

LIFE AND PHYSICAL SCIENCES
Student Learning Outcome Alignment Form

Course Prefix/Number: CHEM 1307

Course Title: Introductory Chemistry II

| Core Objective | Course SLO | General Learning Activities | Assessment |
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| Critical Thinking Skills | SLO #2 Draw structural representations of organic molecules and describe shapes. | Students will draw Lewis Structures and use VSEPR to predict structures and shapes of various molecules given chemical formulae. Based upon these findings, students will extrapolate to physical and chemical properties. See attached activity—Lewis Structures. | Exam questions. See attached Critical Thinking rubric. |
| Communication Skills | SLO # 7 Name; describe physical and chemical properties; and discuss uses of esters and salts. SLO #8 Name; describe physical and chemical properties; and discuss uses of amines and amides. | Lab groups will prepare and present PowerPoint presentations and short papers about drugs that contains at least one of the following functional groups: ester, salt, amine, amide. See the attached assignment--pharmacology. | Exam questions. See attached Communication Skills rubric |
| Empirical & Quantitative Skills | SLO #5 Name; describe physical and chemical properties; and discuss uses of alcohols, phenols, esters, and thiols. | Students will extract ethanol from various consumer products and calculate the percent alcohol and proof. See attached Wow that has a kick | Exam questions. See attached empirical and quantitative skills rubric |
| Teamwork | SLO #6 Name; describe physical and chemical properties; and discuss uses of aldehydes and ketones. | Student lab teams will extract citral from various citrus fruits, observe it's chemical and physical properties, and make calculations predicting amount of fruit needed for commercial production of the oil. See attached orange oil lab. | Exam questions. See attached teamwork rubric |

