

Annual Key Assessment Findings and Curricular Improvements
Chemistry Department/A&S
Undergraduate BA/BS Program in Chemistry/Biochemistry/Environmental Chemistry
AY 2011-2012

I. Key Assessment Findings

The CUA Chemistry Department is periodically reviewed by the American Chemical Society for approval of its BS chemistry degree. Approval is granted to institutions meeting faculty, instrumentation, library, and curriculum criteria. The Chemistry Department submitted its latest comprehensive report to ACS in July 2012. The department is currently awaiting evaluation of the report by the ACS Committee on Professional Education.

Senior Assessment

Five candidates for May 2012 graduation completed a written research paper and gave an oral presentation of the topic, which fulfilled the senior assessment requirement for these students. The group included candidates for the BS in Chemistry, BS in Biochemistry, and BA in Biochemistry. All students passed the senior assessment (see table 1).

Table 1 Undergraduate Comprehensive Exam Results

	Fail		Pass		High Pass		Pass w/Honors		TOTAL
	#	%	#	%	#	%	#	%	
BS Chemistry	0	0.00%	1	100.00%	0	0.00%	0	0.00%	1
BS Biochemistry	0	0.00%	1	100.00%	0	0.00%	0	0.00%	1
BA Biochemistry	0	0.00%	3	100.00%	0	0.00%	0	0.00%	3

As indicated in the table of results for the senior assessment rubric that follows, most candidates met expectations in all categories.

Table of Results
Student Learning Assessment Rubric
Department of Chemistry
Chemistry BS, Biochemistry BA/BS, Environmental Chemistry
Senior Assessment

Trait	Level						Mean	SD	Total N
	Exceeding Expectations (3pts)		Meeting Expectations (2pts)		Below Expectations (1pt)				
	N	%	N	%	N	%			
1) Proficiency in curricular content and chemical concepts in the comprehensive paper	0	0%	5	100%	0	0%	2.00	0.00	5
2) Written presentation of scientific topics	0	0%	5	100%	0	0%	2.00	0.00	5
3) Effective use of peer-reviewed scientific literature	0	0%	5	100%	0	0%	2.00	0.00	5
4) Oral communication and presentation of scientific topics	0	0%	4	80%	1	20%	1.80	0.45	5

Note: 1) The "N" represents the number of students at each level of performance for each trait.

2) The "%" represents the percentage of the number of students falling at the level performance

for each trait against the total number of students.

3) The mean is the average of all scores across the levels within the trait.

4) The standard deviation (SD) is the measure of the variability of the data set, indicating how "spread out" these data are from the mean value.

Graduate Placement

Of the five graduates in chemistry or biochemistry in 2012, one has been accepted into a medical program (Iowa) for Fall 2013. One began working for QuanTech (statistical analysis and survey research for the fisheries industry) in Arlington, VA, in September, 2012, in a temporary position and has recently joined (November, 2012) the research group of Dr. Barbara Campbell at Clemson University. One of the 2012 graduates began a nursing graduate program in Fall 2012. A fourth graduate has been admitted to several graduate programs in chemistry programs for Fall

2013. She is currently considering attending Notre Dame, but has not made a final decision. The chemistry department does not have information regarding the postgraduate plans of the fifth graduate.

II. Performance in key courses

“Capstone” course: Seniors in the ChemBS /Env.Chem BS programs and in the Biochem BA/BS programs do not take a single course that could be considered a “capstone” course for the programs. However, all Chem BS and Env.Chem BS majors take Chem 352 and all Chem BS majors take Chem 501. All Biochem BA/BS majors take Chem 572. Enrollment, grade, and course evaluation data are provided for these courses.

Physical Chemistry II – Chem 352 (Spring ‘12):

The Department of Chemistry analyzed course grade, evaluation, and enrollment data in Chem 352 for the last offering of the course (Spring 2012).

For the last offering of this course (Spring 2012), enrollment was 3 students. The grades of students in this class spanned C to A- with an average grade in this course of 3.13 (B). Course evaluations are not available for this period because the enrollment dropped below the minimum required for generation of course evaluation forms.

Advanced Inorganic Chemistry – Chem 501(Fall 2010):

The Department of Chemistry analyzed course grade, evaluation, and enrollment data in Chem 501 for the last offering of the course (2010).

For the last offering of this course (Fall 2010), enrollment was 5 students. The grades of students in this class ranged from A to F with an average grade in this course of 2.74 (B-). Course evaluations are not available for this period.

Biochemistry II – Chem 572 (Spring 2011):

The Department of Chemistry analyzed course grade, evaluation, and enrollment data in Chem 572 for the last offering of the course (2011).

For the last offering of this course (Spring 2011), enrollment was 9 students. The grades of students in this course ranged from D to A. The average grade in this course is 2.66 (B-). Course evaluations are not available for this period.