

# ADVANCED MANUFACTURING AND MECHATRONICS, CERTIFICATE OF COMPLETION

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## Certificate Description

The Advanced Manufacturing and Mechatronics Certificate of Completion program is designed for those students planning to work in a manufacturing industry. The Mechatronics Certificate of Completion program will prepare students to enter the workforce with the ability to operate and maintain equipment found in a modern manufacturing environment.

As manufacturing advances into a more automated production system, a higher level of technical expertise is required of the labor force. The certificate holders will have experience with the operation and maintenance of computer numeric controlled (CNC) machines and programmable logic controllers (PLCs), as well as a working knowledge of basic electronics, pneumatic, and mechanical systems.

## Certificate Requirements

### Freshman

First Semester	Credit Hours
MATH 156 or higher (not MATH 171 or MATH 181)	3-6
ENGR 181 Graphics for Engineers	2
ENGT 102 Manufacturing Processes	3
ENGT 144 DC/AC Electric Circuits	4
<b>Credit Hours</b>	<b>12-15</b>

### Second Semester

ENGT 114 Principles of Quality Control In Manufacturing	3
ENGT 140 Introduction to Computer Numeric Controlled (CNC) Machines	3
ENGT 150 Automated Control Systems	4
MECH 150 Introduction to Hydraulics and Pneumatics	4
<b>Credit Hours</b>	<b>14</b>
<b>Total Credit Hours</b>	<b>26-29</b>