Graduates are prepared to:

- Demonstrate a basic understanding of digital electronics.
- Demonstrate familiarity with programmable logic controllers.
- Demonstrate an understanding of AC and DC variable speed motor control.
- Demonstrate familiarity with basic electrical tools and the ability to operate.
- Demonstrate a basic understanding of industrial safety, electrical troubleshooting, hydraulic and pneumatic system operation, and mechanical system repair.
- Demonstrate familiarity with basic mechanical tools and the ability to repair a basic mechanical system.
- Demonstrate a basic understanding of hydraulic and pneumatic systems.
- Identify and use specific tooling used in machining process.
- Demonstrate basic welding procedures using SMAW and GMAW techniques.

For more information on other programs in this field, visit the catalog pages for the Industrial Technician CAS (http://catalog.gfcmsu.edu/academic-programs/industrial-technician-cas/) and the Renewable Energy Technician AAS (http://catalog.gfcmsu.edu/academic-programs/renewable-energy-technician/).

Outcomes

Graduates are prepared to:

- Identify and practice safe workplace habits.
- Demonstrate familiarity with basic electrical tools and the ability to troubleshoot a basic electrical system.
- Demonstrate familiarity with basic mechanical tools and the ability to repair a basic mechanical system.
- Demonstrate a basic understanding of hydraulic and pneumatic systems.
- Demonstrate the ability to use personal computers and common operating systems and applications software.
- Develop and practice professional standards of workplace communication and interpersonal skills.
- Demonstrate a basic understanding of AC and DC variable speed motor drives.
- Demonstrate a basic understanding of programmable logic controllers.
- Demonstrate a basic understanding of digital electronics.
- Demonstrate an understanding of college-level algebra.
- Demonstrate an understanding of motor control circuits and how they operate.
- Demonstrate a basic understanding of how industrial process controls are used.
- Demonstrate familiarity with industrial robotic control and programming.
- Identify and use specific tooling used in machining process.
- Demonstrate basic welding procedures using SMAW and GMAW techniques.

Program Requirements

Many students need preliminary math and writing courses before enrolling in the program requirements. These courses may increase the total number of program credits. Students should review their math and writing placement before planning out their full program schedules.
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>ELCT 250</td>
<td>Programmable Logic Controllers *·+</td>
<td>3</td>
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<tr>
<td>CAPP 156</td>
<td>MS Excel *·+</td>
<td>3</td>
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<td>ETEC 234</td>
<td>Automatic Controls *·+</td>
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<tr>
<td>ETEC 236</td>
<td>Intro to Industrial Robotics *·+</td>
<td>3</td>
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<tr>
<td>WLDG 100</td>
<td>Intro to Welding Fundamentals +</td>
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| Total Credits | 62-63 |

* A grade of C- or above is required for graduation.

* Indicates prerequisites needed.

** Placement in course(s) is determined by placement assessment.