

CHEM*7640
SYNTHETIC ORGANIC REACTIONS
(Winter SEMESTER 2016)
Information Sheet and Course Outline

- **Instructor:** Professor William Tam
Office: MACN 332 Phone: 824-4120 (Ext.52268)
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**You are welcome to visit/contact me any time to discuss problems.

- **Lectures:** January 11, 2016 – April 4, 2016, every Mondays
7:00 pm–9:20 pm, Main Link Room (Guelph: MACN101; Waterloo: EIT2053).

- **Useful Reference Books:**
 - (a) “*Advanced Organic Chemistry, Part A and Part B*”, 3rd or 4th Ed., by Carey, F. A. and Sundberg, R. J., Kluwer Academic/Plenum Publishers.
 - (b) “*Organic Synthesis*”, 2nd Edition, by Smith, M. B., McGraw-Hill Companies, Inc., New York, 2002.
 - (c) “*March’s Advanced Organic Chemistry*”, 5th Ed., by Smith M. B. and March, J., John Wiley and Sons, Inc., New York, 2001.
 - (d) “*Advanced Organic Chemistry: Reactions and Mechanisms*”, by Miller, B., Prentice-Hall, Inc., 1998.
 - (e) “*Polar Rearrangements*”, by L.M. Harwood, Oxford University Press, 1995.
 - (f) “*Classics in Total Synthesis*”, by Nicolaou, K. C. and Sorensen, E. J., VCH Publishers, Inc., New York, 1996.
 - (g) “*The Logic of Chemical Synthesis*”, by Corey, E. J. and Cheng, X. M., John Wiley and Sons, Inc., New York, 1989.
 - (h) “*Comprehensive Organic Transformations*” 2nd Ed., by Richard C. Larock, Wiley-VCH, 1999.

- Mark Distribution:** The final grade will be obtained as follows:

Term Paper:	15%	(Due date: April 4, 2016)
Seminar:	15%	(Dates: March 28 th and April 4 th 2016)
Mid-term Exam:	30%	(Date: February 22, 2016)
Final Exam:	40%	(Date: April 11, 2016)

Lecture Schedule

January	11 th	Chapter 1 (Introduction & Review on Basic Organic Reactions), Chapter 2 (Oxidation)
	18 th	Chapter 2 (Oxidation), Chapter 3 (Reduction)
	25 th	Chapter 3 (Reduction)
February	1 st	Chapter 4 (Olefination) & Chapter 5 (Introduction to Protecting Groups in Organic Synthesis)
	8 th	Chapter 6 (Functional Groups Interconversion)
	15 th	(Winter Break, no class this week)
	22 nd	Mid-term Exam. (covering Chapters 1-6)
	29 th	Chapter 7 (Carbonyl Chemistry)
March	7 th	Chapter 8 (Cycloaddition)
	14 th	Chapter 9 (Sigmatropic Rearrangement)
	21 st	Chapter 10 (Organometallic Reagents in Organic Synthesis)
	28 th	Tutorial and Seminars
April	4 th	Tutorial and Seminars
	11 th	Final Exam.

Addition Information:

For Waterloo students, please see the following:

Academic Integrity: In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. [Check www.uwaterloo.ca/academicintegrity/ for more information.]

Appeals: A decision made or penalty imposed under Policy 70 (Student Petitions and Grievances) (other than a petition) or Policy 71 (Student Discipline) may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to Policy 72 (Student Appeals) www.adm.uwaterloo.ca/infosec/Policies/policy72.htm .

Discipline: A student is expected to know what constitutes academic integrity [check www.uwaterloo.ca/academicintegrity/ to avoid committing an academic offence, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about “rules” for group work/collaboration should seek guidance from the course instructor, academic advisor, or the undergraduate Associate Dean. For information on categories of offences and types of penalties, students should refer to Policy 71, Student Discipline, www.adm.uwaterloo.ca/infosec/Policies/policy71.htm. For typical penalties check Guidelines for the Assessment of Penalties, www.adm.uwaterloo.ca/infosec/guidelines/penaltyguidelines.htm

Grievance: A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70, Student Petitions and Grievances, Section 4, www.adm.uwaterloo.ca/infosec/Policies/policy70.htm. When in doubt please be certain to contact the department’s administrative assistant who will provide further assistance.

Note for Students with Disabilities: The Office for persons with Disabilities (OPD), located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the OPD at the beginning of each academic term.

Turnitin.com: Plagiarism detection software (Turnitin) will be used to screen assignments in this course. This is being done to verify that use of all material and sources in assignments is documented. In the first week of the term, details will be provided about the arrangements for the use of Turnitin in this course.

Note: students must be given a reasonable option if they do not want to have their assignment screened by Turnitin. See: <http://uwaterloo.ca/academicintegrity/Turnitin/index.html> for more information.

For Guelph students, please see the following:

E-mail Communication: All students are required to check their University of Guelph e-mail account regularly. E-mail is the official route of communication between the University and its students.

When You Cannot Meet a Course Requirement: When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course in writing, with your name, id#, and e-mail contact. See the graduate calendar for information on regulations and procedures for Academic Consideration.

Drop Date: The last date to drop one-semester courses, without academic penalty, is Friday, 30 October 2015. Two-semester courses must be dropped by the last day of the add period in the second semester. Refer to the Graduate Calendar for the Schedule of Dates.

<https://www.uoguelph.ca/registrar/calendars/graduate/current/sched/index.shtml>

Academic Misconduct: The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community – faculty, staff, and students – to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection. The Academic Misconduct Policy is detailed in the Graduate Calendar.

Recording of Materials: Presentations which are made in relation to course work—including lectures—cannot be recorded in any electronic media without the permission of the presenter, whether the instructor, a classmate or guest lecturer.

Resources: The Graduate Calendar is the source of information about the University of Guelph's procedures, policies and regulations that apply to graduate programs:

<http://www.uoguelph.ca/registrar/calendars/graduate/current/>