

**SEMINOLE STATE COLLEGE  
ASSOCIATE IN SCIENCE IN PRE-ENGINEERING (214)**

**Degree Program Evaluation for 2013-14**

*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 Pre-Engineering 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 Pre-Engineering**

- Outcome 3: Define and explain fundamental concepts, principles, and theories of engineering.
- 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 engineering concepts.
- Outcome 6: Demonstrate preparation for continued pursuit of engineering education leading to a baccalaureate degree in an engineering area.

## 2. Quality Indicators

### Combined Course Embedded Assessment Results For Fall 2013 and Spring 2014 for Major Field Courses in Degree Program

General Education Outcomes	Pre-Test % Correct	Post-Test % Correct	Difference
General Education Outcome 1	11%	76%	65%
General Education Outcome 2	23%	67%	44%
General Education Outcome 3	10%	68%	58%
General Education Outcome 4	17%	92%	75%
Specific Outcomes for AS Pre-Engineering	Pre-Test % Correct	Post-Test % Correct	Difference
Degree Program Outcome 3	19%	64%	45%
Degree Program Outcome 4	18%	67%	49%
Degree Program Outcome 5	17%	65%	48%
Degree Program Outcome 6	16%	65%	49%

#### 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 4.29 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 4.58.

##### Graduate Exit Survey:

Overall, students rated their academic experience favorably with 80.9% of the students rating “quality of teaching in your major field of study” as excellent or above average. More than 80% 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 0.2 of a point below the national mean. However, the previous year score was 1.4 points below the national mean. Therefore, the Science gained from the previous year.

The Mathematics portion of the CAAP test was 0.3 of a point above the national mean for the current year.

##### Other Quality Indicators:

**3. Minimum Productivity Indicators**

**Productivity Indicators**

Academic Year	Semester	Declared Majors	Graduates
2013-14	Summer 2013	13	0
	Fall 2013	29	1
	Spring 2014	24	5

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

Majors Enrolled (25 per year): Yes

Degree Conferred (5 per year): Yes

Comments/Analysis:

Low Productivity Justification:

**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	1114	Introduction to Chemistry	4	60	15	240
CHEM	1315	General Chemistry I	3	74	25	370
ENGR	1113	Introduction to Engineering	1	13	13	39
ENGR	2113	Rigid Body Mechanics	0	0	0	0
ENGR	2153	Strengths of Materials	0	0	0	0
ENGR	2613	Electrical Science	0	0	0	0
MATH	1613	Plane Trigonometry	3	35	12	105
MATH	2215	Calculus and Analytic Geometry I	1	15	15	75
MATH	2424	Calculus and Analytic Geometry II	1	6	6	24
PHYS	2211	Calculus Based General Physics I	2	11	6	6
PHYS	2224	General Physics II	1	9	9	36
PHYS	2231	Calculus Based General Physics II	1	2	2	2

**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
2013-14	754	143

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?
2013-14	\$778,946	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	Credit Hours Generated
GPS	1114	General Physical Science	428
GPS	1214	Earth Science	348
PHYS	1314	Astronomy	172
PHYS	2114	General Physics I	84

**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
Holtz, Chris	Science	M.S.	University of California, San Diego
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)**

Stiefer, Nick	Science	B.S.	Emporia State University

**Current Adjunct Faculty Teaching Major Courses in Degree Program (Instructors with \*\* beside their name teach only zero-level classes)**



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

Expand program by 5 students.