# AUTOMATED MANUFACTURING SYSTEMS TECHNOLOGY

(10-628-3) Associate of Applied Science Degree
Most Courses Offered at Elkhorn Campus and Lakeview Center

### Career Cluster ►
Manufacturing Production
Process Development

### Career Pathway ►
Manufacturing Production
Process Development

## Program Total Required
70

### Suggested Sequence

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Requisites</th>
<th>Credits</th>
<th>Hrs/Wk</th>
</tr>
</thead>
<tbody>
<tr>
<td>605-113</td>
<td>DC/AC I</td>
<td></td>
<td>3</td>
<td>2-2</td>
</tr>
<tr>
<td>612-102</td>
<td>Pneumatics/Hydraulics, Introduction</td>
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<tr>
<td>620-103</td>
<td>Mechanical Skills for Technicians</td>
<td></td>
<td>3</td>
<td>1-4</td>
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<tr>
<td>804-115</td>
<td>College Technical Math 1</td>
<td>Coreq: 605-113</td>
<td>4</td>
<td>2-4</td>
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<tr>
<td>628-125</td>
<td>Quality for Automated Manufacturing</td>
<td></td>
<td>3</td>
<td>2-2</td>
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<tr>
<td>628-100</td>
<td>Automated Manufacturing Concepts/Intro</td>
<td></td>
<td>2</td>
<td>0-4</td>
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<tr>
<td>628-110</td>
<td>CNC/CAM Programming</td>
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<td>1-4</td>
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<tr>
<td>806-154</td>
<td>General Physics 1</td>
<td>Prereq: 804-115</td>
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<tr>
<td>801-136</td>
<td>English Composition 1</td>
<td>Prereq: 831-103 (See Note 1)</td>
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<tr>
<td>620-110</td>
<td>Robotics / Mechanics I</td>
<td>Prereq: 605-113</td>
<td>3</td>
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<tr>
<td>620-140</td>
<td>Programmable Controllers</td>
<td>Prereq: 620-103</td>
<td>2</td>
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<tr>
<td>890-103</td>
<td>Employability Skills</td>
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<tr>
<td>628-111</td>
<td>Computer Assisted Programming/Robot and FMS</td>
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<td>809-196</td>
<td>Sociology, Introduction to</td>
<td>Prereq: 838-105 (See Note 1)</td>
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<tr>
<td>809-198</td>
<td>Psychology, Introduction to</td>
<td>Prereq: 838-105 (See Note 1)</td>
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<td>606-126</td>
<td>AutoCAD, Introduction</td>
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<td>620-120</td>
<td>Feedback &amp; Control Systems</td>
<td>Prereq: 605-113</td>
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<td>620-145</td>
<td>Programmable Logic Controllers – Advanced</td>
<td>Prereq: 620-140</td>
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<td>628-112</td>
<td>Computer Aided Manufacturing, Advanced</td>
<td>Prereq: 628-111; Coreq: 620-145</td>
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<tr>
<td>625-121</td>
<td>MSSC Certification Preparation and Assessment</td>
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<tr>
<td>801-197</td>
<td>Technical Reporting</td>
<td>Prereq: 801-136</td>
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<td>3-0</td>
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</table>

### Electives
Take 6 elective credits. Any associate degree level course may be taken as an elective.

**Suggested Electives:**
- 606-127 CAD Intermediate (2 Cr)
- 612-115 Hydraulics / Advanced (3 Cr)
- 606-128 CAD Solids (2 Cr)
- 620-111 Intro to Solid State Circuits (4 Cr)
- 628-108 Field Experience (2 Cr)

Δ Courses may be taken out of suggested sequence as long as requisites have been met.
**PROGRAM DESCRIPTION**
Automated Manufacturing Systems Technology is designed to train technicians who can work in a factory which has a high level of automation. Emphasis is placed on automated systems, including production systems, material handling systems, and supervisory control systems. Training objectives will focus on system implementation, application, operation, and installation. The education is broad-based and multi-disciplinary and includes an understanding of electrical, electronic, electromechanical, and mechanical components, plus micro-processors, computers, inventory, and quality control.

**ADMISSION REQUIREMENTS**
1. Students must submit an application & $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. 70 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.*

**PROGRAM LEARNING OUTCOMES**
Graduates of the Automated Manufacturing Systems Technology Associate Degree Program should be able to:

1. Demonstrate knowledge of electricity, electronics, hydraulics and pneumatics.
2. Demonstrate a knowledge of sensor utilization for measuring flow, pressure, speed, voltage, current, torque, force, temperature, etc.
3. Demonstrate an understanding of PLC programming and program design.
4. Demonstrate proper use and operation of hand tools.
5. Analyze design solutions for electromechanical machines and devices as a team.

**NOTES**
1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).

**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
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential mathematical skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

**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.

**EQUAL OPPORTUNITY/ACCESS EDUCATOR / EMPLOYER IGUALDAD DE OPORTUNIDADES**

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 Web Advisor on our web page at www.gtc.edu.

My advisor is ___________________________. My advisor’s contact information is __________________________.