Washburn University (AMS) » Academic Affairs » College of Arts & Sciences » Chemistry **BA/BS-Chemistry** 

2021-2022 Assessment Cycle

# **Assessment Findings**

# **Program Assessment Accomplishments**

No text specified

# Finding per Measure

# **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.

Findings for Course Grades

Summary of Findings: Data for PSLO 1 will be collected in Fall

2022 and be reported in the odd academic

year.

Recommendations:

Reflections/Notes:

▼ 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.

Findings for National Exam

Summary of Findings: Data for CH151, CH 152, CH 320 will be

collected in Fall 2022

Data for CH341 and CH 386 will be

collected in Spring 2023

Data for CH 382 will be collected in Fall

2024

Data for PSLO1 will be reported in the next odd academic year following collecting of

data.

Recommendations:

Reflections/Notes:

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.

Findings for Course Grades

Summary of Findings: Data for CH321, CH342 will be collected in

Fall 2022.

Data for CH343, CH345, CH346 will be

collected in Spring 2023.

Data for CH385 will be collected in Spring

2024.

Data for PSLO 2 will be reported in the

following odd academic year. after collecting

data.

Recommendations:

Reflections/Notes:

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)

# Findings for Chemistry Seminar

Summary of Findings: We are still working in developing rubrics

for PSLO3. Data for PSLO 3 will be collected in Spring 2023 and be reported in the even

academic year.

Recommendations:

Reflections/Notes:

▼ 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.

# Findings for Performance Assessment

Summary of Findings: We are still working in developing rubrics

for PSLO3. Data for PSLO 3 will be collected in Spring 2023 and be reported in the even

academic year.

Recommendations:

Reflections/Notes:

#### 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)

Findings for Ethics Paper



Summary of Findings: Data for PSLO 4 will be collected in Spring

2023 and be reported in the even academic

year.

Recommendations:

Reflections/Notes:

▼ 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)

Findings for Lab Experiments/Reports

Summary of Findings: Data for this measure of PSLO 4 will be

collected in Fall 2022 and be reported in the

even academic year.

Recommendations:

Reflections/Notes:

#### **Overall Recommendations**

Since we didn't start collecting data, there are no recommendations to make at this time.

#### **Overall Reflection**

We made progress in reviewing the assessment for the BS in chemistry degree.

## **Faculty Collaboration**

The Chemistry faculty and staff involved in developing the mission statement starting from scratch. The chemistry faculty involved in:

- developing PSLOS
- identifying the measures, acceptable targets for each PSLOs.
- developing rubrics for some of the PSLOs that require rubric.
- series of meetings throughout the year to discuss/review the assessment of the BS in Chemistry program.

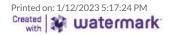
#### **Communication & Collaboration with Students**

We discussed this in our meetings. Though, students are not involved in setting the target or expectations, they will be informed how those expectations/targets will be measured.

## **Communication & Collaboration with External Stakeholders**

Though we didn't involve external stakeholders, faculty reviewed the plan at the department's spring meetings (retreat from internal grant) and make recommendations. Faculty reviewed the current PSLOs, measures, and target levels and involve in developing rubrics.

#### **Communication & Collaboration with University**



We held several meetings with the Director of Assessment, Dr. Hockett) to discuss the best strategy on how to develop a meaningful program assessment and also on Bloom's Taxonomy.

We also held meetings with CTEL representatives to have a better understanding of assessment.

We received an assessment grant in Fall 2021 that we used for meetings throughout the Spring 2022 semester and review the BS in chemistry program.

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