GATEWAY TECHNICAL COLLEGE **Effective 2015/2016**	**Career Cluster ►** Manufacturing	**Career Pathway ►** Manufacturing Production Process Development	**AUTOMATED MANUFACTURING SYSTEMS TECHNOLOGY** **(10-628-3)** *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, Introduction		3	2-2
		628-109	*	Mechanical Skills for Technicians		3	1-4
		620-103	*	Intro to Industrial Controls	Coreq: 605-113	4	2-4
		804-115		College Technical Math 1	Prereq: 834-110 (See Note 1)	5	5-0
Semester 2		628-125	*	Quality for Automated Manufacturing		3	2-2
		628-100	*	Automated Manufacturing Concepts/Intro		2	0-4
		628-110	*+	CNC/CAM Programming		3	1-4
		806-154		General Physics 1	Prereq: 804-115	4	3-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
Semester 3		442-102	*	Introduction to Welding		2	0-4
		620-140	*	Programmable Controllers	Prereq: 620-103	2	1-2
		890-103		Employability Skills		2	1-2
		628-111	*	Computer Assisted Programming/Robot and FMS		3	1-4
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 3)	3	3-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 3)	3	3-0
Semester 4		606-126	*	AutoCAD, Introduction	(See Note 4)	2	0-4
		620-120	*	Feedback & Control Systems	Prereq: 605-113	2	1-2
		620-145	*	Programmable Logic Controllers – Advanced	Prereq: 620-140	3	1-4
		628-112	*	Computer Aided Manufacturing, Advanced	Prereq: 628-111; Coreq: 620-145	3	1-4
		605-133	*	Industrial Data Communications	Prereq: 605-113 or 605-107	3	2-2
		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:

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

Minimum Program Total Credits Required 70

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

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	Manufacturing	Manufacturing Production Process Development	

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.

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.

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

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. Minimum 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.

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).
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.
4. Student may take 606-128 CAD-Solidworks (2 Cr) in place of this course. See an advisor for details.

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 Web Advisor 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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To schedule an appointment with an advisor, please call 1-800-247-7122.
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 _____.