SEMINOLE STATE COLLEGE

ASSOCIATE IN SCIENCE IN PHYSICAL SCIENCES (213)

2016-17 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 2016 and Spring 2017 for Major Field Courses in Degree Program

General Education Outcomes	Pre-Test % Correct	Post-Test % Correct	Difference
General Education Outcome 1	10%	66%	56%
General Education Outcome 2	8%	61%	53%
General Education Outcome 3	8%	65%	57%
General Education Outcome 4	6%	67%	61%
Specific Outcomes for AS Physical Sciences	**Pre-Test % Correct**	**Post-Test % Correct**	**Difference**
Degree Program Outcome 3	10%	65%	55%
Degree Program Outcome 4	10%	71%	61%
Degree Program Outcome 5	9%	60%	51%
Degree Program Outcome 6	9%	63%	54%

Other Data Indicating Quality Relevant to Degree Program Major Field

Degree Program Enrollment by Ethnicity

Academic Year	Ethnicity	Summer 2016		Fall 2016		Spring 2017	
2016-17	Total Students	3	100%	10	100%	3	100%
[redacted]	Black	0	0%	0	0%	0	0%
	Indian	0	0%	0	0%	1	33%
	Asian	0	0%	0	0%	0	0%
	Hispanic	0	0%	0	0%	0	0%
	Hawaiian/Pacific Islander	0	0%	0	0%	0	0%
	White	3	100	9	90%	1	33%
	Undeclared	0	0%	1	10%	1	34%

Degree Program Enrollment by Gender

Academic Year	Gender	Summer 2016	Fall 2016	Spring 2017
2016-17	Male	2	5	3
[redacted]	Female	1	5	0

Student Feedback on Instruction:
The average response scores from the Student Feedback on Instruction was 4.47 on a scale of 5.0 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.

Graduate Exit Survey:
Overall, students rated their academic experience favorably with 82.7% of the students rating “quality of teaching in your major field of study” as excellent or above average. More than 78% 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 0.1 of a point below the national mean.
The Mathematics portion of the CAAP test was 0.1 of a point below the national mean for the current year.

3. Minimum Productivity Indicators

Productivity Indicators

Academic Year	Semester	Declared Majors	Graduates
2016-17	Summer 2016	3	1
	Fall 2016	10	1
	Spring 2017	3	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. These courses taught in this degree program also serve other degree programs on campus as both General Educational credit (courses) and some of these courses serve as requirements for the Pre-Engineering Degree, and Medical Laboratory Technician 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
BIOL	1113	Introduction to Environmental Science (not offered this year)				
CHEM	1315	General Chemistry I	3	93	31	465
CHEM	1515	General Chemistry II	1	5	5	25
PHYS	1114	General Physical Science	4	111	28	444
PHYS	1214	Earth Science	4	78	20	312
PHYS	1314	Astronomy	2	74	37	296
PHYS	1414	Physical Geology (not offered this period)				
MATH	1513	College Algebra	30	520	17	1560
MATH	1613	Plane Trigonometry	2	24	12	72
MATH	2215	Calculus and Analytic Geometry I	2	33	17	165
MATH	2424	Calculus and Analytic Geometry II	2	11	6	44
MATH	2434	Calculus and Analytic Geometry III	2	15	8	60
PHYS	2114	General Physics I	1	28	28	112
PHYS	2211	Calculus Based Physics I	2	14	7	14
PHYS	2224	General Physics II	1	17	17	68
PHYS	2231	Calculus Based Physics II	1	7	7	7

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
2016-17	3166	254

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?
2016-17	$463,449.00	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	1114	Introduction to Chemistry	300
CHEM	1315	General Chemistry I	380
PHYS	1114	General Physical Science	552
PHYS	1214	Earth Science	368
PHYS	1314	Astronomy	256
PHYS	1414	Physical Geology	
PHYS	2114	General Physics I	72
PHYS	2224	General Physics II	60

Faculty Teaching Major Field Courses in Degree Program

Name	Teaching Area	Highest Degree	Institution
Carpenter, Emily	Mathematics	M.S.	Oklahoma State University
Bryant, Melissa	Mathematics	M.Ed.	East Central University
Goeller, Linda	Mathematics	Ph.D.	Oklahoma State University
Gomez, Lynnette	Mathematics	B.S.	Oklahoma Baptist University
Holtz, Chris	Science	M.E.	University of Florida
Tollett, Jarrod	Science	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)			
Coursey, Danita	Mathematics	B.S.	University of Science and Arts of
Helseth, Dave	Science	M.S.	Oklahoma State University
Knox, Vickie	Mathematics	B.S.	East Central University
Love, Mary	Mathematics	M.A.	Northern Arizona University
Qualls, Travis	Mathematics	M.Ed.	East Central University
Stanley, Kara	Science	M.S.	West Texas A&M University
Troglin, Annette	Mathematics	M.Ed.	East Central University

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

These courses still serve a vital role in education for students served in this five county service area. This degree may no longer be offered, but these courses serve a larger educational foundation than just those enrolled in this degree option.