

Course Information

Spring Semester
Introduction to Manufacturing

Course Description: Introduction to fabrication will provide students 8 separate modules designed to train students in tool usage, manufacturing processes and design. This course will start with learning how to use basic hand tools and metrology skills and will progress to using a mill to create a final project. This course uses online modules coupled with hands on activities to provide vital skills for all engineers.

Prerequisites: None

Location: Online, Shiley Shop (SH116), SH102, SH110

Time: Online Course

Instructor Information

Instructor: Dr. Kenneth Lulay

Telephone: 503.943.7432
503.943.7048

Office Hours: Email or check outside office

Emails: lulay@up.edu
hoffertm@up.edu

Office Locations: Shiley 236
Shiley 122

Materials

Text: No textbook required

Class Website: <https://sites.up.edu/manufacturingintro/>

Course Objective:

1. Safely use basic hand and power tools
2. Learn basic of metrology and measuring techniques
3. Read assembly instructions to complete basic milling procedures
4. Hone work holding techniques and understanding of dimensioning and tolerances

Course Schedule and outline

Each Module is schedule for to be completed in two weeks. This means there will be 8 modules in total with an added final project.

Each module will contain an *online presentation, a hands-on activity and a short quiz.*

Week one: Basic Hand Tools

Week two: Power Hand Tools

Week three: Metrology

Week four and Midterm: Fasteners and Box Assembly

Week five: Mills

Week six: Lathes

Week seven: Press Fitting and Bearings
Week eight: Assembly
Final Project: Final Manufacturing Project

Grading Breakdown:

Completion of Hands on Activities per module.....	45%
Midterm Project.....	15%
Quizzes.....	20%
Final Project.....	20%