SDSU
San Diego State University

Curriculum, Assessment and Accreditation
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Chemistry (BA/BS) – Sciences

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Step 1: Student Learning Outcome

DLO 2: Demonstrate Competency in Problem Solving and Quantitative Reasoning: 2.1: Demonstrate the ability to quantify and interpret the reliability of measured physical and chemical properties of molecules and mixtures employing dimensional and appropriate statistical analysis. 2.2: Demonstrated knowledge of the important techniques employed to synthesize, separate, purify, identify, and quantitate chemical compounds. 2.3: Develop knowledge of how to apply the scientific method in exploring chemical phenomena.

Step 2: Assessment Methods and Measures

Average score across three midterm exams that assess problem solving and quantitative reasoning.

Step 3: Criteria for Success

Students need an average score of 75% or better across the three midterms

Step 4: Summary of Results

In the spring semester 2025 for CHEM 201, 130 students met or passed criterion, which equated to 45.87% success rate.

Step 5: Action Plan

Below are descriptions for how the program is planning to see improvement to the students' abilities with quantitative problem solving (DLO 2) in General Chemistry II (Chem 201):

We have begun efforts to improve student preparation for and performance in the

course by making the following changes to the pre-requisite General Chemistry (Chem 200) course: 1) Tenure-track faculty as lecturers; 2) Improved harmonization of lecture content, problem solving assignments, lab practical assignments, and exams; 3) All exams to be taken in class and during course time.