



# Mechatronics

Associate in Applied Arts and Sciences (A.A.A.S.)

Planning Guide 2017-2018

EPC 768

## Program Information:

**Length of Program:** 93 – 99 credits  
**Completion Award:** A.A.A.S. Degree  
**Enrollment:** Fall, Winter, Spring, Summer  
**Approximate Quarterly Costs:** \$325  
*(in addition to tuition, books and parking)*

**Website:** [www.shoreline.edu/manufacturing](http://www.shoreline.edu/manufacturing)

## Program Advisor:

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## Program Navigator:

**Wanda Waldrop**  
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## Program Description:

Mechatronics is a two-year program that prepares students for immediate employment and future advancement in companies or government organizations that manufacture, service, sell, design or support electro-mechanical systems that control machinery, automation, and/or processes. This degree is offered jointly with Shoreline Community College and North Seattle College. Students must take classes at both campuses in order to complete this degree.

## Mechatronics—What is it?

Mechatronics technicians integrate knowledge of mechanics, electronics, and control systems to analyze and problem-solve 21<sup>st</sup>-century manufacturing systems. Certificates earned at both Shoreline Community College and North Seattle College stack into the Mechatronics A.A.A.S. degree. The program includes certificates in Robotics, Basic Manufacturing, and Preventative Machine Maintenance at Shoreline Community College and Controls, and Electronics at North Seattle College.

## 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:

- Identify and apply technical concepts and terms used in industrial energy and control.
- Troubleshoot robotic systems, using knowledge of microprocessors, programmable controllers, electronics, circuit analysis, mechanics, sensor or feedback systems, hydraulics, or pneumatics.
- Repair, maintain and install industrial production or processing machinery or equipment- both electrical and mechanical.
- Locate, evaluate, and apply relevant information from various sources to address workplace problems.

## Career Opportunities—What can I do with a Degree in Mechatronics?

- Industrial Machinery Mechanic <https://www.onetonline.org/link/summary/49-9041.00>
- Electrical and Electronics Repairers, Commercial and Industrial Equipment <http://www.onetonline.org/link/summary/49-2094.00>
- Robotics Technician <https://www.onetonline.org/link/summary/17-3024.01>
- Electro-Mechanical Technicians <https://www.onetonline.org/link/summary/17-3024.00>
- Millwright <https://www.onetonline.org/link/summary/49-9044.00>

**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 [www.shoreline.edu/acc/CareerCounseling.aspx](http://www.shoreline.edu/acc/CareerCounseling.aspx).

**Job Search Information:** [www.workforceexplorer.com](http://www.workforceexplorer.com)

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**Program Prerequisites:** A.A.A.S. requires completion of courses at both Shoreline Community College and North Seattle College. Many classes are variable credit and lab time is arranged with the instructor. Please work closely with instructors or program advisors. Courses at North Seattle College with pre-requisites are marked with an (\*). See catalog for more information.

A.A.A.S. DEGREE – 93 – 99 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 AT SHORELINE COMMUNITY COLLEGE

MFGT 105 Basic Manufacturing			20
MFGT 244 Preventive Maintenance			3
MFGT 245 10-Hour OSHA			1
MFGT 246 Mechanical Maintenance			5
MFGT 247 Motive Maintenance			5
MFGT 196 Manufacturing Internship			6-9
MFGT 280 Robotic Certification			5

### REQUIRED COURSES AT NORTH SEATTLE COLLEGE

EET 106 Intro to Soldering			1
EET 131 IT Essentials – A+ Certification			5
EET 137 Intro to Robotics			5
EET 160 Intro to Electricity and Electronics			5
EET 161 D.C. Principles of Electronics			5
EET/EEL 201 Energy Generation, Conversion and Sustainability*			5
EET/EEL 202 Industrial Motors Controls*			5
EET/EEL 203 Industrial Motors Drives*			5

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

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.