

Program Assessment Plan
 American University
 Academic Program: CAS: Chemistry - BS

Academic Program: CAS: Chemistry - BS

Unit's Primary Department: Chemistry

Learning Outcome: Problem Solving

Use basic concepts of Chemistry (e.g. laws and theories governing electron or molecular behavior, scientific method, problem solving ability) to solve new or unknown problems.

Outcome Year: 2008-2009
 2009-2010
 2010-2011
 2011-2012

Start Date: 04/01/2009

Outcome Status: Active Learning Outcome

Assessment Plan			
Assessment Measure	Target	Schedule/Cycle	Active
Performance on ACS standardized tests and GRE chemistry test. Measure Type: Quiz/ Exam	50% in the 80th percentile.	Data tabulated yearly in departmental database and assessed every 4 years (2012/13-Year 4) in department meeting.	Yes
Student alumni and employer questionnaires. Measure Type: Alumni Feedback	Score 4/5 on "Completion of this degree directly contributed to the student's success."	Questionnaires sent every 4 years by departmental chair and assessed every 4 years (2011/12 - Year 3) in departmental meeting.	Yes
Participation and excellence in departmental, school-wide, regional, and nationwide research conference. Measure Type: Presentation	100% of chemistry majors present research (poster or oral) at least once at any level. Average 4/5 on presentation assessment score sheet.	Data tabulated yearly in departmental database and assessed every 4 years (2009/10 - Year 1) in departmental meeting.	Yes
Quality of reading and writing assignments. Measure Type: Written Assignment	Post-term writing quiz better than pre-term. No grades on written work lower than C.	Data collected every year and assessed by Dr. Fox, Dr. Hartings, and Dr. Miller every two years.	Yes
Student Evaluation of Teaching and Laboratory Questionnaires. Measure Type: Survey	At least 5.5. of 7 on departmental selected questions on Student Evaluation of Teaching.	Data tabulated yearly in departmental database and assessed every 4 years (2010/11 Year 2) using a 2-year rolling average in departmental meeting. One question will be on an annual rotation between 203 (year 1), 103, 106, 107, 114, 116.	Yes

Learning Outcome: Research Literature

Ability to obtain and evaluate scientific information from the library or Web and effectively communicate the findings in oral and written format.

Outcome Year: 2008-2009
 2009-2010
 2010-2011
 2011-2012

Start Date: 04/01/2009
Outcome Status: Active Learning Outcome

Assessment Plan			
Assessment Measure	Target	Schedule/Cycle	Active
Student alumni and employer questionnaires. Measure Type: Alumni Feedback	Score 4/5 on "Completion of this degree directly contributed to the student's success."	Questionnaires sent every 4 years by departmental chair and assessed every 4 years (2011/12 - Year 3) in departmental meeting.	Yes
Participation and excellence in departmental, school-wide, regional, and nationwide research conference. Measure Type: Presentation	100% of chemistry majors present research (poster or oral) at least once at any level. Average 4/5 on presentation assessment score sheet.	Data tabulated yearly in departmental database and assessed every 4 years (2009/10 - Year 1) in departmental meeting.	Yes
Quality of reading and writing assignments. Measure Type: Written Assignment	Post-term writing quiz better than pre-term. No grades on written work lower than C.	Data collected every year and assessed by Dr. Fox, Dr. Hartings, and Dr. Miller every two years.	Yes

Learning Outcome: Data Analysis

Ability to evaluate and quantify data; develop quantitative literacy and formulate scientific conclusions that are effectively communicated in oral and written formats.

Outcome Year: 2008-2009
2009-2010
2010-2011
2011-2012

Start Date: 04/01/2009
Outcome Status: Active Learning Outcome

Assessment Plan			
Assessment Measure	Target	Schedule/Cycle	Active
Student alumni and employer questionnaires. Measure Type: Alumni Feedback	Score 4/5 on "Completion of this degree directly contributed to the student's success."	Questionnaires sent every 4 years by departmental chair and assessed every 4 years (2011/12 - Year 3) in departmental meeting.	Yes
Participation and excellence in departmental, school-wide, regional, and nationwide research conference. Measure Type: Presentation	100% of chemistry majors present research (poster or oral) at least once at any level. Average 4/5 on presentation assessment score sheet.	Data tabulated yearly in departmental database and assessed every 4 years (2009/10 - Year 1) in departmental meeting.	Yes
Student Evaluation of Teaching and Laboratory Questionnaires. Measure Type: Survey	At least 5.5. of 7 on departmental selected questions on Student Evaluation of Teaching.	Data tabulated yearly in departmental database and assessed every 4 years (2010/11 - Year 2) using a 2-year rolling average in departmental meeting. One question will be on an annual rotation between 203 (year 1), 103, 106, 107, 114, 116.	Yes
Examination of Advanced Laboratory sequence on-line notebooks. Measure Type:	Eliminate need to repeat data measurements for 80% of the class.	Laboratory course instruction methods will be assessed every 4 years (2011/12 - Year 3) by	Yes

Assessment Plan			
Assessment Measure	Target	Schedule/Cycle	Active
Written Assignment		instructors assigned to CHEM-571, CHEM-572, CHEM-581, CHEM-582.	

Related Courses

- CHEM-571 - Experimental Biological Chemistry
- CHEM-572 - Experimental Biological Chemistry II

Learning Outcome: Conduct Experiments

Operate, interpret, and present data obtained via hands-on experimentation in the lab and using sophisticated instrumentation (such as NMR).

Outcome Year: 2008-2009

2009-2010

2010-2011

2011-2012

Start Date: 04/01/2009

Outcome Status: Active Learning Outcome

Assessment Plan			
Assessment Measure	Target	Schedule/Cycle	Active
Student alumni and employer questionnaires. Measure Type: Alumni Feedback	Score 4/5 on "Completion of this degree directly contributed to the student's success."	Questionnaires sent every 4 years by departmental chair and assessed every 4 years (2011/12 - Year 3) in departmental meeting.	Yes
Participation and excellence in departmental, school-wide, regional, and nationwide research conference. Measure Type: Presentation	100% of chemistry majors present research (poster or oral) at least once at any level. Average 4/5 on presentation assessment score sheet.	Data tabulated yearly in departmental database and assessed every 4 years (2009/10 - Year 1) in departmental meeting.	Yes
Examination of Advanced Laboratory sequence on-line notebooks. Measure Type: Written Assignment	Eliminate need to repeat data measurements for 80% of the class.	Laboratory course instruction methods will be assessed every 4 years (2011/12 - Year 3) by instructors assigned to CHEM-571, CHEM-572, CHEM-581, CHEM-582.	Yes

Related Courses

- CHEM-571 - Experimental Biological Chemistry
- CHEM-572 - Experimental Biological Chemistry II