



Manufacturing/Machinist Technology

Associate in Applied Arts and Sciences (AAAS) or
Certificate of Proficiency (CP)

Planning Guide 2017-2018

EPC 607

Program Information:

Length of Program: 60-105 Credits
Completion Award: A.A.A.S. Degree *or*
Certificate of Proficiency
Enrollment: Every Quarter
Approximate Quarterly Costs: \$300
(in addition to tuition, books and parking)

Website: www.shoreline.edu/cncmachinist/

Program Advisor:

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Program Navigator:

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Program Description:

The Manufacturing/Machinist Associate in Applied Arts and Sciences degree or Certificate of Proficiency is designed to prepare qualified individuals for entry into the job market as a Manufacturing Technician. The program uses the innovative I-BEST approach to instruction, so students learn math for manufacturing with extra help as needed. Shoreline Community College works closely with local advisory committees comprised of industry professionals to ensure students receive the knowledge and skills currently in demand by employers in the field. Students interested in pursuing a four-year baccalaureate degree in Engineering should follow the Engineering AS-DTA transfer degree planning guide.

Manufacturing/Machinist Technology—What is it?

This is an intensive program covering the basic set up and operation of machines, blueprint reading, shop mathematics, machine tool theory, inspection, surface plate techniques, and Statistical Process Control (SPC). Specialist courses include Computer Aided Manufacturing (CAM), Computer Numerical Control Programming (CNC), and Rapid Prototyping. Students will be involved in producing and machining industry parts.

Program Outcomes:

Students who successfully complete this program **-by achieving a GPA of 2.0 or better for the entire program-**should be able to:

1. Perform entry-level tasks as a machinist; program basic machine tools to perform routine machining functions.
2. Use mathematics skills to solve basic manufacturing problems.
3. Safely set-up mills and turning tools making tool length and work piece offsets.
4. Apply teamwork, inspection and SPC to manufacturing problems.
5. Utilize properties of materials and establish correct speed of tool rotation and feed rate of forward motion.
6. Interpret mechanical blueprints.
7. Use current software for computer assisted machining.

Career Opportunities—What can I do with a Degree in Manufacturing/Machinist?

The demand in the manufacturing sector is excellent for individuals with good math, communication, and problem solving skills. With more and more manufacturing occurring in the Puget Sound Region, the demand for machinists should continue to grow. Graduates are hired as entry level machining technicians.

Potential employers include: Large and small manufacturing firms in the Puget Sound Region including aerospace, plastics, molding, and general manufacturing working as machining technicians and programmers. For more, please visit career information and resources at <http://www.shoreline.edu/counseling-center/career-counseling.aspx>.

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Program Prerequisites: AAAS requires completion of the Certificate of Proficiency. Many classes are variable credit and lab time is arranged with the instructor. ESL students should be at level 4 or 5 to enter the program. Please work closely with instructors or program advisors.

A.A.A.S. DEGREE – 96-105 Credits

GENERAL EDUCATION/RELATED INSTRUCTION REQUIREMENTS

Course	QTR	GR	CR
BTWRT 215 Bus Communications <u>or</u> ENGL& 101 English Composition 1			5
Human Relations (*see approved list)			2-5
Multicultural Education (†see approved list)			5

REQUIRED CORE COURSES

Course	QTR	GR	CR
MFGT 105 Basic Manufacturing			20
MFGT 106 Intermediate Manufacturing			20
MFGT 120 Manufacturing Technology Applications			20

Choose between 24-30 credits from the courses below:

Course	QTR	GR	CR
MFGT 155 Quality Assurance			5
MFGT 156 Quality Assurance II			5
MFGT 196 Manufacturing Internship			9
MFGT 215 Mfgt Technology Programming			6
MFGT 220 Computer Aided Mfgt (CAM)			6
MFGT 225 Intro to Additive Mfgt			3
MFGT 227 Advanced CAD/CAM Programming			5
MFGT 244 Preventive Maintenance			3
MFGT 245 10-Hour OSHA			1
MFGT 246 Mechanical Maintenance			5
MFGT 247 Motive Maintenance			5
MFGT 248 Control Maintenance			5
MFGT 249 Maintenance Internship			9
MFGT 280 Robotic Certification			5
MFGT 296 CAM Internship			9
ENGR 205 SolidWorks			3

CERTIFICATE OF PROFICIENCY – 60 Credits

CP CORE CURRICULUM

Course	QTR	GR	CR
MFGT 105 Basic Manufacturing			20
MFGT 106 Intermediate Mfgt			20
MFGT 120 Manufacturing Technology Applications			20

RECOMMENDATIONS:

<u>APPROVAL TO GRADUATE</u>	
<hr/> <i>Student Name & SID</i>	<hr/> <i>Date</i>
<hr/> <i>Faculty Advisory</i>	<hr/> <i>Date</i>
<hr/> <i>Division Dean</i>	<hr/> <i>Date</i>
<hr/> <i>Credential Approval</i>	<hr/> <i>Date</i>

Note: Every effort has been made to ensure the accuracy of the information in this publication. However, the information is subject to change without notice and final career decisions are the responsibility of the student.

* Approved Multicultural Understanding Courses: CMST 203, GWS 284, HIST 245, MCS 105, EDUC 117

† Approved Human Relations Courses: BUS 105, BUS 250, BUSTC 114, CMST& 101