

Chemistry Program Assessment Plan

Chair: Tina Zhao

Chemistry Mission Statement

The Chemistry program aims to equip our students with conceptual and experimental tools required to understand and manipulate the molecular world. The program offers classroom, and laboratory practices that span the traditional areas of chemistry as well as the interdisciplinary frontiers. The Chemistry program is dedicated in generating high quality classroom and laboratory experience for all students, affording them the best opportunity to compete in any professional or academic program or career field.

Program Student Learning Outcomes

1. Apply mathematics and technology to solve quantitative chemical problems.
2. Conceptualize, model and explain chemical process qualitatively at the molecular level.
3. Write clear- well-documented lab reports using the language of science and according to standard scientific guidelines.
4. Extract appropriate information, analyze and synthesize experimental results to reach correct conclusions
5. Application content in the real world (table for 2020-2021. Plan for 2021-2022)

Curriculum Map

Key:

I-Introduced

R-Reinforced

M-Mastered

A-Assessed/Artifact

TBD- to be determined

PSLOs	CHE 101	CHE 111	CHE 112	CHE 211	CHE 212
PSLO 1	I, R	I, R, A	I, R, M	M	M
PSLO 2	I, R	I, R	I, R, M	I, R, M, A	I, R, M, A
PSLO 3	I	I, R, A	M	M	M
PSLO 4	I, R	I, R, A	R, M	I, R, M	M
PSLO 5	TBD	TBD	TBD	TBD	TBD

Assessment Schedule

The PSLO(s) will be assessed twice per academic year, once each in fall and spring. At the beginning of fall of the next academic year, the combined results will be examined, too.

Assessment Timeline and Benchmarks

For academic year 2020-2021, PSLOs 1 and 4 will be assessed. PSLO 1 will use the stoichiometry problems in CHE 111 and CHE 112 common final exam. The benchmark is that students in CHE 111 will answer 60% correctly and students in CHE 112 will answer 70% correctly. PSLO 4 will use two labs from CHE 111 and CHE 112. The benchmark is that CHE 111 students correctly identify the unknown metal and 70% of CHE 112 students obtain the correct integrated rate law.

Use of Results

During the end of fall and the spring assessment meetings the chair will meet with full time and adjunct faculty to review the assessment results. The chair, faculty, and adjuncts will determine any appropriate changes to either the curriculum or pedagogy. Annually in fall, the chair will meet with full time and adjunct faculty to review the combined assessment results, identify strategies to improve the benchmark for the academic year and determine which PSLO(s) to assess.