

Spokane Falls Community College  
**COURSE LEARNING OUTCOMES**

---

<b>Prefix and Course Number:</b>	<b>CHEM&amp;242</b>
<b>Course Title:</b>	<b>Organic Chemistry II</b>
<b>Version Date: mm/dd/yyyy</b>	<b>1.21.2021</b>

---

Course Learning Outcomes

Upon successful completion of the course, the student will be able to:

1. Apply IUPAC nomenclature rules and predict trends in physical properties for alkynes and aromatic compounds.
2. Interpret patterns of reactivity for reactions of alkynes, radicals, conjugated dienes and aromatic compounds, and provide stepwise mechanisms to predict the outcome of reactions including multistep products where applicable.
3. Explore the reactivity patterns of conjugated and aromatic systems using Valence bond and Molecular Orbital theory applying the fundamentals of electronic structure, resonance and bonding.
4. Predict the relative energies of radicals and product distributions which arise from radical reactions, including those from side reactions which occur.
5. Analyze the relationship between the activating and deactivating effect substituents exhibit on the orientation of electrophilic aromatic substitutions in substituted benzenes.
6. Devise synthetic approaches to relatively simple organic compounds using the concepts of multi-step synthesis, which includes retro-synthetic analysis to produce the highest yield using the fewest steps and/or protecting groups.
7. Deduce the molecular structures based on analyzing and interpreting spectra obtained from various spectroscopic techniques such as Nuclear Magnetic Resonance (NMR), Mass Spectrometry (MS) and Infrared spectroscopy (IR).