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

Degree Program Evaluation for 2017-18

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 2017-18
for Major Field Courses in Degree Program

General Education Outcomes	Pre-Test % Correct	Post-Test % Correct	Difference
General Education Outcome 1	25%	80%	55%
General Education Outcome 2	25%	78%	53%
General Education Outcome 3	21%	65%	44%
General Education Outcome 4	9%	61%	52%
Specific Outcomes for AS Pre-Engineering	**Pre-Test % Correct**	**Post-Test % Correct**	**Difference**
Degree Program Outcome 3	21%	73%	52%
Degree Program Outcome 4	21%	73%	52%
Degree Program Outcome 5	9%	70%	61%
Degree Program Outcome 6	9%	70%	61%

Other Data Indicating Quality Relevant to Degree Program Major Field

Degree Program Enrollment by Ethnicity

Academic Year	Ethnicity	Summer 2017		Fall 2017		Spring 2018	
2017-18	Total Students	9	100%	41	100%	37	100%
	Black	0	0%	2	4%	2	5%
	Indian	1	11%	9	22%	7	19%
	Asian	0	0%	1	3%	1	3%
	Hispanic	0	0%	1	3%	2	5%
	Hawaiian/Pacific Islander	0	0%	0	0%	0	0%
	White	8	89%	28	68%	25	68%
	Undeclared	0	10%	0	0%	0	0%

Degree Program Enrollment by Gender

Academic Year	Gender	Summer 2017	Fall 2017	Spring 2018
2017-18	Male	7	35	32
	Female	2	6	5

Student Feedback on Instruction:
The College's average on the rated-scale questions was 4.39 on a 5.0 scale. This information suggests overall positive feedback from students on classroom instruction. These averages fall close to the midpoint between the answers "usually applies" and "almost always applies" and were offered as positive affirmations to fifteen different statements regarding course effectiveness and classroom instruction.

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.

Other Quality Indicators: none

3. Minimum Productivity Indicators

Productivity Indicators

Academic Year	Semester	Declared Majors	Graduates
2017-18	Summer 2017	9	1
	Fall 2017	41	0
	Spring 2018	37	7

Does the degree program meet the minimum OSRHE standards for productivity this year?
Majors Enrolled (25 per year): **Yes**/No
Degree Conferred (5 per year): **Yes**/No

Comments/Analysis:
Not certain at this time why our student graduation rate is much lower than our declared major. Tracking this anomaly will be part of our solution to growth of this program.

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
ENGR	1113	Introduction to Engineering	1	18	18	54
CS	2013	Programming in C++	1	2	2	6
MATH	2215	Calculus and Analytic Geometry I	2	25	13	125
MATH	2424	Calculus and Analytic Geometry II	3	22	7	88
PHYS	2114	General Physics I	1	28	28	112
PHYS	2211	Calculus Based Physics I	2	14	7	14

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
2017-18	54	345

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 <u>do not</u> 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?
2017-18	$996,965	STEM 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
NA	NA	NA	

Faculty Teaching Major Field Courses in Degree Program

Name	Teaching Area	Highest Degree	Institution
Bryant, Melissa	Mathematics	M.Ed.	East Central University
Goeller, Linda	Mathematics	Ph.D.	Oklahoma State University
Tollett, Jarrod	Mathematics / 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)**			
Schnell, Michael	Computer Science	M.S.	Northeastern 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 10 students as declared major. Graduate 5 students more per year. Efforts underway to expand the degree program through help from NSF grant focused on recruitment and retention of under-represented student learners.