

**PELLISSIPPI STATE COMMUNITY COLLEGE
MASTER SYLLABUS**

**SHOP FUNDAMENTALS & BASIC SAFETY
MET 1005**

Lecture/Lab Hours: 3

Credit Hours: 1

Date Revised: Spring 2017

Catalog Course Description

This course is designed for the novice that wants to attain a basic understanding of the use of hand-held manual and power tools found in the everyday shop environment. In addition, the use of common layout and measurement devices is included. An emphasis on safe practices will be introduced and reinforced throughout the course.

Prerequisites:

None

Co-requisites:

None

Textbooks and Other Supplies

TBD

Week/Unit/Topic Basis:

Week	Topic
1-3	Measurement tools and inspection
4-5	Precision layout techniques
6-7	Cutting, filing and fitting with safety
8-9	Drilling operations with safety
10-12	Power tool operation and safety
13-14	Culminating project
15	Final Exam Period

Engineering Technology General Outcomes (Educational objectives)

- I. Apply basic engineering theories and concepts creatively to analyze and solve technical problems.
- II. Utilize with a high degree of knowledge and skill equipment, instruments, software, and technical reference materials currently used in industry.
- III. Communicate effectively using developed writing, speaking, and graphics skills.
- IV. Assimilate and practice the concepts and principles of working in a team environment.
- V. Obtain employment within the discipline or matriculate to a four year program in engineering or industrial technology.

Engineering Technology Concentration Competencies

NOTE: At the program level all 6 competencies apply to roman numerals I – V of the Engineering Technology General Outcomes (Educational objectives) listed above

Students will

- A. Apply the knowledge, techniques, skills, and modern tools for the concentration of study to specifically defined engineering technology activities.
- B. Demonstrate the knowledge of mathematics, science, engineering and technology to engineering technology problems using developed practical knowledge.
- C. Conduct and report the results of standard tests and measurements, and conduct, analyze and interpret experiment or project results.
- D. Function effectively as a member of a technical team.
- E. Identify, analyze and solve specifically defined engineering technology-based problems.
- F. Employ written, oral and visual communication in a technical environment.

Course Goals

NOTE: Capital letters after course goals reference the competencies of the Engineering Technology concentrations listed above.

The course will

1. Enhance student understanding of measurement concepts and applications. (A,B,C)
2. Expand student understanding of the layout of precise two-dimensional patterns. (A,B,E,F)
3. Expand student understanding of the safe operation of manual and power tools. (A,C, D, E, F)
4. Improve student team building skills through the accomplishment of a culminating project. (A - F)

Expected Student Learning Outcomes

NOTE: Numbers after Expected Student Learning Outcomes reference the course goals listed above.

The student will

- a. Identify a variety of gages and measuring instruments. (1, 2, 3)
- b. Calibrate and operate a variety of standard and electronic measuring devices. (1)
- c. Calculate allowance for mating parts. (1)
- d. Develop a pattern layout using precise methods and tools. (2)
- e. Identify and explain the proper use of a variety of hand-held manual and power tools. (3)
- f. Associate concepts and perform basic filing, sawing, drilling and cutting operations. (1,3)
- g. Document technical information in a neat and orderly format for the culminating project. (1, 2, 3, 4)

Evaluation

Total evaluation will be based on the following point distribution.

Testing Procedures

Unit Exams

50 points

Five unit exams will be administered during the course. They will include discussion questions, short answer questions, true/false questions, and problem solving.

Laboratory Experiences

Individual Projects

30 points

Team Project

20 points

Field Work

N/A

Other Evaluation Methods

N/A

Grading Scale

Final grade for this course will be based on the following alphabetical/numerical scale.

A	93-100
B+	88-92
B	83-87
C+	79-82
C	74-78
D	65-73
F	Below 65

Policies

Attendance Policy

Pellissippi State expects students to attend all scheduled instructional activities. As a minimum, students in all courses (excluding distance learning courses) must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course. Individual departments/programs/disciplines, with the approval of the vice president of Academic Affairs, may have requirements that are more stringent. In very specific circumstances, an appeal of the policy may be addressed to the head of the department in which the course was taken. If further action is warranted, the appeal may be addressed to the vice president of Academic Affairs.

Academic Dishonesty

Academic misconduct committed either directly or indirectly by an individual or group is subject to disciplinary action. Prohibited activities include but are not limited to the following practices:

- Cheating, including but not limited to unauthorized assistance from material, people, or devices when taking a test, quiz, or examination; writing papers or reports; solving problems; or completing academic assignments.
- Plagiarism, including but not limited to paraphrasing, summarizing, or directly quoting published or unpublished work of another person, including online or computerized services, without proper documentation of the original source.
- Purchasing or otherwise obtaining prewritten essays, research papers, or materials prepared by another person or agency that sells term papers or other academic materials to be presented as one's own work.
- Taking an exam for another student.
- Providing others with information and/or answers regarding exams, quizzes, homework or other classroom assignments unless explicitly authorized by the instructor.
- Any of the above occurring within the Web or distance learning environment.

Please see the Pellissippi State Policies and Procedures Manual, Policy 04:02:00 Academic/Classroom Conduct and Disciplinary Sanctions for the complete policy.

Accommodations for Disabilities

Students that need accommodations because of a disability, have emergency medical information to share, or need special arrangements in case the building must be evacuated should inform the instructor immediately, privately after class or in her or his office. Students must present a current accommodation plan from a staff member in Disability Services (DS) in order to receive accommodations in this course. [Disability Services](#) (<http://www.pstcc.edu/sswd/>) may be contacted via [Disability Services email](#) or by visiting Alexander 130.

Other Policies

Safety and Equipment Abuse

Repeated safety violations will result in a reduction of final grade, at the instructor's discretion. Flagrant violations which result in equipment damage or personal injury could result in automatic failure of the course