

# Industrial Technician CAS

## Certificate of Applied Science Degree

**NOTE: This program is currently under review and will not be accepting new students.**

This program prepares students for operation and maintenance jobs dealing with industrial machinery. Program graduates have general skills in industrial safety, electrical troubleshooting, hydraulic and pneumatic system operation, and mechanical system repair. These skills are built on a strong educational foundation in math, writing, and communications.

For more information on other programs in this field, visit the catalog pages for the Industrial Technician AAS (<http://catalog.gfcmsu.edu/academic-programs/industrial-technician-aas/>) 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.
- Develop and practice professional standards of workplace communication and interpersonal skills.
- Demonstrate an understanding of motor control circuits and how they operate.
- Identify and use specific tooling used in machining process.
- Demonstrate a basic understanding of programmable logic controllers.

## Estimated Cost

### Estimated Resident Program Cost\*

Tuition and Fees	\$3,450
Program Fee	\$500
Course Fee	\$35
Books/Supplies	\$1,190
Total	\$5,204

\*

**Fall 2023 MUS Student Health Insurance Premiums may 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 for only Summer 2023.**

## Fall Start 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.

Course	Title	Credits	Grade/Sem
<b>First Year</b>			
<b>Fall</b>			
ECP 100	First Aid and CPR +	1	_____
M 111	Technical Mathematics +	3	_____
MCH 130	Machine Shop +	3	_____
NRGY 110	Fundamentals of Hydraulic/ Pneumatic Systems +	3	_____
NRGY 120	Industrial Safety and Rigging +	3	_____
NRGY 130	Fundamentals of Mechanical Systems +	3	_____
<b>Credits</b>		<b>16</b>	
<b>Spring</b>			
COMX 102	Interpersonal Skills in the Workplace +	1	_____
ELCT 120	Basic Industrial Controls +	3	_____
ELCT 250	Programmable Logic Controllers *,+	3	_____
ETEC 101	AC/DC Electronics I +	3	_____
ETEC 103	AC/DC Electronics II *,+	3	_____
WRIT 104	Workplace Communications +	2	_____
<b>Credits</b>		<b>15</b>	
<b>Total Credits</b>		<b>31</b>	

+

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

\*

Indicates prerequisites needed.

\*\*

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

## Spring Start 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.

Course	Title	Credits	Grade/Sem
<b>First Year</b>			
<b>Spring</b>			
COMX 102	Interpersonal Skills in the Workplace +	1	_____
ELCT 120	Basic Industrial Controls +	3	_____
ELCT 250	Programmable Logic Controllers *,+	3	_____
ETEC 101	AC/DC Electronics I +	3	_____
ETEC 103	AC/DC Electronics II *,+	3	_____
WRIT 104	Workplace Communications +	2	_____
<b>Credits</b>		<b>15</b>	
<b>Fall</b>			
ECP 100	First Aid and CPR +	1	_____
NRGY 110	Fundamentals of Hydraulic/ Pneumatic Systems +	3	_____
NRGY 120	Industrial Safety and Rigging +	3	_____

NRGY 130	Fundamentals of Mechanical Systems +	3	_____
M 111	Technical Mathematics +	3	_____
MCH 130	Machine Shop +	3	_____
<b>Credits</b>		<b>16</b>	
<b>Total Credits</b>		<b>31</b>	

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