Organic Chemistry II

Credits:	5 (4/1/0)
Description:	Meets MnTC Goal Areas 2 and 3. This course is the second course of a two-course series (CHEM2224 and CHEM2225). Students will learn the reactions and characteristics of various organic chemistry groups. The following topics will be included: aldehydes and ketones, carboxylic acids, amines, amides, phenols, carbanions, esters, aromatics, heterocyclic compounds, macromolecules and the possible addition of selected topics such as carbohydrates, fats, amino acids and proteins. The course includes a lab which will include purification, synthesis, and characterization of organic compounds and the study of organic reactions. Green chemistry techniques will be practiced whenever possible.
Prerequisites:	CHEM2224
Corequisites:	None
Competencies:	1. Determine nomenclature. 2. Compare functional groups. 3. Characterize properties of functional groups. 4. Compare reaction mechanisms. 5. Predict reactivity. 6. Determine buffer capacity of organic acids. 7. Predict reaction products. 8. Rate reactions for yield. 9. Formulate reaction synthesis outlines. 10. Interpret NMR and IR spectra. 11. Perform separation techniques. 12. Perform organic chemical characterization techniques. 13. Analyze chemicals using UV absorbance. 14. Synthesize chemicals using green chemistry principles. 15. Use the scientific method to solve problems. 16. Collect experimental data. 17. Analyze data. 18. Write laboratory reports in scientific journal style. 19. Communicate results in oral or written form.
MnTC goal areas:	2. Critical Thinking 3. Natural Sciences