Program Review Executive Summary

**Institution Name:** Oklahoma Panhandle State University  
**Program Name and State Regents Code:** Mathematics BS 015  
**List Any Options:** Academic, Teaching  
**Date of Review:** 10/30/2020 **Recommended Date of Next Review:** 2025

**Centrality to Institutional Mission:**
The program of Mathematics 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.

**Program Objectives and Goals:**

**Goal 1: Oral and Written Communication:** Communicate effectively using written, oral, and symbolic languages

**Student Learning Objectives:**
1. Students will be able to communicate their mathematical thinking orally to peers, faculty, and others
2. Students will be able to accurately use written representations to demonstrate mathematics

**Goal 2: Analytical and Quantitative Reasoning:** Read and think critically by analyzing, assimilating, and applying information

**Student Learning Objectives:**
1. Students will know, understand, and apply the process of mathematical problem solving
2. Students will be able to reason, construct, and evaluate mathematical arguments and proof and develop an appreciation for mathematical rigor and inquiry
3. Students will recognize, use, and make connections between and among mathematical ideas and in context outside mathematics to build mathematical understanding
4. Students will demonstrate a versatile knowledge of mathematics content
5. Students will embrace technology as an essential tool for teaching and learning mathematics

**Goal 3: Social Responsibility and Cultural Awareness:** Be an aware and active participant in the global, dynamic community

**Student Learning Objectives:**
1. Students will communicate their appreciation for an influential mathematician and his/her place in the historical development of mathematics and how their developments influence the contemporary study of mathematics

**Quality Indicators Such As:**
Student benchmarks were not met in all student-learning objectives at the time of the Program Review. These benchmarks and objectives have few students being evaluated in the upper areas.

Student evaluations and graduation evaluations were used to inspire the change of focus into just the core area GPA to better analyze student growth.

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 faculty involvement in professional organizations.

**Productivity for Most Recent 5 Years**
- Number of Degrees: 2.25 average over past 4 years
- Number of Majors: 12.25 average over past 4 years
Other Quantitative Measures Such As:

- Number of Courses for Major: 14-25
- Student Credit Hours in Major: 44-76
- 2015/2016 Direct Instructional Costs: $202045
- 2016/2017 Direct Instructional Costs: $188343
- 2017/2018 Direct Instructional Costs: $245884
- 2018/2019 Direct Instructional Costs: $217136.49
- 2019/2020 Direct Instructional Costs: $241995.83
- Supporting Credit Hour Production: 1977.5 average over past 4 years

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<tr>
<th>Faculty Member</th>
<th>Credential</th>
<th>Institution</th>
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<tbody>
<tr>
<td>Mrs. Shawna Tucker</td>
<td>M.Ed.</td>
<td>Southwestern Oklahoma State University</td>
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<tr>
<td>Ms. Laura Franks</td>
<td>M.A.</td>
<td>Texas Tech University</td>
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<tr>
<td>Miss Alice Brazeau</td>
<td>M.Ed.</td>
<td>Campbellsville University</td>
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<tr>
<td>Dr. Yuriy Bulka</td>
<td>Ph.D.</td>
<td>University of Alabama</td>
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- Number of FTE faculty in specialized courses: 2

Duplication and Demand

The Bachelor in Mathematics is a program in demand by local public schools who have a need for competent mathematics teachers. There are other comparable universities offering a similar program outside of the Oklahoma panhandle. However, mathematics is required for general education.

Effective Use of Resources

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<tr>
<td>Cost to operate program per student credit hour</td>
<td>$259.55</td>
<td>$267.86</td>
<td>$264.39</td>
<td>$296.98</td>
<td>$312.60</td>
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<td>Faculty/ student ratio</td>
<td>1/4.63</td>
<td>1/5</td>
<td>1/3.25</td>
<td>1/1.15</td>
<td>1/1.47</td>
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Strengths and Weaknesses

Strengths of the program include small teacher to student ratios, and the teaching option being able to have majors eligible for more scholarships. Weaknesses include low number of enrollment, and outdated textbooks.

Recommendations

Maintain at current level