

# MACHINE SHOP TECHNOLOGY – ASSOCIATE IN SCIENCE DEGREE, CERTIFICATE OF ACHIEVEMENT

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- IGETC (<https://curriculum.pasadena.edu/academic-programs-leading-degree-certificate/#igetctext>)

Top Code:

0956.30

The curriculum prepares students to work in the metal processing trades. Emphasis is on basic manufacturing principles. The program qualifies students to seek employment in the areas of instrumentation, mold making, tool and die general machining, industrial maintenance and research and development. The curriculum includes: basic manufacturing principles, technical mathematics including trigonometry, principles of metallurgy, quality assurance practices, tool design and manufacturing, physics of metal processing, computer numerical control machining (CNC), principles and operations of the electro-discharge machine (EDM), and product design.

A Certificate of Achievement is awarded upon complete of all required courses with a grade of C or better.

## Program Outcomes

- Demonstrate an understanding of basic manufacturing principles.
- Apply the skills need for: Instrumentation, mold making, tool and die general machining, industrial maintenance, and research and development.

## Requirements for the Certificate of Achievement

Code	Title	Units
MACH 101	BEGINNING METALWORKING SKILLS	3
MACH 102	INTERMEDIATE METALWORKING SKILLS	3
MACH 110	BLUEPRINT READING	1
MACH 111	GEOMETRIC DIMENSIONING AND TOLERANCING	2
MACH 120	COMPUTER-AIDED MANUFACTURING (CAM)	3
MACH 130	CNC MILL MACHINING	3
MACH 135	CNC LATHE MACHINING	3
<b>Total Units</b>		<b>18</b>

## General Education Requirements for the Associate in Science Degree

- General Information (<https://curriculum.pasadena.edu/academic-programs-leading-degree-certificate/>)
- PCC Local Gen Ed (<https://curriculum.pasadena.edu/academic-programs-leading-degree-certificate/#pcclocaltext>)
- CSU Breadth (<https://curriculum.pasadena.edu/academic-programs-leading-degree-certificate/#csubreadthtext>)