Program learning outcomes	Courses related to these learning outcomes	Assessment method	Measures/Criteria, Rubric	Data collection	Assessment cycle
BA Biochemistry					
1. Demonstrate a foundational understanding of organic, analytical, and physical chemistry and advanced knowledge in biochemistry.	a. CHEM 2430/2440: Organic 1&2 b. CHEM 2200: Analytical 1 c. CHEM 3330/3340: Physical 1 or 2 d. CHEM 4610/4620: Biochem 1&2	a. Overall percentile on ACS exam b. Overall percentile on ACS exam c. Overall percentile on ACS physical exam, 2: Total score on cumulative final exam d. Overall percentile on ACS exam in Biochem 2	a-d. 66th percentile exceeds, 45-66 meets, 33-44 approaching, <33 does not meet c. For cumulative final: 90% exceeds, 80-89 meets, 70-79 approaching, <70 does not meet	Every offering	Year 1 of a 3-year cycle
2. Demonstrate proficiency of basic (general, organic, analytical, and biochemistry) laboratory techniques and conduct laboratory experiments safely.	a. CHEM 1115/1125: General 1&2 Lab b. CHEM 2435/2445: Organic 1&2 Lab c. CHEM 2205: Analytical 1 Lab d. CHEM 4615: Biochem 1 Lab e. CHEM 2430/2440: Orgo 1&2 f. CHEM 2200: Analytical 1 g. CHEM 4610/4620: Biochem 1&2	a. Score on Gen Chem 2 lab Boiling Point Elevation and score on safety exam in Gen Chem lab 1&2. b. Technique points for Orgo 2 lab (Lab 7: E1/E2 Elimination) and score on safety exam in Orgo lab 1&2. c. Semester score d. Score on Results section for Biochem 1 lab (Unknown Amino Acid Identification Using Acid-Base Titrations and TLC) e. Score on specific questions on ACS exam in Orgo 2 f. Score on specific questions on ACS analytical Exam g. Score on specific questions on ACS Exam in Biochem 2	a,b. For score: 90% exceeds, 80-89 meets, 70-79 approaching, <70 does not meet. For safety exam: 80% or higher meets expectations, below 80% does not meet. c,d. 90% exceeds, 80-89 meets, 70-79 approaching, <70 does not meet. e-g. If course % correct on each question meets or exceeds Diff Index provided by ACS, meets expectations. If below, does not meet.	Every offering	a-d. Year 2 of a 3-year cycle e-g. Year 1 of a 3-year cycle
3. Collect, interpret, and analyze quantitative data.	a. CHEM 2430/2440: Orgo 1&2 b. CHEM 2200: Analytical 1 c. CHEM 2205: Analytical 1 Lab d. CHEM 4610/4620: Biochem 1&2 e. CHEM 4615: Biochem 1 Lab	a. Score on specific questions on ACS exam in Orgo 2 b. Score on specific questions on ACS analytical exam c. Semester score d. Score on specific questions on ACS Exam in Biochem 2 e. Score on Results, Discussion, and Conclusion sections of Biochem 1 lab (Unknown Amino Acid Identification Using Acid-Base Titrations and TLC)	a,b,d. If course % correct on each question meets or exceeds Diff Index provided by ACS, meets expectations. If below, does not meet. c,e. 90% exceeds, 80-89 meets, 70-79 approaching, <70 does not meet	Every offering	a-d. Year 1 of a 3-year cycle e. Year 2 of a 3-year cycle
4. Communicate scientific results effectively.	a. CHEM 2435: Orgo 1 Lab b. CHEM 4615: Biochem 1 Lab	a. Score on end of semester presentation in Orgo 1 Lab b. Score on Biochem 1 lab (Unknown Amino Acid Identification Using Acid-Base Titrations and TLC)	90% exceeds, 80-89 meets, 70-79 approaching, <70 does not meet	Every offering	Year 2 of a 3-year cycle