



(Subject to Change - 08.10.2016)

Week	Date	Theme	Discussion	Activity		
1	9/1/16	Getting Started	Class Introduction Carbon Atoms and Organic Molecules Producing Lab Reports	Lab Tour Safety -- Rules, Contract & Quiz Locker Check-in		
2	9/8/16	Separations	Solubility	How molecular structure can be used to predict solubility and miscibility. Why some solutions will separate into a heterogenous sample.	Exp 2: Solubility	
3	9/15/16		Crystallization	Solutions at the limit of solubility can produce pure crystalline phases. How that effect can be predicted and utilized in the lab.	Exp 3A: Semimicroscale Crystallization Exp 3C: Solvent Selection for Crystallization	
4	9/22/16		Extraction	Using solubility barriers to selectively pull a component from one solution into another.	Exp 4A: Extraction of Caffeine Exp 4B: Distribution of Solute in Immiscible Solvents	
5	9/29/16	Chromatography	Elution	How slight differences in solubility can produce big separations when solutions are passed through silica gel. How to tune this effect.	Exp 6A: Chromatography Exp 6B: Selecting Solvents for Elution	
6	10/6/16		Thin Layer (TLC)	Using chromatography for analysis. Gas and thin layer techniques for identifying mixtures and their components.	Exp 12: TLC Identification of an Analgesic Drug	
7	10/13/16		Column Chromatography	The technique of column chromatography for isolating pure samples of other difficult to separate mixtures.	Exp 17: Chlorophyll & Carotenoid Pigments	
8	10/20/16	MIDTERM EXAM				
9	10/27/16	Purity	Melting Point	Isolating and determining the purity of pure substances that compose common and valuable mixtures.	Exp 10: Isolation of Active Ingredients from Analgesic Drugs	
10	11/3/16		Sublimation	Taking advantage of other physical properties to isolate put materials. Exploring cold finger apparatus and sublimation.	Exp 13A: Isolation of Caffeine, p100	
11	11/10/16		Distillation	Using distillation to prepare pure samples and confirming their structure and purity with infrared spectroscopy.	Exp 15A: Essential Oils, Distillation of Oil of Cloves	
12	11/17/16	Preparations	Alkyl Halides	Preparing building block compounds from which more complicated substance can be constructed. Building alkyl halides.	Exp 23C: Prep of t-Pentyl Chloride	
13	11/24/16		Holiday - No Class Meetings			
14	12/1/16		Olefins	The dehydration of an alcohol to insert a foot hold, a double bond, in a carbon skeleton.	Exp 24: Prep of 4-Methyl Cyclohexene	
15	12/8/16	Synthesis	The story of willow bark. Designing, synthesizing, isolating and characterizing a better medicine by making a better molecule.	Exp 9: Synthesis of Aspirin		
16	12/15/16	FINAL EXAM			-	