

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

**2014-15 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 2014 and Spring 2015 for Major Field Courses in Degree Program

General Education Outcomes	Pre-Test % Correct	Post-Test % Correct	Difference
General Education Outcome 1	17%	63%	46%
General Education Outcome 2	1%	68%	67%
General Education Outcome 3	8%	66%	58%
General Education Outcome 4	5%	61%	56%
Specific Outcomes for AS Physical Sciences	Pre-Test % Correct	Post-Test % Correct	Difference
Degree Program Outcome 3	7%	61%	54%
Degree Program Outcome 4	8%	54%	46%
Degree Program Outcome 5	10%	68%	58%
Degree Program Outcome 6	9%	68%	59%

### Other Data Indicating Quality Relevant to Degree Program Major Field

#### Degree Program Enrollment by Ethnicity

Academic Year	Ethnicity	Summer 2014		Fall 2014		Spring 2015	
2014-15	Total Students	5	100%	6	100%	7	100%
	Black	0	0%	0	0%	0	0%
	Indian	1	20%	1	17%	1	14%
	Asian	0	0%	0	0%	0	0%
	Hispanic	0	0%	0	0%	0	0%
	Hawaiian/Pacific Islander	0	0%	0	0%	0	0%
	White	4	80%	5	83%	6	86%
	Undeclared	0	0%	0	0%	0	0%

#### Degree Program Enrollment by Gender

Academic Year	Gender	Summer 2014	Fall 2014	Spring 2015
2014-15	Male	1	4	4
	Female	4	2	3

#### Student Feedback on Instruction:

The average response scores from the Student Feedback on Instruction for the Math/Science/Engineering Division ranged from 4.35 to 4.76 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 MSE response score for all the rated scale questions was 4.55.

#### Graduate Exit Survey:

Overall, students rated their academic experience favorably with 78% of the students rating “quality of teaching in your major field of study” as excellent or above average. More than 79% of students rated “faculty concern for student well-being” and “faculty commitment to student success and learning” as excellent or above average.

**Collegiate Assessment of Academic Proficiency (CAAP) Test:**

The Science portion of the CAAP test was 0.8 of a point below the national mean.

The Mathematics portion of the CAAP test was 0.4 of a point above the national mean for the current year.

**Community College Survey of Student Engagement:**

SSC placed higher than the national average in student-faculty interaction, student effort, support for learners, and academic challenge. The MSE division faculty emphasizes each of these areas. SSC scored lower than the national average in collaborative learning. Students do learn collaboratively in our division through the science lab assignments.

Faces of the Future Survey: no longer used

Other Quality Indicators: none

**3. Minimum Productivity Indicators**

**Productivity Indicators**

Academic Year	Semester	Declared Majors	Graduates
2014-15	Summer 2014	5	0
	Fall 2014	6	0
	Spring 2015	7	0

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	84	28	420
CHEM	1515	General Chemistry II	1	7	7	35
ENVS	1113	Introduction to Environmental Science (not offered this year)	0	0		
GEOL	1114	Physical Geology	1	5	5	20
GPS	1114	General Physical Science	6	142	23.7	568
GPS	1214	Earth Science	3	84	28	336
MATH	1613	Plane Trigonometry	2	34	30.7	102
MATH	2215	Calculus and Analytic Geometry I	1	13	13	65
MATH	2424	Calculus and Analytic Geometry II	1	9	9	36
MATH	2434	Calculus and Analytic Geometry III	2	11	5.5	44
PHYS	1314	Astronomy	2	36	18	144
PHYS	2224	General Physics II	1	9	9	36
PHYS	2231	Calculus Based Physics II	1	6	6	6

##### Credit Hours Generated in Major Field Courses of Degree Program By Level (from table above)

Academic Year	1000 Level Credit Hours Generated	2000 Level Credit Hours Generated
2014-15	1625	187

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?
2014-15	\$460,621.21	Science 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 That Are Part of General Education Requirements in Other Degree Programs**

Major Field Course Information			
Prefix	Number	Title	Credit Hours Generated
CHEM	1315	General Chemistry I	420
GEOL	1114	Physical Geology	20
GPS	1114	General Physical Science	568
GPS	1214	Earth Science	336
PHYS	1314	Astronomy	144

**Faculty Teaching Major Field Courses in Degree Program**

Name	Teaching Area	Highest Degree	Institution
Goeller, Linda	Mathematics	Ph.D.	Oklahoma State University
Holtz, Chris	Science	M.S.	University of California, San Diego
Jobe, Noble	Science	Ph.D.	Oklahoma State University
Tollett, Jarrod	Mathematics / Science	M.Ed.	East Central University
Troglin, Annette	Mathematics	M.Ed.	East Central University
<b>Current Full-Time Faculty From Other Divisions Teaching Major Courses in Degree Program (Instructors with ** beside their name teach only zero-level classes)</b>			
<b>Current Adjunct Faculty Teaching Major Courses in Degree Program (Instructors with ** beside their name teach only zero-level classes)</b>			
Helseth, Dave	Science	M.S.	Oklahoma State University
Ozment, K	Science	B.S.	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.