final examination will be held on December 9, 2010 (1 week after last class).