Chemical Synthesis - Part I and II Course Director: Uttam Tambar		
Mon/Wed	Lecturer	Topic
08/24	Tambar	Chemical Oxidation
08/26	Tambar	Additions to Double Bonds - I
08/31	Tambar	Additions to Double Bonds - II
09/02	Tambar	The Carbon-Heteroato m Bond - I (Epoxidation and Epoxide Opening)
09/07	No Class	**Labor Day Holiday**
09/09	Tambar	The Carbon-Heteroato m Bond - II (Dihydroxylation)
09/14	Tambar	The Carbon-Heteroato m Bond - III (Arene Oxydation)
09/16	Tambar	The Carbon-Heteroato m Bond - IV (Synthesis and Reaction)
09/21	Tambar	The Carbon-Heteroato m Bond - I (Epoxidation and Epoxide Opening)
09/23	Tambar	The Carbon-Heteroato m Bond - II (Dihydroxylation)
09/28	Tambar	The Carbon-Heteroato m Bond - III (Arene Oxydation)
09/30	Tambar	The Carbon-Heteroato m Bond - IV (Synthesis and Reaction)
10/05	Tambar	The Carbon-Carbon Bond - I (Alkylation at Nucleophilic Carbon I)
10/07	Tambar	The Carbon-Carbon Bond - II (Alkylation at Nucleophilic Carbon II)
10/12	Tambar	The Carbon-Carbon Bond - III (Condensation and Addition Processes)
10/14	Tambar	The Carbon-Carbon Bond -IV (Acyclic Diastereoselection)
10/19	Tambar	Enantioselective Carbon-Carbon Bond Formation
10/21		**Midterm Exam**
10/26	Ready	Functional Group Protection
10/28	Ready	Case Study - I
11/02	Chen	Case Study - II
11/04	De Brabander	Case Study - III
11/09	De Brabander	Case Study - IV
11/11	De Brabander	Case Study - V
11/16	Tambar	Case Study – VI
11/18	Tambar	Case Study – VII
11/23	Falck	Case Study – VIII
11/25	Falck	Case Study - IX
11/30	MacMillan	Natural Product Biosynthesis - II
12/02	MacMillan	Natural Product Biosynthesis - III
12/07		**Oral Presentations**

Required Text

* F. A. Carey and R. J. Sundberg 'Advanced Organic Chemistry: Part A: Structure and Mechanisms; Part B: Reaction and Synthesis' 5th Ed., Springer, 2008. ISBN 0387-68346-1; 0387-68354-2

Suggested Reading

* K. C. Nicolaou and E. J. Sorensen 'Classics in Total Synthesis' Wiley-VCH 1996. ISBN 3-527-29284-5.

* E. J. Corey and X.-M. Cheng 'The Logic of Chemical Synthesis' John Wiley & Sons, 1995. ISBN 0-471-11594-0.

* Ho, T.-L. 'Tactics of Organic Synthesis' John Wiley &Sons, 1994. ISBN 0471-59896-8.

* March, J. "Advanced Organic Chemistry, Fourth Edition"

* Hegedus, L. S. "Transition Metals in the Synthesis of Complex Organic Molecules"

* Eliel, E. L.; Wilen, S. H. "Stereochemistry of Organic Compounds"

* Kürti, L.; Czakó, B. "Strategic Applications of Named Reactions in Organic Synthesis"