

Industrial Technician AAS

Overview

Associate of Applied Science Degree

Program Director: Kerry Hardman

Program Website (<http://www.gfcmsu.edu/webs/Technicians>)

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/archive/2017-2018/academic-programs/sustainable-energy-technician-cas>) and the Renewable Energy Technician AAS (<http://catalog.gfcmsu.edu/archive/2017-2018/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*

Tuition and Fees	\$6,510
Application Fee	\$30
Program Fee	\$1,000
Books/Supplies	\$1,570
Total	\$9,110

* **Fall 2017 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.

GFC MSU Additional Graduation Requirement

Course	Title	Credits	Grade/Sem
COLS 103	Becoming a Successful Student +	1	_____

Course	Title	Credits	Grade/Sem
First Year			
Fall			

Upon completion of the 1st and 2nd semesters, students are eligible to apply for the Industrial Technician Certificate of Applied Science.

ETEC 101	AC/DC Electronics I **,+	3	_____
NRGY 120	Industrial Safety and Rigging **,+	3	_____
NRGY 130	Fundmtl of Mechanical Systems **,+	3	_____
ELCT 120	Basic Industrial Controls **,+	3	_____
Select one of the following:			
M 105	Contemporary Mathematics **,+	3	_____
M 151	Precalculus **,+	4	_____
M 121	College Algebra **,+	3	_____
M 171	Calculus I **,+	4	_____

Credits 15-16

Spring			
COMX 115	Intro to Interpersonal Communc +	3	_____
ETEC 103	AC/DC Electronics II *,+	3	_____
ELCT 130	Elec Motors and Generators *,+	3	_____
MCH 130	Machine Shop +	3	_____
NRGY 110	Fundmtl Hydraul/Pneu Systems *,+	3	_____
WRIT 104	Workplace Communications +	2	_____

Credits 17

Second Year			
Fall			
CAPP 131	Basic MS Office +	3	_____
ETEC 220	ElectricalPower/Distribution I *,+	3	_____
ETEC 231	Electronic Drive Systems *,+	3	_____
ETEC 245	Digital Electronics *,+	4	_____
ELCT 250	Programmable Electronic Contro *,+	3	_____

Credits 16

Spring			
CAPP 156	MS Excel *,+	3	_____
ETEC 234	Automatic Controls *,+	4	_____
ETEC 236	Intro to Industrial Robotics *,+	3	_____
WLDG 100	Welding Fundamentals +	3	_____

Credits 13

Total Credits 61-62

* Indicates prerequisites needed.

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

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