



Chemistry Annual Assessment 2017-2018

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Annual Assessment 17-18

Chemistry Minor

Program Profile

Program Mission Statement

Please insert your program mission statement here

The purpose of the Chemistry minor is to furnish students with the broad array of fundamental chemical concepts, techniques, and interdisciplinary insights most pertinent to young scientists.

Program Data

Delivery Method

Traditional On Campus (selected)
Online
Hybrid

Student Minors 2016-17

51

Student Minors 2017-18

33

Concentrations 2016-17

If your program contains concentrations, please list the concentrations and the number of students identified within each concentration.

NA

Concentrations 2017-18

If your program contains concentrations, please list the concentrations and the number of students identified with each concentration.

NA

Student Demographics

Program goals for student retention, persistence and degree completion are? What do the persistence numbers mean to the faculty in the program? Are your persistence numbers what you expected? If not, how could the numbers be improved? What is the optimal enrollment for the program?

There is no degree awarded for the minor, so far as I am aware.

I am unsure why there was a decrease in the number of minors declared, but it could have to do with the increase in the difficulty of the course after I took over. I have been made aware that General Chemistry was previously considered an 'easy' A.

However, that would imply a rather fast response on the students' part, and it's only a guess on my part. Gauging student response and enthusiasm will be key going forward.

Is the Program Externally Accredited

Yes
No (selected)

External Accreditation

Name the Accrediting Agency or entity including the last review/approval. Is there an accrediting body for the field of study? If yes, what is the name of the group. Is the program seeking accreditation? If no, why?

NA

Program Assessment

Standard/Outcome

Identifier	Description
WWU2016.1	Major Field Competence: Students will demonstrate excellence in an academic or professional discipline, and engage in the process of academic discovery.
WWU2016.2	Ethics: Students will exhibit values and behaviors that address self- respect and respect for others that will enable success and participation in the larger society.
WWU2016.3	Self-Liberation: Students will develop an honest understanding and appreciation of themselves and others resulting in an ability to make individual decisions.
WWU2016.4	Lifelong Education: Students will possess an intellectual curiosity and desire for continual learning both within and beyond formal education in preparation for participation in a global society.

Additional Standards/Outcomes

Identifier	Description
CHM.1	Demonstrate a fundamental understanding of chemical concepts relating to all branches of chemistry, including analytical, organic, physical, inorganic, and biochemistry.
CHM.2	Demonstrate a thorough understanding of the periodic table of elements and how it can be used to determine trends in chemical reactivity and stability.
CHM.3	Logically apply the scientific method to everyday situations in order to facilitate an understanding of the world around us.
CHM.4	Integrate empirical evidence with experimental data, such that solid conclusions can be formulated.

General Education Alignment to Program

How do the General Education criteria align with the Program Objectives? What courses within your program build upon skills learned in general education courses (please list the program course and the general education criteria). The General Education clusters are: Critical Analysis, Creative Expression, Quantitative Inquiry, and Society & the Individual. See attached for more detailed breakdown.

Students who complete the Chemistry minor are necessarily better-versed as critical analysts and practitioners of quantitative inquiry; these skills are vital to successful completion of the courses and labwork. Successful students will also exercise creative expression and a focus on society & the individual via their small-scale research on topics relevant to chemistry in the wider world. Typically such research is presented in the form of essays.

GE_Cluster_Descriptions_FINAL_Version_Approved.docx

Curriculum Map

A - Assessed

R - Reinforced

I - Introduced

M - Master

Standard Chemistry Minor Curriculum Map

	CHM 114	CHM 115	CHM 116	CHM 124	CHM 125	CHM 314	CHM 315	CHM 324	CHM 325	CHM 440	CHM 441
CHM.1 Demonstrate a fundamental understanding of chemical concepts relating to all branches of chemistry, including analytical, organic, physical, inorganic, and biochemistry.	I, A	I		A, R	R	R	R	R, A	R	A, M	M
CHM.2 Demonstrate a thorough understanding of the periodic table of elements and how it can be used to determine trends in chemical reactivity and stability.	I, A	I		R, A	R	R	R	R, A	R	A, M	M
CHM.3 Logically apply the scientific method to everyday situations in order to facilitate an understanding of the world around us.	I	I, A		R	R, A	R	R	R	R, A	M	M, A
CHM.4 Integrate empirical evidence with experimental data, such that solid conclusions can be formulated.	I	I		R	R, A	R	R	R	R, A	M	M, A

