

**Course Title:** EGT 234: Machine Design

**Course Leader:** Stephanie Rittler

**Expected Learning Outcomes for Course:**

Upon successful completion of the course, students will be able to do the following:

- Understand stress concentration, failure theories, and cyclic loading
- Apply Mohr's circle to failure theories
- Apply failure theories to stressed parts
- Work with principle stresses
- Design shafts
- Select and analyze springs
- Select and analyze fasteners
- Size power transmission threads
- Calculate loads on clutches and brakes
- Analyze welded and riveted connections
- Analyze gear trains

It is expected that 80% of the students enrolled in this course will complete the MET program and be employed in a related field or continue their education.

**Assessment:**

(How do students demonstrate achievement of these outcomes?)

Four exams, homework assignments

**Validation:**

(What methods are used to validate your assessment?)

Feedback from internship employers.

**Results:**

(What does the data show?)

Students struggle with quite a few concepts in this course due to a lack of example problems in their textbook.

**Follow-up:**

(How have you used the data to improve student learning?)

More example problems are worked through during class and students work together in teams to solve problems. Also, step-by-step homework solutions are posted on Blackboard once homework is turned in.

**Budget Justification:**

(What resources are necessary to improve student learning?) N/A