### Course alpha, number, title
ME 372 Machine Tool Laboratory

### Required or elective
Elective

### Course (catalog) description
Principles and practice of machine tools. Safety, terminology, measurement, and working procedures for hand and machine tools.

### Prerequisite(s)
none

### Textbook(s) and/or other required material
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### Class/Lab schedule:
Total Credits: 12
Lecture/Laboratory/Discussion Hours: 0/2/0

### Topics covered
- a. Machine shop safety
- b. Identification of machines
- c. Using hand tools
- d. Planning and layout procedures
- e. Using a drill press
- f. Using a lathe
- g. Using a milling machine
- h. Using cutting machine tools
- i. Fabrication and assembly of parts
- j. Welding

### Course learning objectives
Students will know the safety of and be able to use machines in a standard machine shop, including hand tools.

### Relationship of course to ME program outcomes
The following measurement standard is used to evaluate the relationship between the course outcomes and the educational-program outcomes:

- 2 = Strong Emphasis
- 1 = Some Emphasis
- 0 = Little or No Emphasis

(a) an ability to apply knowledge of mathematics, science, and engineering—2
(b) an ability to design and conduct experiments, as well as to analyze and interpret data—0
(c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability—1
(d) an ability to function on multidisciplinary teams—1
(e) an ability to identify, formulate, and solve engineering problems—0
(f) an understanding of professional and ethical responsibility—1
(g) an ability to communicate effectively—2
(h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context —0
(i) a recognition of the need for and the ability to engage in life-long learning—0
(j) a knowledge of contemporary issues—0
(k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice—1

### Contribution to professional component:
0% Engineering Science 0% Engineering Design 100% Other

### Person(s) who prepared this description
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