

## MACHINE TOOL, D.A.S. - MTT1

This diploma provides students with a primary technical specialty. All courses within this diploma will be awarded for credit toward an Associate in Applied Science degree with a major in Machine Tool Technology.

### Requirements

Courses	Course Title	Credit Hours
<b>General Education Courses</b>		
ENG 165	Professional Communications (or approved ENG course)	3
Select one of the following:		3
MAT 170	Algebra, Geometry and Trigonometry I	
MAT 110	College Algebra	
MAT 120	Probability and Statistics	
Elective Social/Behavioral Sciences ( <a href="https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/">https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/</a> )		3
Subtotal		9
<b>Required Core Subject Areas</b>		
MTT 120	Machine Tool Print Reading	3
MTT 121	Machine Tool Theory I	3
MTT 123	Machine Tool Theory II	3
MTT 141	Metals and Heat Treatment	3
MTT 143	Precision Measurements	2
Subtotal		14
<b>Other Courses Required for Graduation</b>		
MTT 122	Machine Tool Practice I	4
MTT 124	Machine Tool Practice II	4
MTT 126	Machine Tool Practice III	4
MTT 161	Machine Tool Maintenance Theory	2
MTT 250	Principles of CNC	3
Subtotal		17
Total Hours		40

### Graduation Plan

#### Fall Start

Course	Title	Hours
<b>First Year</b>		
<b>Fall Semester</b>		
MAT 170	Algebra, Geometry and Trigonometry I	3
MTT 120	Machine Tool Print Reading	3
MTT 121	Machine Tool Theory I	3
MTT 122	Machine Tool Practice I	4
MTT 143	Precision Measurements	2
Hours		15
<b>Spring Semester</b>		
ENG 165	Professional Communications	3

MTT 123	Machine Tool Theory II	3
MTT 124	Machine Tool Practice II	4
MTT 250	Principles of CNC	3
Hours		13

#### Summer Semester

MTT 126	Machine Tool Practice III	4
MTT 141	Metals and Heat Treatment	3
MTT 161	Machine Tool Maintenance Theory	2
Elective Behavioral Science ( <a href="https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/">https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/</a> )		3
Hours		12
Total Hours		40

#### Spring Start

Course	Title	Hours
<b>First Year</b>		
<b>Spring Semester</b>		
ENG 165	Professional Communications	3
MTT 123	Machine Tool Theory II	3
MTT 124	Machine Tool Practice II	4
MTT 250	Principles of CNC	3
Hours		13
<b>Summer Semester</b>		
MTT 126	Machine Tool Practice III	4
MTT 141	Metals and Heat Treatment	3
MTT 161	Machine Tool Maintenance Theory	2
Elective Behavioral Science ( <a href="https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/">https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/</a> )		3
Hours		12
<b>Fall Semester</b>		
MAT 170	Algebra, Geometry and Trigonometry I	3
MTT 120	Machine Tool Print Reading	3
MTT 121	Machine Tool Theory I	3
MTT 122	Machine Tool Practice I	4
MTT 143	Precision Measurements	2
Hours		15
Total Hours		40

### Application and Advising

If you are ready to start your education, there are a few simple steps involved in enrolling at Piedmont Technical College.

Get Started Today (<https://www.ptc.edu/admissions/new-students/>)

### Advising Information

The following information provides a guide for advisors who are helping students enroll in this program.

## Program Notes

To help students maximize financial aid opportunities as well as help ensure that students take their courses in the appropriate sequence, it is recommended that students entering Machine Tool Technology be admitted to the associate degree program, rather than certificate or diploma programs. The certificates and diplomas can be earned and awarded as they are completed within the associate degree program.

Be aware that not all MTT courses are offered each semester, so the best practice is to advise students to take the courses as outlined in the semester-by-semester graduation plan (see below).

Developmental students enrolling in the Spring or Summer should be advised by the MTT faculty members. The math required for this program is MAT 170. Students will follow this progression, with their starting point being determined by their placement test scores: MAT 032/012 > MAT 170. To schedule developmental math, substitute in place of MAT 170 during the Fall semester.

Students may earn a Machine Tool Operator certificate by completing the following courses successfully (25 cr. hrs.): MTT 121, 122, 143, 250, 120, 123, 124 and CPT 169.

MTT courses are offered during days and evenings.

This diploma is offered in Greenwood and the L-CAM (Laurens).

Ensure that first-term students take all MTT courses, even if developmental courses are needed. Ask the department head or full-time instructor for the best match. First-semester students in the FALL who are enrolled in developmental study courses should sign up for the following MTT courses: MTT 143, MTT 120, MTT 121, MTT 122. Students starting in the Spring or Summer may be advised to complete developmental and/or general education coursework so that they can begin MTT courses in the Fall semester. In some cases, students may be able to start with MTT coursework in the Spring or Summer, but starting in a semester other than Fall may affect students' financial aid in subsequent semesters. It is best to connect with Don Lytch (at the Lex Walters Campus in Greenwood), or Phillip Calhoun (at the center for Advanced Manufacturing in Laurens), if a student needs to start MTT courses in a semester other than Fall.

## Notes About Individual Classes

The English required for this program is ENG 165. Students will follow this progression, with their starting point being determined by their placement test scores: ENG 032/012 and/or RDG 032/012 (or RWR 032/012) > ENG 100 and/or RDG 100 (or RWR 100) > ENG 165. To schedule developmental English, substitute in place of ENG 165 during the Spring semester.

Developmental students enrolling in the Spring or Summer should be advised by the MTT faculty members. The math required for this program is MAT 170. Students will follow this progression, with their starting point being determined by their placement test scores: MAT 032/012 > MAT 170. To schedule developmental math, substitute in place of MAT 170 during the Fall semester.

The Machine Tool student should be prepared to purchase \$350 worth of hand-tools necessary for project work. A good calculator with sine, cosine and tangent functions, along with fractional/decimal equivalent

is recommended (TI-36X Solar by Texas Instruments). Safety glasses are required.

## Program Student Learning Outcomes

### Purpose Statement

The purpose of the Machine Tool Technology Diploma program is to provide the technical instruction and practical experience for skill development to enable the student to become gainfully employed in the Machine Tool Technology field.

### Program Student Learning Outcomes

1. Apply theoretical knowledge gained in class to complete metal working projects to blueprint requirements.
2. Setup and safely operate all machine tools required for project completion.
3. Apply the proper use of measuring tools for the completion of projects within stated limits.
4. Maintain the personal discipline to complete projects on time.
5. Use technology in machine shop related to on the job requirements.
6. Use applicable tooling correctly during various machining operations.