

Program Assessment Report

Program: Mechanical Engineering Technology - Associate in Applied Science

Year: 18/19

Division: Business and technology

Contact: Matthew Eyre

Delta College



Actions Taken in Response to Last Year's Report

Rationale for Current Assessments

Assessment 1 of 4

Goal / Project

Outcome(s)

Demonstrate the ability to identify, formulate and solve fundamental engineering problems.

Standard / Objective

Method of assessment

Capstone Exam(s) / Mock Prof Exam

Comment/Details about the method of assessment

The Comprehensive Final Exam is a problem-based in-class paper exam.

Courses Affected

MT256

Time Frame

The assessment includes session 2015, 2016, 2017, & 2018

Submitted By

Matthew Eyre

Result

Result

(2) Results met expectation/standard

Data Collection (general or specific stats regarding results)

Of the 35 students that have completed the Final Exam for MT256, 23/35 completed the course with an 80% or higher on the final exam.

Of the 35 students that have completed the Final Exam for MT256, 29/35 completed the course with an 70% or higher on the final exam.

What We Learned (areas for improvements, strengths, etc.)

The comprehensive final exam is designed to challenge students knowledge of the current course, MT256, as well as knowledge gain from previous courses, MT221W, MT250, MTH119, MTH121, PHY111.

Students are demonstrating the ability to apply knowledge from current and past courses to solve engineering

style problems.

Use of Data to Improve Student Success

The data will be used to enhance the Comprehensive Final Exam to ensure that it challenges students knowledge at the same time it affords them the opportunity to demonstrate their ability to apply their diverse education.

| Institutional Student Learning Outcome | Action plan items of what is planned based on the data and results |
|--|--|
| <input checked="" type="checkbox"/> Apply Knowledge and Skills | <input checked="" type="checkbox"/> Change assignments/activities <input type="checkbox"/> Update course content |
| <input checked="" type="checkbox"/> Think Critically | <input type="checkbox"/> Change materials provided <input type="checkbox"/> Update course outcomes |
| <input checked="" type="checkbox"/> Communicate Effectively | <input type="checkbox"/> Adjust grading rubric <input type="checkbox"/> Update prior courses |
| <input type="checkbox"/> Act Responsibly | <input type="checkbox"/> Continue to Monitor <input type="checkbox"/> Other |

Assessment 2 of 4

Goal / Project

Outcome(s)

Apply knowledge of mathematics, science and engineering.

Standard / Objective

Method of assessment

Course Embedded Exam(s)

Comment/Details about the method of assessment

The Comprehensive Final Exam consists of two parts (in-class paper exam plus a take-home practicum).

Courses Affected

MT250

Time Frame

The assessment includes session 2013, 2014, 2015, 2016, & 2018

Submitted By

Matthew Eyre

Result

Result

(2) Results met expectation/standard

Data Collection (general or specific stats regarding results)

Of the 56 students that have completed the Final Exam for MT250, 41/56 completed the course with an 80% or higher on the final exam.

Of the 56 students that have completed the Final Exam for MT250, 48/56 completed the course with an 70% or higher on the final exam.

What We Learned (areas for improvements, strengths, etc.)

The comprehensive final exam is designed to challenge students knowledge of the current course, MT250, as well as knowledge gain from previous courses, MT221W, MTH119, MTH121, PHY111.

Students are demonstrating the ability to apply knowledge from current and past courses to solve engineering style problems.

Use of Data to Improve Student Success

The data will be used to enhance the Comprehensive Final Exam to ensure that it challenges students knowledge at the same time it affords them the opportunity to demonstrate their ability to apply their diverse education.

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| <input checked="" type="checkbox"/> Communicate Effectively | <input type="checkbox"/> Adjust grading rubric <input type="checkbox"/> Update prior courses |
| <input type="checkbox"/> Act Responsibly | <input type="checkbox"/> Continue to Monitor <input type="checkbox"/> Other |

Assessment 3 of 4

Goal / Project

Outcome(s)

Compile a comprehensive body of knowledge including verbal, oral, critical thinking and analytical skills.

