

## Program Review Executive Summary

<p><b>Institution Name: Oklahoma Panhandle State University</b>  <b>Program Name and State Regents Code: Chemistry 007</b>  <b>List Any Options: N/A</b>  <b>Date of Review: 10/30/2020 Recommended Date of Next Review: 2025</b></p>	
<p><b>Centrality to Institutional Mission:</b>  The program of Chemistry follows the Oklahoma Panhandle State University mission of “Rooted in “Progress through Knowledge,” OPSU is committed to promoting excellence in the preparation of students for success in a global community.” This is done through its goals, which align to the primary points of “progress through knowledge... in a global community” with a focus on oral and written communication, analytical and quantitative reasoning, and social responsibility and cultural awareness.</p>	
<p><b>Program Objectives and Goals:</b>  Goal 1: Oral and Written Communication: Communicate effectively using written, oral, and symbolic languages  Student Learning Objectives:  1) Students will be able to present information and knowledge acquired to various audiences  2) Students will be able to construct written documents in subjects related to chemistry  Goal 2: Analytical and Quantitative Reasoning: Read and think critically by analyzing, assimilating, and applying information  Student Learning Objectives:  1) Students will be able to apply scientific principles  2) Students will be able to solve statistical and related problems in chemistry research  3) Students will demonstrate skills acquired that elevate their personal competences  4) Demonstrate knowledge of chemistry  Goal 3: Social Responsibility and Cultural Awareness: Be an aware and active participant in the global, dynamic community  Student Learning Objectives:  1) Students will explain historical figures and their discoveries  2) Students will analyze nutritional labels on consumer products to identify chemical compounds</p>	
<p><b>Quality Indicators Such As:</b></p>	<p>Student benchmarks were not met in all student-learning objectives at the time of the Program Review. Those that were not met are being focused on including more access of materials for students.  Student evaluations were used to inspire the change of improving access to faculty notes about lecture.  Learning environments for the student are becoming more effective. Faculty in the department participated in a campus wide evaluation of the learning management system; the digital learning space of D2L was reevaluated Summer 2018 and found to still be a great fit for our students and their learning. COVID-19 also spurred greater support in use of learning spaces for digital learning experiences. In Fall 2019, classroom furniture was updated.  The capacity of the program to meet needs and expectations of constituencies is met through including basic and applied research, including speakers from industry areas, and ethical training.</p>
<p><b>Productivity for Most Recent 5 Years</b></p>	<p>Number of Degrees: 2 average over past 4 years  Number of Majors: 6.5 average over past 4 years</p>

<b>Other Quantitative Measures Such As:</b>	Number of Courses for Major: 12 Student Credit Hours in Major: 40 2015/2016 Direct Instructional Costs: \$33179 2016/2017 Direct Instructional Costs: \$31451 2017/2018 Direct Instructional Costs: \$31899 2018/2019 Direct Instructional Costs: \$108762.72 2019/2020 Direct Instructional Costs: \$99658.09 Supporting Credit Hour Production: 2225.5 average over past 4 years					
	Faculty Member		Credential	Institution		
	Justin K. Collins		PhD	Oklahoma State University		
	Number of FTE faculty in specialized courses: 1					
<b>Duplication and Demand</b>	The Bachelor in Chemistry is a program in demand by local public schools who have a need for competent science teachers. There are other comparable universities offering a similar program outside of the Oklahoma panhandle. However, chemistry is required for general education.					
<b>Effective Use of Resources</b>		2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
	Cost to operate program per student credit hour	\$259.55	\$261.81	\$273.27	\$303.48	\$303.75
	Faculty/ student ratio	1/2.92	1/4	1/3.25	1/3.75	1/6.5
<b>Strengths and Weaknesses</b>	Strengths of the program include small class size, sufficient benchtop and storage space in the lab, the availability of general glassware and equipment, teaching facilities and instructing technology, and the strong rapport between students and instructors. Weaknesses include one faculty member, and budget.					
<b>Recommendations</b>	Expand program; add option for Biochemistry and explore adding Secondary Education. Also, purchase an infrared radiation spectroscopy instrument as it is required for alignment with the course equivalency program of the Oklahoma State Regents of Higher Education.					