Chemistry 6226

Advanced Synthetic Organic Chemistry

Spring 2013

Instructor:	Aaron Aponick, 328 Sisler Hall, 352.392.3484, aponick@chem.ufl.edu
Lectures:	Mondays, Wednesdays, and Fridays 8:30-9:20 a.m., 111 Flint Hall
Office Hours:	Tuesdays 8:00-10:00 a.m., 328 Sisler Hall and by appointment
Teaching Assistant:	Paulo Paioti, ppaioti@chem.ufl.edu
Required Texts:	*Advanced Organic Chemistry, Part B: Reactions and Synthesis, 5th Ed.* by Francis A. Carey and Richard J. Sundberg, ISBN 9780387683546
	Classics in Stereoselective Synthesis by Erick M. Carreira and Lisbet Kvaerno ISBN 9783527299669
Reference Texts:	*Modern Methods of Organic Synthesis, 4th Ed.* by William Carruthers & Iain Coldham
	Modern Organic Synthesis Dale L. Boger, TSRI press
	Transition Metals in the Synthesis of Complex Organic Molecules by Louis S. Hegedus
	Organic Synthesis, Strategy and Control by Paul Wyatt and Stuart Warren
	Strategic Applications of Named Reactions in Organic Synthesis by Laszlo Kurti and Barbara Czako
	Encyclopedia of Reagents for Organic Synthesis Available in the Science Library Reference Section and online
	Comprehensive Asymmetric Catalysis by Jacobsen, Pfaltz, and Yamamoto eds.
	Protecting Groups by Philip J. Kocienski
	Protective Groups in Organic Synthesis by Theodora W. Green and Peter G. M. Wuts

Course Objective and Content: This course is intended to provide an overview of synthetic organic chemistry with an emphasis on carbon-carbon bond forming reactions. Understanding issues of chemo-, regio-, and stereoselectivity are central to developing synthetic strategies and therefore will be highlighted throughout. The course consists of lectures and practice problems taken from the current literature when possible.

Tentative Course Outline:

1. Functional Group Interconversion
   - Oxidation
   - Reduction
   - Protecting Groups
   - Alkene Functionalization
   - Miscellaneous

2. C-C Bond Forming Reactions
   - Olefination
   - Cross-coupling
   - Carbenes
   - Enolates, formation/alkylation/aldol reactions
   - Radical Cyclization
   - Pericyclic Reactions
   - Acyclic Stereocontrol

Grading:

Exam 1	100 pts
Exam 2	100 pts
Exam 3/Final	100 pts
Problem Sets	50 pts

Exam Dates:

Exam 1	February 13, 2013
Exam 2	March 27, 2013
Exam 3	April 24, 2013

All exams are scheduled 7:30-9:30 in 340 Sisler Hall

Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

No cell phones, text messaging, headphones, computers, or other electronic devices are to be used during any class meeting.