

San José City College
Associate in Science Degree
2016-2017

MACHINE TECHNOLOGY

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 in all major, certificate and major elective courses.

Upon completion of 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.

CAREER OPTIONS:

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

CERTIFICATE OF ACHIEVEMENT - LEVEL 2: CNC MACHINE OPERATOR **UNITS**

Day Accelerated Program

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	<u>4.5</u>
TOTAL			18

CERTIFICATE OF ACHIEVEMENT - LEVEL 2: ENTRY LEVEL MACHINIST

MACH	100	Shop Math and Drawing	4
MACH	101	Introduction to Machine Technology	3
MACH	151A	Advanced Lathe Practices	4
MACH	151B	Advanced Milling Machine Practices *	4
* MACH 151B must be taken at San José City College			
APPROVED MAJOR ELECTIVES			<u>3</u>
TOTAL			18

FOR ADDITIONAL INFORMATION, SEE A COUNSELOR, VISIT THE CAREER/TRANSFER CENTER, OR CONTACT:

Isai Ulate, isai.ulate@sjcc.edu
 Business and Workforce Development Division
 San José City College

408-298-2181 x3836
 408-288-3781
www.sjcc.edu

Machine Technology

2016-2017

<u>CERTIFICATE OF ACHIEVEMENT - LEVEL 3: CNC, CAD/CAM MACHINIST</u>			<u>UNITS</u>
COMPLETION OF CERTIFICATE OF ACHIEVEMENT - LEVEL 2:			
CNC MACHINE OPERATOR - OR - ENTRY LEVEL MACHINIST			18
MACH	110	Geometric Dimensioning & Tolerancing (GD&T) Measurements *	4
MACH	153A	Operator/Programmer I	5
MACH	153B	Operator/Programmer II	5
* MACH 110 must be taken at San José City College			
APPROVED MAJOR ELECTIVE			<u>1</u>
TOTAL			33

A.S. MAJOR REQUIREMENTS:

DAY PROGRAM

MACH	110	Geometric Dimensioning & Tolerancing (GD&T) Measurements *	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
* MACH 110 must be taken at San José City College			
APPROVED MAJOR ELECTIVE			<u>1</u>
TOTAL			33

- OR -

EVENING PROGRAM

MACH	100	Shop Math and Blueprint Reading	4
MACH	101	Introduction to Machine Technology	3
MACH	110	Geometric Dimensioning & Tolerancing (GD&T) Measurements *	4
MACH	151A	Advanced Lathe Practices	4
MACH	151B	Advanced Milling Machine Practices *	4
MACH	153A	Operator/Programmer I	5
MACH	153B	Operator/Programmer II	5
* MACH 110 and 151B must be taken at San José City College			
APPROVED MAJOR ELECTIVES			<u>4</u>
TOTAL			33

A.S. DEGREE REQUIREMENTS:

MAJOR REQUIREMENTS: DAY OR EVENING PROGRAM	33
GENERAL ELECTIVES (as needed to reach 60)	2
GENERAL EDUCATION PATTERN/GRADUATION REQUIREMENTS	24
PHYSICAL ACTIVITY	<u>1</u>
TOTAL REQUIRED UNITS	60

APPROVED MAJOR ELECTIVES - Choose from the following:

CIS	041	Introduction to Computer Information Systems	3
MACH	098	Directed Studies	1-8
MACH	109	Introduction to Coordinate Measurement Machine	3
MACH	138	Occupational Work Experience	3-4
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	4
MACH	165	Mill Setups I	1.5

Prepared by the SJCC Articulation Office and is subject to change without notice. This major sheet should be used for advisory purposes only. See a counselor for assistance in preparing your individual course plan. It is ultimately the individual student's responsibility to ensure that all requirements are met. 06/16