

Providence Extension Program Organic Chemistry Course – Fall 2021/ Quarter 1 – Weekly Pacing Schedule - Milford				
Chapters	Week	Discussion Topics	Homework Due on Tuesdays	Laboratory
<i>Every Thursday, there will be an in-class quiz covering material from your readings/ laboratories/ homework for the week</i>				
Chapter 1 – Atomic and Molecular Structure	Week 1 Aug. 24 th	Introduction to Organic Chemistry, atomic structure, electron configurations, covalent bonding, Lewis structures and octet rule, electronegativity properties of bonds, ionic bonds (pp. 1 - 20, to Section 1.9).		Lab 1 – <i>Writing Lewis Structures</i>
	Week 2 Aug. 31 st	Writing formal charges, resonance theory, molecular representation in various notation forms (pp. 20 – 39, stop at Section 1.15).		Lab 2 – <i>Writing Formal Charges</i>
	Week 3 Sept 7 th (Labor Day on Tuesday)	Introduction to biological molecules: Proteins, carbohydrates, and nucleic acids (pp. 39 – 46, end of chapter)	<input type="checkbox"/> Lab 1 Report Sheet <input type="checkbox"/> Lab 2 Report Sheet	
Chapter 2 – Three-Dimensional Geometry, intermolecular Interactions and Physical Properties	Week 4 Sept 14 th	Molecular geometry; VSEPR theory; dipoles and dipole moments; physical properties, functional groups, and intermolecular interactions (pp. 76 – 89, stop at Section 2.6)	<input type="checkbox"/> Test 1 – Chapter 1 <input type="checkbox"/> Homework for Chapter 1	Lab 3 – <i>Molecular Modeling – VSEPR Theory</i>
	Week 5 Sept. 21 st	Intermolecular interactions, and physical properties; solubility (pp. 89 - 106, up to 2.9)	<input type="checkbox"/> Lab 3 Report Sheet	
	Week 6 Sept. 28 th	Protic and aprotic solvents; soaps and detergents; lipids (pp. 106 – 120, end of chapter).		
Chapter 3 – Orbital Interactions I	Week 7 Oct 5 th	Atomic orbitals and wave nature of electrons; orbital interactions; molecular orbital theory; hybridized atomic orbitals (pp. 128 – 143, stop at 3.5)	<input type="checkbox"/> Test 2 – Chapter 2 <input type="checkbox"/> Homework for Chapter 2	Lab 4 – <i>Solubility of Flavor Compounds in Ethanol – Flavor Extracts</i>
	Week 8 Oct 12 th	Valence bond theory; sigma and pi bonds; nonbonding orbitals; triple bonding; cis/ trans isomerism; hybridization and effective electronegativity (pp. 143 – 158, end of chapter)	<input type="checkbox"/> Lab 4 Report Sheet	
The Mystery of Life's Origin Chapters 1 and 2	Oct. 19 th	Quarter 2 Starts – Nomenclature 1 and 2	<input type="checkbox"/> Response paper due for <i>Mystery of Life's Origin</i> , Chapters 1 and 2	