

**SEMINOLE STATE COLLEGE
ASSOCIATE IN SCIENCE IN PHYSICAL SCIENCES (213)**

2012-13 Degree Program Evaluation

The information required to complete this annual evaluation process mirrors the information required by OSRHE Policy on Academic Program Review. Specifically, it covers the following Vitality of the Program items: (1) Program Objectives and Goals, (2) Quality Indicators, (3) Minimum Productivity Indicators, and (4) Other Quantitative Measures (for additional information see OSRHE Policy 3.7.5.B.1-4).

1. Program Objectives and Goals

Associate in Science in Physical Sciences Degree Program Outcomes

Outcomes for Transfer Degree Programs

- Outcome 1: Demonstrate successful articulation of Seminole State College transfer degree programs to state and professional institutions of higher learning granting professional and baccalaureate degrees in Oklahoma.
- Outcome 2: Demonstrate successful academic achievement by Seminole State College transfer degree students at primary receiving state baccalaureate institutions of higher learning in Oklahoma. Successful academic achievement is defined as the maintenance of satisfactory academic progress toward degree completion as determined by the receiving institution.

Outcomes Specific to Associate in Science in Physical Sciences

- 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.

2. Quality Indicators

Combined Course Embedded Assessment Results For Fall 2012 and Spring 2013 for Major Field Courses in Degree Program

General Education Outcomes	Pre-Test % Correct	Post-Test % Correct	Difference
General Education Outcome 1	10%	74%	64%
General Education Outcome 2	15%	68%	53%
General Education Outcome 3	11%	79%	68%
General Education Outcome 4	-	-	-
Specific Outcomes for AS Physical Sciences	Pre-Test % Correct	Post-Test % Correct	Difference
Degree Program Outcome 3	15%	70%	55%
Degree Program Outcome 4	13%	71%	58%
Degree Program Outcome 5	15%	69%	54%
Degree Program Outcome 6	14%	54%	40%

Other Data Indicating Quality Relevant to Degree Program Major Field

Student Feedback on Instruction: The average response scores from the Student Feedback on Instruction for the Math/Science/Engineering Division ranged from 4.25 to 4.65 for the rated scale questions. Therefore, all of the averaged responses fell between “usually applies” and “almost always applies” with those responses describing desired attributes or behaviors. The average response score for all the rated scale questions was 4.47. The average response score for rated scale questions pertaining only to online courses was 4.33.

Graduate Exit Survey: No relevant current data available.

Collegiate Assessment of Academic Proficiency (CAAP) Test: Over the past five years, the Science portion of the CAAP test was only 0.1 point below the national mean. However, the current year score was 1.4 points below the national mean.

The Mathematics portion of the CAAP test was 0.1 point above the national mean for the current year.

Community College Survey of Student Engagement: Sixty-two percent of SSC students responded often or very often to the student-faculty interaction of discussing grades or assignments with an instructor as compared to 50.1% for students in the cohort schools. Instructors in the MSE Division encourage student-faculty interaction and frequently discuss grades with students.

Faces of the Future Survey: No relevant current data available.

Other Quality Indicators: No relevant current data available.

3. Minimum Productivity Indicators

Productivity Indicators

Academic Year	Semester	Declared Majors	Graduates
2012-13	Summer 2012	-	1
	Fall 2012	5	-
	Spring 2013	7	2

Does the degree program meet the minimum OSRHE standards for productivity this year?

Majors Enrolled (25 per year): No

Degree Conferred (5 per year): No

Comments/Analysis: This degree program continues to be a low demand program.

Low Productivity Justification: The Physical Science degree is a low demand and a low productivity degree statewide as verified by Oklahoma State Regents for Higher Education STEM Degrees by Field by Institution data (<http://www.okhighered.org/oeis/>). Although the Physical Science Degree is a low demand program and the rates of declared majors are below OSRHE productivity levels, our function at Seminole State College is to provide local access to those students in our five county service area wishing to pursue the Physical Science Degree.

4. Other Quantitative Measures

Number of Sections Taught and Enrollment for Each Course in Major Field of Degree Program

Prefix	Number	Major Field Course Title	Number of Sections	Total Students	Ave. Class Size	Total Credit Hours Generated
CHEM	1315	General Chemistry I	3	76	25	380
CHEM	1515	General Chemistry II	2	15	8	75
ENVS	1113	Introduction to Environmental Science	0	-	-	-
GEOL	1114	Physical Geology	2	39	20	156
GPS	1214	Earth Science	4	129	32	516
MATH	1613	Plane Trigonometry	4	47	12	141
MATH	2215	Calculus and Analytic Geometry I	2	27	14	135
MATH	2424	Calculus and Analytic Geometry II	1	13	13	52
MATH	2434	Calculus and Analytic Geometry III	1	1	1	4
PHYS	1314	Astronomy	2	33	17	132
PHYS	2224	General Physics II	1	13	13	52
PHYS	2231	Calculus Based Physics II	1	10	10	10
PHYS	2114	General Physics I	1	12	12	48
PHYS	2211	Calculus Based Physics I	2	6	3	6

Credit Hours Generated in Major Field Courses By Level

Academic Year	1000 Level Credit Hours Generated	2000 Level Credit Hours Generated
2012-13	1400	307

Note: Credit Hours Generated columns represent the student credit hours generated by all the major field courses of the degree program for the given academic year. The hours do not represent the number of student credit hours generated only by those students declaring this major.

Direct Instructional Costs

Academic Year	Instructional Costs*	Costs Shown By Division or Program?
2012-13	\$497,559.51	Science Department/MSE Division

*When cost data are not available by degree program, use total division budget for instructional costs for each degree program.

Credit Hours Generated by Courses in Major Field of Degree Program That Are Part of General Education Requirements in Other Degree Programs

Major Field Course Information				
Prefix	Number	Title	Total Students	Credit Hours Generated
CHEM	1315	General Chemistry I	76	380
GEOL	1114	Physical Geology	39	156
GPS	1114	General Physical Science	109	436
GPS	1214	Earth Science	129	516
PHYS	1314	Astronomy	33	132

Faculty Teaching Major Field Courses in Degree Program

Name	Teaching Area	Highest Degree	Institution
Goeller, Linda	Mathematics	Ph.D.	Oklahoma State University
Helseth, Dave	Science	M.S.	Oklahoma State University
Laule, Gerhard	Science	M.S.	University of Arkansas
Rush, Loretta	Science	M.Ed.	East Central University
Tollett, Jarrod	Mathematics / Science	M.Ed.	East Central University
Troglin, Annette	Mathematics	M.Ed.	East Central University
Current Full-Time Faculty From Other Divisions Teaching Major Courses in Degree Program (Instructors with ** beside their name teach only zero-level classes)			
-	-	-	-
Current Adjunct Faculty Teaching Major Courses in Degree Program (Instructors with ** beside their name teach only zero-level classes)			
Wilson, Barbara	Science	M.S. & M.Ed.	OU / East Central University

5. Recommendations and Other Relevant Items: Describe recommendations, new developments or initiatives pertaining to degree program.

Expand program by 5 students this year.