Assessment Findings

Assessment Findings for the Assessment Measure level for Standard Chemistry Minor Curriculum Map

CHM.1 Demonstrate a fundamental understanding of chemical concepts relating to all branches of chemistry, including analytical, organic, physical, inorganic, and biochemistry.				
Assessment Measures				
CHM114				
Assessment Measure	Criterion	Summary	Attachments of the Assessments	Improvement Narratives
Direct - Class Assignment	Has the criterion 90% pass rate been met yet? Not met	Criteria not met due to change of faculty and necessity of re-training assessment program		
CHM 124				
Assessment Measure	Criterion	Summary	Attachments of the Assessments	Improvement Narratives
Direct - Class Assignment	Has the criterion 90% pass rate been met yet? Not met	Criteria not met due to change of faculty and necessity of re-training assessment program		
CHM 324				
Assessment Measure	Criterion	Summary	Attachments of the Assessments	Improvement Narratives
Direct - Class Assignment	Has the criterion 95% pass rate been met yet? Not met	Criteria not met due to change of faculty and necessity of re-training assessment program		
CHM 440				
Assessment Measure	Criterion	Summary	Attachments of the Assessments	Improvement Narratives
	Has the criterion 95% pass rate been met yet? Not met	Criteria not met due to change of faculty and necessity of re-training assessment program		

CHM.2 Demonstrate a thorough understanding of the periodic table of elements and how it can be used to determine trends in chemical reactivity and stability.

Assessment Measures

CHM 114				
Assessment Measure	Criterion	Summary	Attachments of the Assessments	Improvement Narratives
Direct - Quiz/Exam	Has the criterion 90% pass rate been met yet? Not met	Criteria not met due to change of faculty and necessity of re-training assessment program		
CHM 124				
Assessment Measure	Criterion	Summary	Attachments of the Assessments	Improvement Narratives
Direct - Quiz/Exam	Has the criterion 95% pass rate been met yet? Not met	Criteria not met due to change of faculty and necessity of re-training assessment program		
CHM 324				
Assessment Measure	Criterion	Summary	Attachments of the Assessments	Improvement Narratives
Direct - Quiz/Exam	Has the criterion 95% pass rate been met yet? Not met	Criteria not met due to change of faculty and necessity of re-training assessment program		
CHM 440				
Assessment Measure	Criterion	Summary	Attachments of the Assessments	Improvement Narratives
Direct - Quiz/Exam	Has the criterion 95% pass rate been met yet? Not met	Criteria not met due to change of faculty and necessity of re-training assessment program		

CHM.3 Logically apply the scientific method to everyday situations in order to facilitate an understanding of the world around us.				
Assessment Measures				
CHM 115				
Assessment	Criterion	Summary	Attachments of	Improvement

Measure			the Assessments	Narratives
Direct - Class Assignment	Has the criterion 90% of students appropriately design an experimental interrogation of a real-world phenomenon been met yet? Not met	Criteria not met due to change of faculty and necessity of re-training assessment program		
CHM 125				
Assessment Measure	Criterion	Summary	Attachments of the Assessments	Improvement Narratives
Direct - Class Assignment	Has the criterion 95% of students appropriately design an experimental interrogation of a real-world phenomenon been met yet? Not met	Criteria not met due to change of faculty and necessity of re-training assessment program		
CHM 325				
Assessment Measure	Criterion	Summary	Attachments of the Assessments	Improvement Narratives
Direct - Research Paper	Has the criterion 90% of students report on experiments reasonably designed to interrogate natural phenomena been met yet? Not met	Criteria not met due to change of faculty and necessity of re-training assessment program		
CHM 441				
Assessment Measure	Criterion	Summary	Attachments of the Assessments	Improvement Narratives
Direct - Research Paper	Has the criterion 95% of students report on experiments reasonably designed to interrogate natural phenomena been met yet? Not met	Criteria not met due to change of faculty and necessity of re-training assessment program		

CHM.4 Integrate empirical evidence with experimental data, such that solid conclusions can be formulated.

