

# Medicinal Chemistry: Research Techniques and Principles

## Lecture Schedule - Fall 2017

Month	Day	Topic	Assignments
Sept.	Tues, 5	Chemical Bonding	Anslyn <sup>1</sup> -Chap. 1 ( <i>Note</i> )
	Thurs, 7	Chemical Bonding	Anslyn <sup>1</sup> -Chap. 6
	Tues, 12	Bonding/Stereochemistry	
	Thurs, 14	Stereochemistry	Anslyn <sup>1</sup> -Chap. 2
	Tues, 19	Conformations	
	Thurs, 21	Conformations	
	Tues, 26	<b>Exam # 1</b> ( <i>Bonding, Stereochemistry, Conformations</i> )	Anslyn <sup>1</sup> -Chap. 7
	Thurs, 28	Thermodynamics/Kinetics/Isotope Effects	Anslyn <sup>1</sup> - Chap. 8 (pp 421-441), Chap. 5
Oct.	Tues, 3	Acids & Bases	
	Thurs, 5	Acids & Bases/Substituent Constants	Anslyn <sup>1</sup> - Chap. 8 (pp 441-464)
<b>Tues, Oct, 10, Thurs, Oct 12, Tues, Oct 17 and Thurs, Oct. 19 No Class</b> (Will be rescheduled as needed)			
	Tues, 24	Mechanisms - Additions	Anslyn <sup>1</sup> - Chap. 10 (pp 576-602)
	Thurs, 26	Mechanisms – Additions/Eliminations	
	Tues, 31	Mechanisms – Eliminations	
Nov.	Thurs, 2	<b>Exam # 2</b> ( <i>Thermo, Kinetics, Isotopes, Acid/Base, Subst. Const, Additions, Eliminations</i> )	Anslyn <sup>1</sup> -Chap. 11 (pp 627-673)
	Tues, 7	Mechanisms - Substitution	Anslyn <sup>1</sup> - Chap. 10 (pp 607-617)
	Thurs, 9	Mechanisms - Substitution	Anslyn <sup>1</sup> -Chap. 15
	Tues, 14	Mechanisms - Pericyclic	
	Thurs, 16	Mechanisms - Pericyclic	Anslyn <sup>1</sup> -Chap. 12
	Tues, 21	Mechanisms – Pericyclic/Organometallic	<i>See Footnote 3</i>
	Thurs, 23	<b>No Class - Thanksgiving</b>	Leonard <sup>2</sup> – Chap. 1,17
	Tues, 28	<b>Exam # 3</b> ( <i>Substitutions, Pericyclics, Organometallics</i> )	Leonard <sup>2</sup> – Chap. 2,3
	Thurs, 30	Literature Searching	Leonard <sup>2</sup> – Chap. 7,8
Dec.	Tues, 5	Literature Searching	Leonard <sup>2</sup> – Chap. 4,5,6
	Thurs, 7	Lab Safety	Leonard <sup>2</sup> – Chap. 9,10,16
	Tues, 12	Practical Aspects of Synthetic Medicinal Chemistry	Leonard <sup>2</sup> – Chap. 11
	Thurs, 14	Practical Aspects of Synthetic Medicinal Chemistry	Leonard <sup>2</sup> – Chap. 12,13,14,15
	TBA	<b>Exam # 4</b> ( <i>Lit., Safety, Practical Aspects</i> )	

*Note: Students should read Chapter 1 in Anslyn before the first class.*

<sup>1</sup> Reading assignments from Anslyn & Dougherty - Modern Physical Organic Chemistry

<sup>2</sup> Reading assignments from Leonard, Lygo, & Procter – Advanced Practical Organic Chemistry

<sup>3</sup> It is suggested that students purchase and read Li, Limberaksi, and Pflum – Modern Organic Synthesis in the Laboratory

**All reading assignments should be completed before the next class period. Please come to class prepared to answer questions.**