

MACHINE TECHNOLOGY - ASSOCIATE IN SCIENCE

San José City College offers an Associate in Science (AS) in CNC Machining and three certificates: CNC Machine Operator, Entry Level Machinist, and CNC, CAD/CAM Machinist. Successful completion of program prepares the graduate for entry into the machinist trade and positions in industry requiring technical skill and understanding of precision metalworking. Most courses applying to degree or certificate have basic language/math requirements and/or course prerequisites.

A grade of "C" or better is required for each course in the major or area of emphasis. A "P" (Pass) grade is an acceptable grade for courses in the major or area of emphasis if the course is taken on a Pass/No Pass basis.

CAREER OPTIONS:

- Mechanic Shop Deburr/Detail Person
- Manual Machinist
- CNC Operator
- CNC Programmer
- CNC Setup Operator/Programmer
- Tool and Die Inspector
- QA/QC Inspector
- Expeditor

Upon successful completion of this program, students will be able to:

- Demonstrate the proper use of machine tools, methods, recognition of different type of materials; and follow safety practices and procedures used in the industry.
- Demonstrate understanding of machine technology vocabulary, and be able to apply concepts in a practical manner. Students will solve problems related to set up applications.
- Read and interpret blueprints, sketches, ANSI specifications, shop drawings, and communicate with various groups the practical application of such interpretations.
- Apply and use new technologies that emerge in this changing field.

Major Requirements

Day Program

Course	Title	Credits
MACH 110	Geometric Dimensioning & Tolerancing (GD&T) Measurement ¹	4
MACH 120	Basic CNC Machining Center/CNC Mill	4.5
MACH 123	Basic CNC Lathe	4.5
MACH 126	Advanced CNC Machining Center and Turning Center	4.5
MACH 129	CNC Programming and Operations	4.5
MACH 153A	Operator/Programmer I	5
MACH 153B	Operator/Programmer II	5
Approved Program Electives Complete a minimum of 1 unit from the following approved major electives to reach 33 total major units: (See list below)		1
Total Units		33

¹ MACH 110 must be taken at San José City College.

- or -

Evening Program

Course	Title	Credits
MACH 100	Shop Math and Drawings	4
MACH 101	Introduction to Machine Technology	3
MACH 110	Geometric Dimensioning & Tolerancing (GD&T) Measurement ¹	4
MACH 151A	Advanced Lathe Practices	4
MACH 151B	Advanced Milling Machine Practices ¹	4
MACH 153A	Operator/Programmer I	5
MACH 153B	Operator/Programmer II	5
Approved Program Electives Complete a minimum of 4 units from the following approved major electives to reach 33 total major units: (see list below)		4
Total Units		33

¹ MACH 110 and MACH 151B must be taken at San José City College.

AS Degree Requirements

Course	Title	Credits
Major Requirements: Day or Evening Program		33
General Education Requirements		27
Complete two courses for the U.S. History, Constitution, and American Ideals Requirement (US-1, US-2, and US-3)		
Total Units		60

Approved Program Electives (as needed to reach 60 units)

Approved Program Electives

Complete a minimum of 1 unit from the following approved major electives to reach 33 total units for certificate:

Course	Title	Credits
CIS 041	Introduction to Computer Information Systems	3
MACH 098	Directed Study in Machine Technology	.5-9
MACH 109	Introduction to Coordinate Measurement Machine	3
MACH 138	Work Experience	1-8
MACH 154	Introductory CAD/CAM Operations for Machinists and Operators	2
MACH 158	Advanced CAD/CAM Operations for Machinists and Operators	2
MACH 159	Introduction to CNC Programming Macros	2
MACH 160	Introduction to CNC Laser Applications	5
MACH 165	Mill Setups I	1.5
Total Units		33