

## CHM 318L Laboratory Schedule – Winter 2017

Week	Experiment/Activity	Gilbert & Martin Reading Assignment <sup>1</sup>	Online Assignment <sup>2</sup>
1	Check-in; course info; introduction to NMR Spectroscopy	<i>Chapter 8.2 (IR Spectroscopy pgs. 238-257)</i>	
2	NMR Spectroscopy (continued)	<i>Chapter 8.3 (NMR Spectroscopy pgs. 258-293)</i>	
3	Bromination of (E)-stilbene [or (E)-cinnamic acid] <i>Miniscale Procedure pg. 379</i>	<i>Heating under reflux pgs. 79-81</i> <i>Recrystallization pgs. 36-39</i> <i>Vacuum Filtration pgs. 67-69</i> <i>Melting Point pgs. 36-39</i>	
4	Dehydration of cyclohexanol; purification through steam distillation <i>Miniscale Procedure pg. 347-348</i>	<i>Distillation (simple &amp; fractional) pgs. 53-57</i> <i>Drying Agents 83-84</i>	
5	NaOCl oxidation of cyclododecanol; purification of solid through extraction <i>Miniscale Procedure pg. 593-595</i>	<i>Extraction pgs. 73-78</i> <i>Rotary Evaporator pg. 90</i>	
6	Grignard preparation and rxn to form triphenylmethanol <i>Miniscale Grignard Preparation pg. 719-721</i> <i>Miniscale (Triphenylmethanol) pg. 728-729 (Stopper the flask)</i>	<i>Review</i> <i>Organometallic Chemistry pgs. 715-719</i>	
7	Grignard (continued) <i>Miniscale (Triphenylmethanol Work-up, isolation, and purification) pg. 728-729</i>		
8	Ether formation: methyl triphenylmethyl ether <i>S<sub>N</sub>1 Reaction published from Kathleen V. Kilway, University of Missouri</i>	<a href="http://d.web.umkc.edu/drewa/chem321/handouts/lab7sn1triphenylmethanolfs2010.pdf">http://d.web.umkc.edu/drewa/chem321/handouts/lab7sn1triphenylmethanolfs2010.pdf</a>	
9	Polymers – preparation and processing of polystyrene; cross-linking using initiator <i>Miniscale (Part A &amp; B) pg. 860-861</i>	<i>Chain Reaction Polymerization pgs. 855-860</i>	
10	Check out, Final Quiz		

\*Students withdrawing from the associated lecture course (CHM 315) at any time during the quarter are also required to withdraw from lab.  
 Lab Textbook: Experimental Organic Chemistry, J.C.Gilbert, S.F.Martin., CENGAGE Learning Laboratory., ISBN 978-1-305-08046-1, 6<sup>th</sup> Ed., 2016  
 \*Lecture Textbook: Organic Chemistry, Wade, Prentice Hall, 8<sup>th</sup> Edition, 2013