Assessment Measures

CHM 125				
Assessment Measure	Criterion	Summary	Attachments of the Assessments	Improvement Narratives
Direct - Research Paper	Has the criterion 90% of students demonstrate competence in presenting conclusions from data they have collected been met yet? Not met	Criteria not met due to change of faculty and necessity of re-training assessment program		
CHM 325				
Assessment Measure	Criterion	Summary	Attachments of the Assessments	Improvement Narratives
Direct - Research Paper	Has the criterion 90% of students capably draw conclusions from data they have collected been met yet? Not met	Criteria not met due to change of faculty and necessity of re-training assessment program		
CHM 441				
Assessment Measure	Criterion	Summary	Attachments of the Assessments	Improvement Narratives
Direct - Research Paper	Has the criterion 95% of students capably draw conclusions from data they have collected been met yet? Not met	Criteria not met due to change of faculty and necessity of re-training assessment program		

Analysis of the Assessment Process

Describe your assessment process; clearly articulate how the program is using course work and or assessment day activities for program assessment. Note any changes that occurred to that process since the previous year. Discuss what activities were successful at assessment and which ones were not as helpful and why. Please include who met to discuss the changes (unless you are a program of one person) and when you met. – Include a discussion on the process for collection and analysis of program data.

The assessment process was not in effect during the semester due to a last minute change in faculty. The plan created was set up by a previous faculty based on their curriculum and teaching approach. The current plan was not followed as it was not shared with the incoming faculty. Moving forward faculty understand the expectation moving forward and will work on the assessment plan for the 18-19 academic year. The program objectives will not be modified at this time, but the division of courses and where assessment is located within the program will be changed for the 18-19 academic year.

Improvement Narrative List

Assessment Findings for the Assessment Measure level

No improvement narratives have been added.

Program Activities

Student Performance Review

Describe the department assessment day activities if not already described previously. Please articulate the nature of the assessments are conducted, explain the process for assessment that happens on these two days. Include the schedule of assessment day for your program. What does the data and outcomes tell you? What changes will you make as a result of the data? What areas are successful for the program?

This is a minor program, so there is not a schedule for Student Performance Review.

Student Performance Review Schedule

Upload the program schedule for students during Performance Reviews.

Senior Showcase

Describe program Senior Showcase activities if not detailed previously in the report? What benefit does the program gain from the activities? What if any assessment of students happens during this event? What changes if any will occur due to what is learned by faculty on Senior Showcase?

This is a minor program, so there is not a scehdule for the Senior Showcase

Assessment Rubrics

Upload rubrics used for Senior Showcase or Student Performance Reviews for student assessment.

Service Learning

Does the Program include projects/ course content that uses the philosophy of service learning?

Yes

No (selected)

Service Learning Component

If so, how is service learning infused in the coursework within your department? Is service or community engagement in the program mission? Describe the Service Learning Activities that your students and department engaged in this past year. How did the activities improve student learning? How did the activities benefit the community?

NA

LEAD Events

Highlight lead events sponsored by program faculty that are connected to program or general education objectives for the past academic year. Include a total number of lead events program faculty sponsored.

NA

Student Accomplishments

Highlight special examples of student successes in the field (academic: mentor-mentee, conference presentations, competitive internship, journal acceptance; extra-curricular: horse show championship, art exhibit). This is for any accomplishments that a student achieved outside of course work or the normal expectations of student success.

NA

Faculty Accomplishments

Highlight special examples of faculty success in the profession/field/content area. This is for any accomplishment of a faculty activity/research/professional nature.

