MCNEESE. STATE UNIVERSITY

Engineering [MEng] [ENGR]

Cycles included in this report:
Jun 1, 2018 to May 31, 2019

Program Name: Engineering [MEng] [ENGR]

Reporting Cycle: Jun 1, 2018 to May 31, 2019

1 Is this program offered via Distance Learning?

100% Traditional or less than 50% Distance/Traditional

2 Is this program offered at an off-site location?

No

2.1 If yes to previous, provide addresses for each location where 50% or more of program credits may be earned.

3 Example of Program Improvement

2016-2017:
Implementing graduate course assessment using the ABET rubrics. Examples are assessments for courses such a ELEN-555 and CIEN-535. The College of Engineering has developed student outcomes against which to evaluate the performance of the program. The capability of the college at delivering student outcomes is assessed by a cross-section of program stake holders. Faculty utilize assessment rubrics to quantify the ability of students to display each desired student outcome. Faculty then use the results from the assessment rubrics to identify and implement adjustment to the delivery of course content.

2017-2018:
Due to low enrollment, there are no changes implemented. Multiple theses project has started.

2018-2019: Multiple master thesis with great results were produced.
Due to low enrollment, there are no changes to report. Discontinued Engineering Management.

4 Program Highlights from the Reporting Year

2016-2017:
Nine ELEN graduates have demonstrated their skills by successfully completing the professional certification. There were five students undertaking thesis research. A MEEN student presented an award-winning graduate research paper during summer 2016. The graduate program continues to provide candidates well prepared for jobs. Local industries employ many of our graduates.

2017-2018:
Beginning in 2017-2018, data is calculated on a 5-point scale with a benchmark of 3.25. To establish a benchmark, the SLOs will be monitored until three years of data has been collected. The current assessment is based on all disciplines.

2018-2019: Please see attached file

Files: See list of attachments to view. (Requires Adobe Reader or compatible viewer).

Graduate Program-Report-2018-19

5 Program Mission

The Departments of Civil, Chemical, and Mechanical Engineering (CCME) and Electrical Engineering and Computer Science (EECS) provide an education in chemical, civil, electrical, and mechanical engineering that is professionally focused and practice-oriented within a student-friendly environment. The departments prepare our students to practice engineering, focusing on the industrial needs of the region by meeting the needs of traditional and non-traditional students through close contact with the faculty, the staff, and local industrial engineers and managers. The departments maintain an up-to-date curriculum that fosters inter-disciplinary teamwork, scholarly development, cooperation with regional industry, and engineering ethics.

6 Institutional Mission Reference

The program mission supports the University mission by fostering student success, academic excellence, and university-community alliances. In the program mission, student success and academic excellence are promoted by a professionally focused and practice-oriented student friendly environment, maintaining an up-to-date curriculum. The University mission is also accomplished by the close cooperation with regional industry.

7 Assessment and Benchmark CHEN 620, CIEN 535, ELEN 555, and MEEN551 Coursework [Approved]

Instruments: A 5-point rubric to determine the average SLOs on, quizzes, exams, and projects.

Assessment: To measure the ability to apply knowledge of mathematics, science, and engineering in the following courses: CHEN 620, CIEN 535, ELEN 555, and MEEN 551.

Benchmark: An average score of 3.20/5.00 is the desired benchmark.

Prior to 2017-2018, the benchmark was 3.00 on a 5-point scale.
Prior to 2016-2017, the benchmark was 2.00 on a 3-point scale.

Course Links

CHEN641 [Advanced Fluid Mechanics (Lec. 3, Cr. 3)]

CIEN535 [Pipeline Design and Analysis (Lec. 3, Cr. 3)]

ELEN555 [Electrical Power Systems Analysis (Lec. 3, Cr. 3)]

MEEN641 [Advanced Fluid Mechanics (Lec. 3, Cr. 3)]

Outcome Links

Content Knowledge [Program]
An ability to apply knowledge of mathematics, science, and engineering.

7.1 Data

Academic Year	Overall average for all PCs
2015-2016	2.17/3.00 (3.34/5.00*)
2016-2017	3.52/5.00
2017-2018	4.07/5.00

*Converted

Academic Year	Average Score			
	CHEN 620	CIEN 535	ELEN 555	MEEN 551
2018-2019	4.0	4.7	3.73	4.5
2019-2020				

Course Links

CHEN641 [Advanced Fluid Mechanics (Lec. 3, Cr. 3)]

CIEN535 [Pipeline Design and Analysis (Lec. 3, Cr. 3)]

ELEN555 [Electrical Power Systems Analysis (Lec. 3, Cr. 3)]

MEEN641 [Advanced Fluid Mechanics (Lec. 3, Cr. 3)]

7.1.1 Analysis of Data and Plan for Continuous Improvement

2016-2017:

Beginning in 2016-2017, the benchmark will be converted to an average score of 3.25 on a 5-point scale. To establish a benchmark, the SLOs will be monitored until three years of data has been collected. The current assessment is based on ELEN courses. Starting next cycle it will be collected from all disciplines.

