

Piedmont Technical College Course Syllabus

COURSE INFORMATION

Course Prefix/Number: MTT 121

Title: Machine Tool Theory I

Responsible Division: Industrial/Engineering

Last Day to Withdraw from this Course: For the last date to withdraw from this course, consult the current *Student Calendar*.

Course Description:

For course, credit hour, pre-requisite(s) and co-requisite(s) information, visit the Detailed Course Information page: www.ptc.edu/courses/MTT121.

Textbook and Other Materials:

For textbook information and additional required and/or supplemental materials, visit the [college bookstore](http://www.ptc.edu/bookstore) (www.ptc.edu/bookstore).

Proctored Examinations:

Proctored examinations for distance learning courses taken at non-PTC campuses may require a proctoring fee for each exam taken.

COURSE POLICIES

Course policies are available online through the *Academic Catalog* and *Student Handbook*. Visit the [Course Policies page](http://www.ptc.edu/syllabus/policies) (www.ptc.edu/syllabus/policies) for a detailed list of important policies and more information.

GRADE POLICY

Detailed grading policy information can be found on the [Grading Policy webpage](http://www.ptc.edu/grading-policy) (http://www.ptc.edu/grading-policy). Final grade appeal information is available in the [Academic Catalog](http://www.ptc.edu/catalog/) (http://www.ptc.edu/catalog/).

ACCOMMODATIONS

Accommodations for ADA:

Information is available on the [Student Disability Services webpage](http://www.ptc.edu/ada) (<http://www.ptc.edu/ada>).

TITLE IX HARASSMENT AND SEXUAL ASSAULT INFORMATION

In accordance with Title IX of the Education Amendments of 1972, Piedmont Technical College does not discriminate on the basis of sex in its education programs or activities. Title IX protects students, employees, and applicants from sex discrimination in admissions and employment to include discrimination based on gender identity or failure to conform to stereotypical notions of masculinity or femininity. More information regarding Title IX, including contact information for the Title IX coordinators, is available at [Title IX Harassment and Sexual Assault Information](https://www.ptc.edu/about/legal-disclosures/title-ix-harassment-and-sexual-assault-information) (<https://www.ptc.edu/about/legal-disclosures/title-ix-harassment-and-sexual-assault-information>).

RATIONALE

Why do I need this course?

The machinist is a key person in all industry, which is engaged in metal manufacturing. The services of this highly skilled craftsman are much in demand as industrial development depends upon an ample supply of trained machinists. To turn a common piece of metal into an intricate part meeting precise specifications, the skilled machinist must possess a wide knowledge of shop practices and working properties of various metals. Industries processing metals will require machinists and toolmakers for the machine shop, maintenance department, fabrication departments, experimental shops and tool rooms.

Of equal importance to the successful machinist is the development of skill in the use of hand tools as well as power saws, bench grinders, drilling machines and lathes. Thus, the purpose of; this course is to thoroughly acquaint the student with operating principles as they apply to machine shop procedures. The course is designed, as the title implies, to incorporate theory and actual shop practice to insure comprehensive understanding of machine shop operation.

PROGRAM INFORMATION

For program information including required courses, program learning outcomes, gainful employment information and advisement information, refer to the Academic Program webpage. Go to [Academics](http://www.ptc.edu/academics) (<http://www.ptc.edu/academics>), select your program, and then select Credentials Offered.

COURSE STUDENT LEARNING OUTCOMES

Upon successful completion of this course and/or clinical, each student will be able to:

- ☐ Interpret the basic terms and metal working concepts used in the machine tool industry.
- ☐ Use and apply math skills and formulas necessary for determining the proper setup of metal working machines such as the lathe, drill press and band saws.
- ☐ Demonstrate hands on activities to enhance knowledge of various metal working machines and tools.
- ☐ Explain the projects they are manufacturing in the lab and be able to ask pertinent questions about the projects being worked on.
- ☐ Operate machinery in a safe and responsible manner.

GENERAL EDUCATION COMPETENCIES

Piedmont Technical College General Education Competencies for All Graduates:

This course may address one or more of the following General Education Competencies (assessment will be stated when applicable):

Communicate effectively.

Assessment:

Student will verbalize manufacturing processes as related to projects.

Apply mathematical skills appropriate to an occupation.

Assessment:

Student applies mathematical formulas to determine proper project processes.

Employ effective processes for resolving problems and making decisions.

Assessment:

Student determines the cause of project errors and machinery malfunctions.

Demonstrate the basic computer skills necessary to function in a technological world.

Assessment:

N/A

To validate proficiency in the general education competencies, students in some programs will be tested using Work Keys.