Course Title: **EGT 150: Introduction to CNC Programming**

Course Leader: **Stephanie Rittler**

Expected Learning Outcomes for Course:

Upon successful completion of this course, the student will be able to:

- Demonstrate an understanding of the role of "M" codes.
- Be able to use "G" codes for linear and circular interpolation.
- Understand the coordinate systems for tool movement on a CNC lathe and mill.
- Run a Haas-VF3 milling machine.
- Program a CNC mill using drill and milling methods.

Assessment:
(How do students demonstrate achievement of these outcomes?)

Assignments, laboratory projects, tests, and final exam

Validation:
(What methods are used to validate your assessment?)

Feedback from internship employers.

Results:
(What does the data show?)

One student recently got a job as an entry-level CNC operator. Local companies such as DL Martin and Rampf Molds want to hire graduates who are more experienced in machining and who know how to use current CAD/CAM software.

Follow-up:
(How have you used the data to improve student learning?)

We are in the process of developing an Advanced CNC course that will employ widely used CAD/CAM software to teach students how to design virtual parts that they will then cut using a CNC machine. Students will also learn basic milling and turning in the course. It is expected that this course will run as early as Fall 2012.

Budget Justification:
(What resources are necessary to improve student learning?)

CAD/CAM software, consumable parts for the CNC machine