NA

Assessment Rubric

Annual Assessment Rubric					
	3.00 Assessment Reflects Best Practices	2.00 Assessment Meets the Expectations of the University	1.00 Assessment Needs Development	0.00 Assessment is Inadequate	3.000 pts 50.00%
Learning Objectives weight: 1.000	<ul style="list-style-type: none"> • Detailed, measurable program learning objectives • Objectives are shared with students and faculty 	<ul style="list-style-type: none"> ✓ Measurable program learning objectives. • Learning objectives are available to students. 	<ul style="list-style-type: none"> ✓ Program learning objectives are identified and are generally measurable 	<ul style="list-style-type: none"> ✓ Program learning objectives are not clear or measurable 	N/A
Comment:					
Assessment Measures weight: 1.000	<ul style="list-style-type: none"> ✓ Multiple measures are used to assess a student-learning objectives. • Rubrics or guides are used for the measures. • All measurements are clearly described. • External evaluation of student learning included. 	<ul style="list-style-type: none"> ✓ Assessment measures relate to program learning objectives. • Various measures are used to assess student learning. • Measures chosen provide useful information about student learning. 	<ul style="list-style-type: none"> ✓ Assessment focuses on class content only. • Minimal description of how the assessment relates to the objective. • Minimal assessment measures established. 	<ul style="list-style-type: none"> ✓ Assessment measures not connected to objectives. • Assessment measures are not clear. • No assessment measures are established. 	N/A
Comment:	The program is a minor only program so it is hard to include assessment that is external to the class content.				
Assessment Results weight: 1.000	<ul style="list-style-type: none"> ✓ All objectives are assessed annually, or a rotation schedule is provided. • Data are collected and analyzed to show learning over time. • Standards for performance and gaps in student learning are clearly identified. 	<ul style="list-style-type: none"> ✓ Most objectives assessed annually. • Data collected and analyzed showing an annual snapshot of student learning. • Data are used to highlight gaps in student learning. • Some data from non-course based content. 	<ul style="list-style-type: none"> ✓ Data collected for at least one program objective. • Data collection is incomplete. • Gaps in student learning not identified. • Lacking external data to support course data. 	<ul style="list-style-type: none"> ✓ Learning objectives are not routinely assessed. • Routine data is not collected. • No discussion on gaps in student learning. • No use of external data to support student learning. • Assessment data not yet collected. 	N/A
Comment:	There are not any results to be discussed due to the change and not having a full time faculty responsible for the program during the academic year.				
Faculty Analysis and Conclusions weight: 1.000	<ul style="list-style-type: none"> ✓ Data is shared that incorporates multiple faculty from the program. • Discussions on data results incorporate multiple faculty. • Opportunities for adjunct faculty to participate. • Includes input from external sources when possible. 	<ul style="list-style-type: none"> ✓ Multiple program faculty receive assessment results. • Assessment results are discussed. • Specific conclusions about student learning are made based on the available assessment results. 	<ul style="list-style-type: none"> ✓ Minimal faculty input about results is sought. • Data not used to determine success or not to the objective. • Minimal conclusions made. 	<ul style="list-style-type: none"> ✓ Faculty input is not sought. • Conclusions about student learning are not identified. • N/A Program recently started or too few graduates to suggest any changes. 	N/A
Comment:					
Actions to Improve Learning and Assessment weight: 1.000	<ul style="list-style-type: none"> ✓ All assessment methods, timetable for assessing, and evaluating the effectiveness modifications are included. • Changes to assessment are inclusive of multiple faculty. • Description of changes is detailed and linked to assessment results. 	<ul style="list-style-type: none"> ✓ More than one change to assessment is proposed, timetable for assessment, and evaluating the change is provided. • Changes to assessment measures is highlighted. • Changes are realistic, with a good probability of improving learning or assessment. 	<ul style="list-style-type: none"> ✓ At least one change to improve learning or assessment is identified. • The proposed action(s) relates to faculty conclusions about areas for improvement. • Adjustments to the assessment are proposed but not clearly connected to data 	<ul style="list-style-type: none"> ✓ Lacking actions to improve student learning. • Actions discussed lack supportive data. • Lacking discussion of the effectiveness of the assessment plan 	N/A
Comment:					