Standard / Objective

Method of assessment

Course Embedded Paper(s)/Projects

Comment/Details about the method of assessment

The assessment project includes all Chapter Review writing assignments. Each student turned in three Chapter Reviews per term. This only includes assignments that were turned in to be graded.

Courses Affected

MIT111W

Time Frame

Fall 2018 & Winter 2019

Submitted By

Matthew Eyre

Result

Result

(2) Results met expectation/standard

Data Collection (general or specific stats regarding results)

Of the 17 students that completed MIT111W Fall 2018. 38 assignments were graded. 33/38 assignments attained 80% or higher on their ability to Compile a comprehensive body of knowledge and verbal, oral, critical thinking and analytical skills.

Of the 17 students that completed MIT111W Fall 2018. 38 assignments were graded. 36/38 attained 70% or higher on their ability to Compile a comprehensive body of knowledge and verbal, oral, critical thinking and analytical skills.

Of the 14 students that completed MIT111W Winter 2019. 26 assignments were graded. 25/26 assignments attained 80% or higher on their ability to Compile a comprehensive body of knowledge and verbal, oral, critical thinking and analytical skills.

Of the 14 students that completed MIT111W Winter 2019. 26 assignments were graded. 26/26 assignments

attained 70% or higher on their ability to Compile a comprehensive body of knowledge and verbal, oral, critical thinking and analytical skills.

Of the 21 students that completed MIT111W 2018-2019 academic year, 21/21 attained 80% or higher on their ability to Compile a comprehensive body of knowledge and verbal, oral, critical thinking and analytical skills.

What We Learned (areas for improvements, strengths, etc.)

Each student was assigned three Chapter Reviews per term. Student scores on the Reviews improved throughout the term.

Use of Data to Improve Student Success

The Chapter Review is a writing assignment designed to improve student outcome in the course. It is designed to help students study for exams by exploring what knowledge they have gained versus information that they are less confident with or need improvements. As the Chapter Review scores have improved over the course of the term, so have their subsequent exam scores.

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Assessment 4 of 4

Goal / Project

Outcome(s)

Prepare engineering drawings with CAD systems.

Standard / Objective

The assessment project includes all weekly assignments to generate engineering drawings. This only includes assignments that were turned in to be graded.

Method of assessment

Comment/Details about the method of assessment

All weekly assignments to generate engineering drawings were graded based upon a standard rubric.

Courses Affected

EGR165

Time Frame

Fall 2018 & Winter 2019

Submitted By

Matthew Eyre

Result

Result

(2) Results met expectation/standard

Data Collection (general or specific stats regarding results)

Of the 16 students that completed EGR165 Fall 2018, 11/16 attained 80% or higher on their ability to prepare engineering drawings with CAD systems

Of the 16 students that completed EGR165 Fall 2018, 14/16 attained 70% or higher on their ability to prepare engineering drawings with CAD systems

Of the 13 students that completed EGR165 Winter 2019, 6/16 attained 80% or higher on their ability to prepare engineering drawings with CAD systems

Of the 13 students that completed EGR165 Winter 2019, 12/16 attained 70% or higher on their ability to prepare engineering drawings with CAD systems

Of the 29 students that completed EGR165 2018-2019 academic year, 17/29 attained 80% or higher on their ability to prepare engineering drawings with CAD systems

Of the 29 students that completed EGR165 2018-2019 academic year, 26/29 attained 70% or higher on their ability to prepare engineering drawings with CAD systems

What We Learned (areas for improvements, strengths, etc.)

Overall, throughout each term students ability to generate drawings with CAD system improved as the term progressed. This is completely expected as students new to this area of engineering gain knowledge and experience. Specific weeks assignments will be modified to enhance student success.

Use of Data to Improve Student Success

Specific weeks assignments will be modified to enhance student success; specifically weeks 9 & 10 of the term.

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Comments and Action Plan

Discipline/Program Comments

Advisory Board Comments

Assessment Committee Comments

Curriculum Council Comments

Action Plan

Actions Taken in Response to Older Reports