

MACHINE TOOL TECHNOLOGY - INTERMEDIATE TECHNICAL CERTIFICATE (ITC)

Explore More About This Program: <https://cwi.edu/program/machine-tool-technology>

Certificate Requirements

Course	Course Title	Min Credits
General Education Requirements		
<i>Choose one of the following courses to complete the GEM 1 or GEM 2 requirement:</i>		
Select one of the following:		
		3
GEM 1 - Written Communication course		
GEM 2 - Oral Communication course		
<i>Complete the following course to fulfill the GEM 3 requirement:</i>		
		3
GEM 3 - Mathematical Ways of Knowing course		
<i>Complete the following course to fulfill the GEM 6 requirement:</i>		
		3
GEM 6 - Social & Behavioral Ways of Knowing course		
Major Requirements		
MACH 103	Machine Shop Laboratory 1	3
MACH 104	Machine Shop Laboratory 2	3
MACH 105	Machine Shop Laboratory 3	6
MACH 126	Related Blueprint Reading 1	2
MACH 127	Related Blueprint Reading 2	2
MACH 143	Related Machine Shop Mathematics	3
MACH 153	Machine Shop Theory 1	2
MACH 154	Machine Shop Theory 2	2
MACH 155	Machine Shop Theory 3	2
MACH 224	Tool Design for Manufacturing	2
Minimum Credit Hours Required		36

Gainful Employment: For more information about our graduation rates, the median debt of students who have completed the program, and other important information, please visit our website at cwidaho.cc/ge (<https://cwidaho.cc/ge>).

Plan of Study Guide

Below is the required sequence of courses that you need to take in order to complete your program requirements. Please register for each semester as shown below using the Student Planning tool in myCWI. Consult your Student Success Advisor for any questions regarding this course sequence plan.

First Year

Fall		Credit Hours
MACH 103	Machine Shop Laboratory 1	3
MACH 104	Machine Shop Laboratory 2	3
MACH 126	Related Blueprint Reading 1	2
MACH 143	Related Machine Shop Mathematics	3
MACH 153	Machine Shop Theory 1	2
MACH 154	Machine Shop Theory 2	2
Select one of the following:		3
GEM 1 - Written Communication course		

GEM 2 - Oral Communication course		
	Total Semester Credit Hours	18
Spring		
MACH 105	Machine Shop Laboratory 3	6
MACH 127	Related Blueprint Reading 2	2
MACH 155	Machine Shop Theory 3	2
MACH 224	Tool Design for Manufacturing	2
	GEM 3 - Mathematical Ways of Knowing course	3
	GEM 6 - Social & Behavioral Ways of Knowing course	3
	Total Semester Credit Hours	18
	Minimum Credit Hours Required	36

Program Outcomes

The following are student learning outcomes for the Intermediate Technical Certificate in Machine Tool Technology at CWI:

- Demonstrate knowledge and application of safe work habits in all phases of machine shop operation.
- Demonstrate knowledge and application of advanced setup, operation, and maintenance of manual milling machines.
- Demonstrate knowledge and application of advanced manual engine lathe set-up techniques and operations, as well as precision surface grinding and measuring techniques.
- Perform and utilize advanced setup techniques, tool and hardware selection, and process planning for manufacturing, as well as jig and fixture design for production machining.
- Apply advanced interpretation of machine shop specific detail and assembly drawings emphasizing machining operations and materials; apply the Machinery's Handbook in interpreting blueprint specifications and associated machining processes.
- Work professionally and productively with others through collaboration and teamwork in a shop or lab environment.