

Assessment: Assessment Plan

Degree Program - ENG - Industrial Engineering (BSIE)

CIP Code: 14.3501.00

Disciplinary Accrediting Body: ABET

Next Accrediting Agency Review: 2024

Degree Program Coordinator: Dongping Du

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Program Purpose Statement: The mission of the department is to provide the highest quality of industrial engineering education by stimulating discovery, integration, application, and communication of knowledge.

Assessment Coordinator: Lindsey Crowley-Scott

Modality: Face-to-Face, Off Campus Face-to-Face

Student Learning Outcome: IE Outcome 1

Students will demonstrate a knowledge of industrial engineering tools appropriate in formulating solutions that meet project objectives and constraints.

Outcome Status: Active

Outcome Type: Student Learning

Start Date: 08/01/2018

Assessment Methods

Student Projects - Measurement 1: Students will demonstrate a knowledge of industrial engineering tools appropriate in formulating solutions that meet project objectives and constraints.

Based on the evaluation of senior design projects and senior design presentations

Evaluators: IMSE faculty and industry observers

Scoring rubric:

(3) Exemplary: All relevant Industrial Engineering tools were used correctly in developing the solution with assumptions fully justified.

(2) Satisfactory: Some of the relevant Industrial Engineering tools were used correctly with assumptions mostly justified.

(1) Poor: Irrelevant Industrial Engineering tools used in developing the solution, or relevant tools not justified or used incorrectly.

(Active)

Criterion: 80% of students score a "2" or "3"

Schedule: Annually

Capstone Assignment/Project - Measurement 2: The team is able to formulate a data collection plan and analyze the data appropriately to meet the project objectives and constraints (Active)

Criterion: Based on the evaluation of senior design projects and senior design presentations

Evaluators: IMSE faculty and industry observers

Scoring rubric:

(3) Exemplary: All elements of the engineering design process were apparent and fully considered in the problem solution.

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(2) Satisfactory: Most elements of the engineering design process were apparent, some elements lacked development in the problem solution

(1) Poor: Not all elements of the engineering design process were used and/or were primarily focused only on analysis

Schedule: at least 80% of the students score a 2 or 3

Student Learning Outcome: IE Outcome 2

Students will be able to demonstrate the ability to communicate effectively

Outcome Status: Active

Outcome Type: Student Learning

Start Date: 08/01/2018

Additional Assessment Component: Communication Literacy

Assessment Methods

Student Projects - Measurement 1: Students will be able to clearly articulate the content of their presentation with the allotted time.

Based on the evaluation of senior design presentations

Evaluators: IMSE faculty and industry observers

Scoring rubric:

(3) Exemplary: The content of the presentation was clearly articulated; all aspects were fully developed.

There were good time management and pace; the presentation finished on time.

(2) Satisfactory: The content of the presentation was clearly articulated for the most part; some aspects lacked in development.

Time management was lacking and the presentation may not have finished on time.

(1) Poor: The content of the presentation was confusing in large part; many aspects lacked in development. Time management and pace were not controlled.

(Active)

Criterion: 80% of students score a "2" or "3"

Schedule: Annually

Student Projects - Measurement 2: Students will demonstrate appropriate oral communication skills, including personal presentation.

Based on the evaluation of senior design presentations

Evaluators: IMSE faculty and industry observers

Scoring rubric:

(3) Exemplary: professional tone; good eye contact with audience; relaxed; appropriate body movements (gestures, posture).

(2) Satisfactory: Somewhat professional or casual tone; okay eye contact; somewhat tense; mostly appropriate body movements.

(1) Poor: confused tone; lack of eye contact; nervous; inappropriate body movements

(Active)

Criterion: 80% of students score a "2" or "3"

Schedule: Annual

Student Learning Outcome: IE Outcome 3

The students demonstrated the elements of engineering design (objectives, synthesis, analysis, implementation, and evaluation) in their problem solution.

Outcome Status: Active

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Outcome Type: Student Learning

Start Date: 08/01/2018

Assessment Methods

Student Projects - Measurement 1: The students demonstrated the elements of engineering design (objectives, synthesis, analysis, implementation, and evaluation) in their problem solution.

Based on the evaluation of senior design projects and senior design presentations

Evaluators: IMSE faculty and industry observers

Scoring rubric:

(3) Exemplary: All elements of the engineering design process were apparent and fully considered in the problem solution.

(2) Satisfactory: Most elements of the engineering design process were apparent, some elements lacked development in the problem solution

(1) Poor: Not all elements of the engineering design process were used and/or were primarily focused only on analysis.

(Active)

Criterion: 80% of students score a "2" or "3"

Schedule: Annual

Capstone Assignment/Project - Measurement 2: Students are able to articulate the impact of a solution beyond solving the immediate problem, including effects in a global, economic, environmental, and societal contexts

Based on the evaluation of senior design projects and senior design presentations

Evaluators: IMSE faculty and industry observers

Scoring rubric:

(3) Exemplary: All elements of the engineering design process were apparent and fully considered in the problem solution.

(2) Satisfactory: Most elements of the engineering design process were apparent, some elements lacked development in the problem solution

(1) Poor: Not all elements of the engineering design process were used and/or were primarily focused only on analysis (Active)

Criterion: at least 80% of the students score a 2 or 3