

**SEMINOLE STATE COLLEGE  
ASSOCIATE IN SCIENCE FOR MATHEMATICS (211)  
Program Review Executive Summary**

**Date of Review:** Fall 2012

**Recommended Date of Next Review:** Fall 2017

**The Associate in Science for Mathematics Degree Program is central to the Seminole State College mission in the following ways:**

**Empowers people for academic success** by preparing students for a range of Mathematics careers and at the same time improve their critical thinking skills necessary for success in all studies. **Empowers people for personal development** by training students to set and achieve educational goals by developing responsibility, organizational skills, and academic skills. The program places students in appropriate developmental or college level courses, allowing students the opportunity to progress through the curriculum to achieve success. **Empowers people for life-long learning** by providing a variety of courses that vary in content and have the purpose of broadening a student's appreciation of and creating a desire for continued learning once they have completed their education.

**Program Objectives and Goals:** Outcomes Specific to Associate in Science for Mathematics (211)

Outcome 3: Demonstrate problem-solving skills foundational to higher order mathematics. Higher order mathematics shall be defined as commonly accepted concepts in algebra, trigonometry, analytic geometry, and calculus.

Outcome 4: Demonstrate preparation for continued pursuit of mathematics education leading to a baccalaureate degree in mathematics.

**Quality Indicators Such As:**

- Student Learning Outcomes
- Effective Teaching
- Effective Learning Environments
- Capacity to Meet Needs of Constituencies

- Instructors assess Student Learning Outcomes at the classroom level with a pre-test and post-test. The fact that all courses in the Mathematics and Science areas show improvement verifies that student learning takes place. In 2010, for all thirteen of the Major Field courses, the average growth rate was 53.4%. The overall ratio of post-test scores to pre-test scores was 4.0 to 1 (71.0% to 17.6%).
- SSC provides faculty with the opportunity for professional development through funding opportunities and onsite technology training. The college employs faculty based on Higher Learning Commission guidelines and teaching ability.
- SSC is committed to creating effective learning environments with technology, increased tutoring and other academic support, and the development of a variety of delivery methods such as blended or hybrid courses.
- The Mathematics Degree Program is meeting the needs of the service area even though the demand for the program is low with approximately 5 declared majors and 3 graduates per year.

**Productivity for Most Recent 5 Years**

**Number of Degrees:** 14

**Number of Majors:** 22

**Other Quantitative Measures:**

- Number of Courses for Major

**Number of Courses for Major:** 13

**Student Credit Hours in Major:** 10,532 for review period (Includes non-major enrollees)

<ul style="list-style-type: none"> <li>- Student Credit Hour in Major</li> <li>- Direct Instructional Costs</li> <li>- Roster of faculty members including the number of FTE faculty in the specialized courses within the curriculum</li> </ul>	<p><b>Direct Instructional Costs:</b> \$1,659,847 for review period (Total for four science degree programs)</p> <p><b>Roster of Mathematics Faculty:</b></p> <table border="1" data-bbox="655 315 1906 727"> <thead> <tr> <th colspan="4" style="text-align: center;"><b>Current Full-Time Mathematics/Science/Engineering Faculty</b></th> </tr> <tr> <th style="text-align: center;">Name</th> <th style="text-align: center;">Teaching Area</th> <th style="text-align: center;">Highest Degree</th> <th style="text-align: center;">Institution</th> </tr> </thead> <tbody> <tr> <td>Bryant, Melissa</td> <td>Mathematics</td> <td>M.Ed.</td> <td>East Central University</td> </tr> <tr> <td>Goeller, Linda</td> <td>Mathematics</td> <td>Ph.D.</td> <td>Oklahoma State University</td> </tr> <tr> <td>Laule, Gerhard</td> <td>Chemistry</td> <td>M.S.</td> <td>University of Arkansas</td> </tr> <tr> <td>Mills, Jamie</td> <td>Mathematics</td> <td>M.Ed.</td> <td>East Central University</td> </tr> <tr> <td>Tollett, Jarrod</td> <td>Physical Science</td> <td>M Ed.</td> <td>East Central University</td> </tr> <tr> <td>Troglin, Annette</td> <td>Mathematics</td> <td>M. Ed.</td> <td>East Central University</td> </tr> <tr> <th colspan="4" style="text-align: center;"><b>Current Adjunct Mathematics/Science/Engineering Faculty</b></th> </tr> <tr> <td>Birdwell, Larry</td> <td>Mathematics</td> <td>M.S.</td> <td>Oklahoma State University</td> </tr> <tr> <td>Qualls, Travis</td> <td>Mathematics</td> <td>M.Ed.</td> <td>East Central University</td> </tr> </tbody> </table>	<b>Current Full-Time Mathematics/Science/Engineering Faculty</b>				Name	Teaching Area	Highest Degree	Institution	Bryant, Melissa	Mathematics	M.Ed.	East Central University	Goeller, Linda	Mathematics	Ph.D.	Oklahoma State University	Laule, Gerhard	Chemistry	M.S.	University of Arkansas	Mills, Jamie	Mathematics	M.Ed.	East Central University	Tollett, Jarrod	Physical Science	M Ed.	East Central University	Troglin, Annette	Mathematics	M. Ed.	East Central University	<b>Current Adjunct Mathematics/Science/Engineering Faculty</b>				Birdwell, Larry	Mathematics	M.S.	Oklahoma State University	Qualls, Travis	Mathematics	M.Ed.	East Central University
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<p><b>Duplication and Demand</b></p>	<p>Degree program does not duplicate programs in the service area. Demand is low.</p>																																												
<p><b>Effective Use of Resources</b></p>	<p>The MSE Division maximizes productivity using the available physical, technical, financial and personnel resources.</p>																																												
<p><b>Strengths and Weaknesses</b></p>	<p><b>Strengths:</b> Faculty members are experienced, motivated, qualified, and caring instructors that work to coordinate course content to insure a proper background for their students. Faculty members are receiving training in the use of new instructional technology and are actively implementing more technology into the classrooms and labs as it becomes available. The size of SSC allows for smaller class sizes and more one on one involvement with the students.</p> <p><b>Weaknesses:</b> Scheduling and offering classes that have lab components are becoming more of a problem due to limited lab space. Support for at-risk students. Basic equipment depreciation.</p>																																												
<p><b>Recommendations</b></p>	<ul style="list-style-type: none"> <li>• Increase student and faculty awareness of the articulation agreements between colleges and universities in the state system and the advantage of receiving an associate degree before transferring to a four-year institution.</li> <li>• Increase efforts to recruit Mathematics majors by encouraging SSC students to choose mathematics as a major and by recruiting area high school students to choose the major.</li> <li>• Implement degree completion initiative that involves degree planning and tracking procedures for students that require students to experience increased, high quality one on one interaction and mentorship with Mathematics faculty.</li> </ul>																																												