

Providence Extension Program Organic Chemistry Course – Fall 2021/ Quarter 2 – Week-at-a-Glance – Milford				
Chapters	Week	Discussion Topics	Homework Due on Mon/ Tues	Laboratory
<i>Every Thurs, there will be an in-class quiz covering material from your readings/ laboratories/ homework for the week</i>				
Chapter 3 – Orbital Interactions	Week 9 Oct. 19 th	▪ Sections 3.5 to end: understanding MO theory, orbital conservation, sigma and pi symmetry, drawing orbital pictures, effective electronegativity		<i>Possibly Mayonnaise lab</i>
The Mystery of Life's Origin - Chapters 2 & 3 Icons of Evolution - Chapter 2	Week 10 Oct. 26 th	▪ The <i>Mystery of Life's Origin</i> text, Chapter 2, and Icons of Evolution, Chapter 2. Discuss Miller-Urey experiment, and how it advanced Darwinian thought; assumption flaws.	<input type="checkbox"/> Chapter 3 Worksheets <input type="checkbox"/> Chapter 3 Test	<i>APA Writing Lab: Writing a Theoretical Article¹</i>
Nomenclature 1 and 2	Week 11 Nov. 2 nd	▪ Nomen 1 – Naming Simple Organic Compounds ▪ Nomen 2 – Naming Alkenes, Alkynes, Benzenes	<input type="checkbox"/> Theoretical Article I, first draft Summarize Miller-Urey experiment, how it advanced Darwinism, and most convincing weaknesses according to provided resources	
Chapter 4 – Isomerism 1	Week 12 Nov. 9 th	▪ Sections 4.1 – 4.6; conformational isomers, energy changes, cyclic structures, chair flips	<input type="checkbox"/> Nomenclature Worksheets <input type="checkbox"/> Theoretical Article I, final revision	
	Week 13 Nov. 16 th	▪ Sections 4.7 – 4.13; substituted cyclohexane, cis and trans isomers, Haworth projections ▪ Discuss the simulation of pre-biotic monomer synthesis and myths surrounding the pre-biotic soup		<i>Modeling lab – substituted cyclohexanes, cis/ trans isomers</i>
Base-catalyzed Saponification Reaction – Soap Making	Week 14 Nov. 30 th	▪ Saponification Reaction – Making of Soap, reaction mechanism of base-catalyzed saponification		<i>Saponification Reaction:</i> ▪ Day 1: Measure oils/ mix lye ▪ Day 2: Perform reaction/ add fragrance, dyes
Chapter 5 – Isomerism 2	Week 15 Dec. 7 th	▪ Sections 5.1 – 5.6; configurational isomers, enantiomers, diastereomers, stereochemistry, Fisher projections	<input type="checkbox"/> Saponification Reaction lab <input type="checkbox"/> Chapter 4 Worksheets <input type="checkbox"/> Chapter 4 Test	
	Week 16 Dec. 14 th	Sections 5.7 – 5.11; Physical and chemical properties of isomers, bond stability, separation techniques, optical activity.		
	Jan. 11 th	Quarter 3 Starts	<input type="checkbox"/> Test #5 – Chapter 5 due	

1. According to the *Sixth Edition of the Publication Manual of the American Psychological Association* (American Psychological Association [APA], 2010) theoretical articles typically draw on existing research literature to advance a theory. Typically “. . . theoretical articles present empirical information only when it advances a theoretical issue, tracing the development of theory for the purpose of expanding and refining theoretical constructions in order to present a new theory, or further analyze and critique existing theory. In such articles, authors customarily evaluate a “. . . theory’s internal consistency and external validity.” The sections contained within a theoretical article can vary in order of their content, as long as the sequence and development of the argument is logical.