

Machinist

A 4-year, 16-credit Apprenticeship (2 years of related instruction)

About the Apprenticeship

Machinists operate a variety of machine tools and possess the skills to take one single part through its entire operational procedure to completion. Machinists work with conventional and CNC lathes, milling machines, grinders, drill presses, and boring bars. In addition to classes that cover machinist and metals trade theory, students will study industrial math, applied communications and human relations. Many employers use journey-workers as management personnel.

How to Get Started

- Obtain employment with approval for apprenticeship training.
- The State of Wisconsin oversees the apprenticeship system and will contact WCTC to set a class schedule.
- The schedule will be sent to the student from WCTC (application to WCTC is not necessary by the student).
- For further information, contact the local apprenticeship representative at 262.695.7778 or www.wisconsinapprenticeship.org

Required Courses	Credits
First Semester	
420-520 Metals Trade Theory I	3
804-504 Industrial Math I	1+
Total semester credits	4
Second Semester	
420-521 Metals Trade Theory II	3
804-505 Industrial Math II	1+
Total semester credits	4
Third Semester	
420-525 Machinist Theory I	3.5
801-500 Applied Communication	.5
Total semester credits	4
Fourth Semester	
420-527 Machinist Theory II	3.5
809-551 Human Relations - Apprentice	.5
Total semester credits	4
+ Proficiency exam available	
<i>Curriculum is current as of catalog printing. The most current curriculum requirements for graduation will be provided upon admission to program, or review at www.wctc.edu.</i>	

Machinist Required Courses

- 420-520 Metals Trade Theory I** 3
 Become familiar with basic theory related to topics such as in machining, blueprint reading, metallurgy, foundry, measurement, and safety in order to establish a solid foundation on which more specialized units – such as plastic moldmaking, stamping dies, CNC machining, and jig and fixture design – can be built.
- 420-521 Metals Trade Theory II** 3
 Explore topics including welding, milling machines, mechanical motions, electrical principles, layout, drill press, grinding, boring bar, jig boring, shapers, and planers.
- 420-525 Machinist Theory I** 3.5
 Become knowledgeable about horizontal and vertical turret lathes, screw machines, basic and advanced numerical control machinery, programming, and jig fixture application. Solve numerical control machining problems, draw up the solutions, and present an oral report on the problems.
- 420-527 Machinist Theory II** 3.5
 Increase knowledge of horizontal and vertical turret lathes, screw machines, basic and advanced numerical control machinery, programming, and jig fixture applications. Solve numerical control machining problems, draw up the solutions, and present an oral report on the problems.

- 801-500 Applied Communication** .5
 Enhance interpersonal communication skills, especially the oral and listening skills needed by those in apprentice programs.
- 804-504 Industrial Math I** 1
 Refresh knowledge of applied arithmetic, ratio, and proportion. Develop skills in applied algebra.
- 804-505 Industrial Math II** 1
 Study concepts within applied geometry and applied trigonometry during this individualized course. Apply these topics to industrial problems. Prerequisites: 804-504 Industrial Math I
- 809-551 Human Relations - Apprentice** .5
 Study the psychological principles of human relations that will assist in adaptation to the world of work and adjustment to personal and occupational relationships.