

**SEMINOLE STATE COLLEGE
ASSOCIATE IN SCIENCE FOR PHYSICAL SCIENCES (213)
Program Review Executive Summary**

Date of Review: Fall 2012

Recommended Date of Next Review: Fall 2017

The Associate in Science for Physical Sciences 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 Physical Science 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 Physical Sciences (213)

Outcome 3: Define and explain fundamental concepts, principles, and theories of physical science.

Outcome 4: Gather scientific information through experiments and interpret and express the results of experiments.

Outcome 5: Demonstrate problem-solving skills foundational to understanding of physical science concepts.

Outcome 6: Demonstrate preparation for continued pursuit of physical science education leading to a baccalaureate degree in a physical science area.

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, the average growth rate was 56.0% for all thirteen of the Major Field courses. The overall ratio of post-test scores to pre-test scores was 4.1 to 1 (73.9% to 17.9%).
- 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 Physical Sciences 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: 16

<p>Other Quantitative Measures:</p> <ul style="list-style-type: none"> - Number of Courses for Major - Student Credit Hour in Major - Direct Instructional Costs - Roster of faculty members including the number of FTE faculty in the specialized courses within the curriculum 	<p>Number of Majors: 27</p> <p>Number of Courses for Major: 13</p> <p>Student Credit Hours in Major: 6,793 for review period (Includes non-major enrollees)</p> <p>Direct Instructional Costs: \$2,561,494 for review period (Total for four science degree programs)</p> <p>Roster of Physical Sciences Faculty:</p> <table border="1" data-bbox="653 415 1896 883"> <thead> <tr> <th colspan="4">Current Full-Time Mathematics/Science/Engineering Faculty</th> </tr> <tr> <th>Name</th> <th>Teaching Area</th> <th>Highest Degree</th> <th>Institution</th> </tr> </thead> <tbody> <tr> <td>Eberhart, Lori</td> <td>Life Science</td> <td>M.S.</td> <td>Oklahoma State University</td> </tr> <tr> <td>Goeller, Linda</td> <td>Mathematics</td> <td>Ph.D.</td> <td>Oklahoma State University</td> </tr> <tr> <td>Helseth, Dave</td> <td>Life Science</td> <td>M.S.</td> <td>Oklahoma State University</td> </tr> <tr> <td>Jobe, Noble</td> <td>Life Science</td> <td>Ph.D.</td> <td>Oklahoma State University</td> </tr> <tr> <td>Laule, Gerhard</td> <td>Life Science</td> <td>M.S.</td> <td>University of Arkansas</td> </tr> <tr> <td>Rush, Loretta</td> <td>Life Science</td> <td>M.Ed.</td> <td>East Central University</td> </tr> <tr> <td>Tollett, Jarrod</td> <td>Physical Sciences</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">Current Adjunct Mathematics/Science/Engineering Faculty</th> </tr> <tr> <td>Williams, Beverly</td> <td>Life Science</td> <td>M.Ed.</td> <td>East Central University</td> </tr> <tr> <td>Wilson, Barbara</td> <td>LifeScience</td> <td>M.S. & M.Ed.</td> <td>OU / East Central University</td> </tr> </tbody> </table>	Current Full-Time Mathematics/Science/Engineering Faculty				Name	Teaching Area	Highest Degree	Institution	Eberhart, Lori	Life Science	M.S.	Oklahoma State University	Goeller, Linda	Mathematics	Ph.D.	Oklahoma State University	Helseth, Dave	Life Science	M.S.	Oklahoma State University	Jobe, Noble	Life Science	Ph.D.	Oklahoma State University	Laule, Gerhard	Life Science	M.S.	University of Arkansas	Rush, Loretta	Life Science	M.Ed.	East Central University	Tollett, Jarrod	Physical Sciences	M.Ed.	East Central University	Troglin, Annette	Mathematics	M.Ed.	East Central University	Current Adjunct Mathematics/Science/Engineering Faculty				Williams, Beverly	Life Science	M.Ed.	East Central University	Wilson, Barbara	LifeScience	M.S. & M.Ed.	OU / East Central University
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Duplication and Demand	Degree program does not duplicate programs in the service area. Demand is low.																																																				
Effective Use of Resources	The MSE Division maximizes productivity using the available physical, technical, financial and personnel resources.																																																				
Strengths and Weaknesses	<p>Strengths: 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>Weaknesses: 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>																																																				
Recommendations	<ul style="list-style-type: none"> • 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. • Implement and improve the process for higher student enrollment in the Physical Sciences Degree 																																																				

	<p>Program.</p> <ul style="list-style-type: none">• 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 Physical Sciences faculty.
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