



Effective 2013/2014

Career Cluster ►



Career Pathway ►

Manufacturing Production
Process Development

ELECTRO-MECHANICAL TECHNOLOGY

(10-620-1)

Associate of Applied Science Degree
Most Courses Offered at
Elkhorn Campus and Lakeview Center

| ^Δ Suggested Sequence | ✓ | Course Number | Course Title | Requisites | Credits | Hrs/Wk Lec - Lab |
|---------------------------------|---|---|--|---------------------------------|-----------|---------------------|
| Semester 1 | | 605-113 * | DC/AC I | | 3 | 2-2 |
| | | 612-102 * | Pneumatics/Hydraulics, Intro to | | 3 | 2-2 |
| | | 620-103 * | Intro to Industrial Controls | Coreq: 605-113 | 4 | 2-4 |
| | | 628-109 * | Mechanical Skills for Technicians | | 3 | 1-4 |
| | | 804-115 | College Technical Math 1 | Prereq: 834-110 (See Note 1) | 5 | 5-0 |
| Semester 2 | | 620-111 * | Intro to Industrial Solid State Circuits | Prereq: 605-113 | 4 | 2-4 |
| | | 620-140 * | Programmable Controllers | Prereq: 620-103 | 2 | 1-2 |
| | | 628-111 * | Computer Assisted Programming/ Robot and FMS | | 3 | 1-4 |
| | | 801-136 | English Composition 1 | Prereq: 831-103 (See Note 1) | 3 | 3-0 |
| | | 806-154 | General Physics 1 | Prereq: 804-115 | 4 | 3-2 |
| Semester 3 | | 620-110 * | Robotics Mechanics I | Prereq: 605-113 | 3 | 2-2 |
| | | 620-145 * | Programmable Logic Controllers/Adv. | Prereq: 620-140 | 3 | 1-4 |
| | | 620-150 * | Electromechanical Drives | Prereq: 605-113 | 3 | 1-4 |
| | | 809-196 | Sociology, Introduction to | Prereq: 838-105 (See Note 1) | 3 | 3-0 |
| | | 809-198 | Psychology, Introduction to | Prereq: 838-105 (See Note 1) | 3 | 3-0 |
| Semester 4 | | 620-102 * | Process Controls | Coreq: 620-111 | 3 | 2-2 |
| | | 620-113 * | Troubleshooting Electrical/Electronic Systems | Prereq: 620-102; Coreq: 620-145 | 3 | 2-2 |
| | | 625-121 * | MSSC Certification Preparation & Assessment | | 2 | 2-0 |
| | | 628-112 * | Computer Aided Manufacturing, Adv. | Prereq: 628-111; Coreq: 620-145 | 3 | 1-4 |
| | | 801-197 | Technical Reporting | Prereq: 801-136 | 3 | 3-0 |
| Electives | | Take 6 elective credits. Any associate degree level course may be taken as an elective. | | | 6 | |
| | | Suggested Electives: 196-135 Business Concepts, Ethics, Principles (2 Cr) 890-103 Employability Skills (2 Cr) 606-126 AutoCAD, Introduction (2 Cr) 628-108 Field Experience (2 Cr) | | | | |
| Program Total Required | | | | | 69 | |

^Δ Courses may be taken out of suggested sequence as long as requisites have been met.



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PROGRAM DESCRIPTION

The emerging field of *Electro-Mechanical Technology* and associated robotics equipment is covered in this program, which can be completed in two years of study if taken full-time. Topics covered during classroom lectures and through practical hands-on experience on modern equipment include troubleshooting manufacturing processes with programmable logic controllers (PLC), robotics, industrial electrical and hydraulic systems, mechanical power transfer systems and process control systems. Other items which are covered include technical report writing, human relations, and communication skills.

PROGRAM LEARNING OUTCOMES

Graduates of the Electro-Mechanical Technology Associate Degree Program should be able to:

1. Perform work safely.
2. Troubleshoot electrical and mechanical systems and devices.
3. Repair electrical and mechanical systems.
4. Communicate technical information.
5. Integrate electrical and mechanical systems and devices.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

- | | |
|--|-------------------------------------|
| 1. Act responsibly | 6. Respect themselves and others as |
| 2. Communicate clearly and effectively | a member of a diverse community |
| 3. Demonstrate essential comp. skills | 7. Think critically and creatively |
| 4. Demonstrate essential math skills | 8. Work cooperatively |
| 5. Develop job seeking skills | 9. Value learning |

ADMISSION REQUIREMENTS

1. Students must submit an application and \$30 fee.
2. Students must complete reading, writing, math, and computer skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. 69 Credits with an average of 2.0 or above.
2. *Average of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. A hand calculator capable of trigonometric functions is required; cost is approximately \$25.
3. Safety glasses are required in labs. If prescription safety glasses are necessary, allow a minimum of 90 days.
4. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult the Master Class Schedule for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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You may call Student Services at 1-800-247-7122 for additional information.

For a complete list of course descriptions (and possible online courses) for this program, please consult our web page at www.gtc.edu.

My advisor is _____ My advisor's contact information is _____