

2021-2022 Assessment Cycle

Assessment Plan

Mission Statement

Vision: Washburn Chemistry Department strives to create a supportive, diverse, and inclusive environment to promote life-long learning, to develop analytical and critical thinking skills, and to grow the body of knowledge for our students, faculty, and community.

Mission: Consistent with the mission of the University and the College of Arts and Sciences, the Department of Chemistry is committed:

- to provide a broad spectrum of undergraduate students with a supportive environment in which to develop the necessary understanding of chemical principles, and analytical and critical thinking skills,
- to engage in scientific research,
- to serve the scientific and local communities.

Measures

BS Chemistry

PSLO 1 Chemical Knowledge

Students will be proficient in applying fundamental chemical principles, models, and theories

Outcome: Students will be proficient in applying fundamental chemical principles, models, and theories

▼ **Measure:** Course Grades
Program level Direct - Exam

Details/Description:

Students take in-class and final exams for each

course used to assess PSLO1. CH151, CH152, CH340

Acceptable Target: 75% of students will receive a grade of C or higher.

▼ **Measure:** National Exam
Program level Direct - Exam

Details/Description: PSLO 1 will be assessed using Standardized National Exams for CH151, CH152, CH320, CH341, CH382, CH386.

Acceptable Target: 50% of students will score 40th percentile or higher in the national exams.

PSLO 2 Empirical Lab and Computation Skills

Students will be proficient in safely conducting empirical labs, implementing calculations and computational methods, and evaluating data

Outcome: Students will be proficient in safely conducting empirical labs, implementing calculations and computational methods, and evaluating data

▼ **Measure:** Course Grades
Program level Direct - Exam

Details/Description: This PSLO will be assessed based on grades of CH321, CH342, CH343, CH345, CH346, CH385

Acceptable Target: 75% of students will receive a course grade of C for those lab courses.

PSLO 3 Communication Skills

Students will be proficient in evaluating and delivering oral and written scientific communications


Outcome: Students will be proficient in evaluating and delivering oral and written scientific communications

▼ **Measure:** Chemistry Seminar
Program level Direct - Student Artifact

Details/Description: Students will complete a review of published article and participate in a faculty-led discussion. Students will give seminar presentation on published articles in communication with the seminar instructor.

Acceptable Target: 75% of students will receive a course average GPA of 3.0 or higher in CH391 (Chemistry Seminar). We didn't finish with preparing rubrics for this measure and the acceptable target will be modified as needed.

Supporting Attachments:

 Rubric for Written Presentation Final.pdf (Adobe Acrobat Document)

▼ **Measure:** Performance Assessment
Program level Direct - Student Artifact

Details/Description: Students will conduct undergraduate research under the supervision of a faculty member and will submit a formal written report on their findings.

Acceptable Target: 75% percent of students will receive an average course GPA of 3.0 or higher in CH390 (Undergraduate Chemical Research). We are currently working in developing rubric for this measure and the acceptable target will be modified accordingly.

PSLO 4 Professionalism

Students will be proficient in practicing inclusive collaboration, ethics, and professionalism

Outcome: Students will be proficient in practicing inclusive collaboration, ethics, and professionalism


▼ **Measure:** Ethics Paper

Program level Direct - Other

Details/Description: Students will write ethics paper in CH391.

Acceptable Target: Students will receive a Pass/Fail grade. Pass grade will be awarded for students who follow the guidelines and complete the ethics paper.

Supporting Attachments:

 Ethics Paper Guidelines.pdf (Adobe Acrobat Document)


▼ **Measure:** Lab Experiments/Reports

Program level Direct - Student Artifact

Details/Description: Students will collaborate as part of a team/group to solve chemical problems, collect data, discuss different views, and write reports with a diverse group of team members in CH151 group project.

Acceptable Target: Students will receive a score of 22 out of 30 or higher in the final project in CH151 lab.

Supporting Attachments:

 CH151 Group Project Rubric.pdf (Adobe Acrobat Document)

Analysis and Reporting Calendar

Data for all PSLOs will be collected each Fall and Spring Semester.
PSLOs 1 and 2 will be reported in odd academic years.
PSLOs 3 and 4 will be reported in even academic years.

Collecting data will start in the Fall of 2022 and there is no analysis to be reported for this year.

Stakeholder Involvement

All Faculty members of Chemistry Department are involved in developing the PSLOs.

Program Assessment Plan Review Cycle

The Program Assessment Plan will be reviewed every four years starting 2026.

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