Industrial Technician AAS

Overview

Associate of Applied Science Degree

Program Director: Karry Hardman

NOTE: This program is in moratorium and will not be accepting new students.

Program Website (http://www.gfcmsu.edu/webs/industrialtech/)

The Industrial Technician Associate of Applied Science degree program prepares graduates for technician jobs in industry related fields. Program graduates have general skills in industrial safety, electrical troubleshooting, hydraulic and pneumatic system operation, and mechanical system repair. They also have specialized skills in programmable logic controls, digital electronics, automatic process controls, metals technology, and industrial robots. These specialized skills are built on a strong educational foundation in math, writing, communications, and computing.

For more information on other programs in this field, visit the catalog pages for the Industrial Technician CAS (http://catalog.gfcmsu.edu/academic-programs/sustainable-energy-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.

Estimated Cost

Estimated Resident Program Cost*

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
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<tbody>
<tr>
<td>Tuition and Fees</td>
<td>$6,835</td>
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<tr>
<td>Application Fee</td>
<td>$30</td>
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<tr>
<td>Program Fee</td>
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<td>Books/Supplies</td>
<td>$1,691</td>
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<td>Total</td>
<td>$9,557</td>
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* Fall 2020 MUS Student Health Insurance Premiums will be changing. Please check the Health Insurance website (http://students.gfcmsu.edu/insurance.html) and/or Student Central for confirmed premium rates. Students will be charged an additional fee of $21 per credit for online/hybrid courses.

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>
<th>Grade/Sem</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Year</strong></td>
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<tr>
<td><strong>Fall</strong></td>
<td></td>
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<tr>
<td>ECP 100</td>
<td>First Aid &amp; CPR</td>
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<tr>
<td>ELCT 120</td>
<td>Basic Industrial Controls</td>
<td>3</td>
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<tr>
<td>ETEC 101</td>
<td>AC/DC Electronics I</td>
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<tr>
<td>NRGY 120</td>
<td>Industrial Safety and Rigging</td>
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<tr>
<td>NRGY 130</td>
<td>Fundmtl of Mechanical Systems</td>
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<td>M 105</td>
<td>Contemporary Mathematics</td>
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<tr>
<td>M 151</td>
<td>Precalculus</td>
<td>4</td>
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<tr>
<td>M 121</td>
<td>College Algebra</td>
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<tr>
<td>M 171</td>
<td>Calculus I</td>
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<tr>
<td><strong>Credits</strong></td>
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<tr>
<td><strong>Spring</strong></td>
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<tr>
<td>COMX 115</td>
<td>Intro to Interpersonal Communc</td>
<td>3</td>
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<tr>
<td>ETEC 103</td>
<td>AC/DC Electronics II</td>
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<tr>
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<td>Elec Motors and Generators</td>
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<tr>
<td>MCH 130</td>
<td>Machine Shop</td>
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<tr>
<td>NRGY 110</td>
<td>Fundmtl Hydraul/Pneu Systems</td>
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<td>Workplace Communications</td>
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<td><strong>Fall</strong></td>
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<td>CAPP 131</td>
<td>Basic MS Office</td>
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<td>ETEC 220</td>
<td>ElectricalPower/Distribution I</td>
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<td>ETEC 231</td>
<td>Electronic Drive Systems</td>
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<td>ETEC 245</td>
<td>Digital Electronics</td>
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<td>ELCT 250</td>
<td>Programmable Electronic Contro</td>
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<tr>
<td><strong>Credits</strong></td>
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<tr>
<td><strong>Spring</strong></td>
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<td>CAPP 156</td>
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<td>ETEC 234</td>
<td>Automatic Controls</td>
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<td>ETEC 236</td>
<td>Intro to Industrial Robotics</td>
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<td>WLDG 100</td>
<td>Intro to Welding Fundamentals</td>
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<tr>
<td><strong>Credits</strong></td>
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Total Credits 62-63

* Indicates prerequisites needed.
** Placement in course(s) is determined by placement assessment.
+ A grade of C- or above is required for graduation.