2017-2018:
Beginning in 2017-2018, data is calculated on a 5-point scale with a benchmark of 3.25. To establish a benchmark, the SLOs will be monitored until three years of data has been collected. The current assessment is based on all disciplines.

2018-2019:
The current average for this PC on various course assessments has met the tentative benchmark of 3.25. The assessment results will be monitored until three years of data has been collected. The current assessment is based on all disciplines.

Course Links

CHEN641 [Advanced Fluid Mechanics (Lec. 3, Cr. 3)]

CIEN535 [Pipeline Design and Analysis (Lec. 3, Cr. 3)]

ELEN555 [Electrical Power Systems Analysis (Lec. 3, Cr. 3)]

MEEN641 [Advanced Fluid Mechanics (Lec. 3, Cr. 3)]

8 Assessment and Benchmark CHEN 620, CIEN 535, ELEN 650, and MEEN 551 Coursework [Approved]

Instrument: A 5-point rubric to determine the averages on quizzes, exams, and projects.

Assessment: To measure the ability to identify, formulate, and solve engineering problems in the following courses: will be decided.

Benchmark: An average score of 3.25/5.00 is the desired benchmark.

Course Links

CHEN670 [Process Control Systems (Lec. 3, Cr. 3)]

CIEN535 [Pipeline Design and Analysis (Lec. 3, Cr. 3)]

ELEN650 [Power Generation, Operation, and Control (Lec. 3, Cr. 3)]

MEEN507 [Gas Dynamics (Lec. 3, Cr. 3)]

Outcome Links

Solving Engineering Problems [Program]
An ability to identify, formulate, and solve engineering problems.

8.1 Data [Approved]

Academic Year	Overall average for all PCs
2015-2016	2.47/3.00 (2.94/5.00*)
2016-2017	3.25/5.00
2017-2018	4.00/5.00

*Converted

Academic Year	Average Score			
	CHEN 620	CIEN 535	ELEN 650	MEEN 551
2018-2019	4.0	4.7	4.2	4.5

Course Links

CHEN670 [Process Control Systems (Lec. 3, Cr. 3)]

CIEN535 [Pipeline Design and Analysis (Lec. 3, Cr. 3)]

ELEN650 [Power Generation, Operation, and Control (Lec. 3, Cr. 3)]

MEEN507 [Gas Dynamics (Lec. 3, Cr. 3)]

8.1.1 Analysis of Data and Plan for Continuous Improvement

2016-2017:
Beginning in 2016-2017, the benchmark will be converted to an average score of 3.25 on a 5-point scale. To establish a benchmark, the SLOs will be monitored until three years of data has been collected. The current assessment is based on ELEN courses. Starting next cycle it will be collected from all disciplines.

2017-2018:
Beginning in 2017-2018, data is calculated on a 5-point scale with a benchmark of 3.25. To establish a benchmark, the SLOs will be monitored until three years of data has been collected. The current assessment is based on all disciplines.

2018-2019:
The current average for this PC on various course assessments has met the tentative benchmark of 3.25. The assessment results will be monitored until three years of data has been collected. The current assessment is based on all disciplines.

Course Links

CHEN670 [Process Control Systems (Lec. 3, Cr. 3)]

CIEN535 [Pipeline Design and Analysis (Lec. 3, Cr. 3)]

ELEN650 [Power Generation, Operation, and Control (Lec. 3, Cr. 3)]

MEEN507 [Gas Dynamics (Lec. 3, Cr. 3)]

9 Assessment and Benchmark Research

Assessment: Conduct Independent Research in Master Thesis.

Benchmark: An average score of 3.50/5.00 is the desired benchmark score. Establish the benchmark next cycle involving literature search.

Outcome Links

Engineering Research Evaluation [Program]
An ability to identify and evaluate engineering and scientific research.

9.1 Data [Approved]

Academic Year	Overall average for all PCs
2016-2017	3.50/5.00
2017-2018	4.40/5.00
2018-2019	4.80/5.00
2019-2020	—

9.1.1 Analysis of Data and Plan for Continuous Improvement [Approved]

2016-2017:
This is a new assessment in 2016-2017. Based on student research results in their thesis work, assessed in oral and written presentations, SLOs are satisfactory. A satisfactory score is 3.50/5.00 as the new benchmark. The current assessment is based on ELEN students. Starting next cycle it will be collected from all disciplines.

2017-2018:

Five students in ME-ELEN program have completed five theses. All presentations and research work were accepted by a graduate committee. They have completed five research projects with satisfactory results.

2018-2019:
One student in the program (ELEN) completed a thesis. All presentations and research work were accepted by a graduate committee. Student have completed the research project with satisfactory results.

End of report