

# Associate of Applied Science Degree Engineering Technologies

## Computer Integrated Manufacturing Technology

### General Manufacturing Major (9430)

The General Manufacturing major prepares students for employment as engineering technicians at the operations level in manufacturing industries having a concentration in computer applications. Technicians assist in the design and implementation of manufacturing process systems that include numerical control equipment, computer aided part programming, computer aided manufacturing, factory automation, and flexible manufacturing cells and systems.

**NOTE:** Students without prior exposure to machining will find CIMN 0950 *Introduction to Machine-Tool Technology* helpful in gaining experience for CIMN 1110.

#### First Semester:

CADT 1100 . . . . .	Introduction to AutoCAD . . . . .	3
CIMN 1110 . . . . .	Manufacturing Processes I . . . . .	3
<b>ENGL 1110*</b> . . . . .	<b>English Composition I (A)</b> . . . . .	3
<b>OR</b>		
<b>ENGL 1111*</b> . . . . .	<b>English Composition I (B)</b> . . . . .	3
MATH 1101 . . . . .	Technical Mathematics I . . . . .	4
MECT 1000 . . . . .	Introduction to Technology . . . . .	2
PHYS 1100 . . . . .	Applied Physics I . . . . .	3

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#### Second Semester:

CIMN 1210 . . . . .	Manufacturing Processes II . . . . .	3
MATH 1201 . . . . .	Technical Mathematics II . . . . .	4
MECT 1150 . . . . .	Technical Communications . . . . .	3
MECT 1600 . . . . .	Geometric Dimensioning and Tolerancing . . . . .	2
MECT 2110 . . . . .	Engineering Mechanics I . . . . .	3
PHYS 1200 . . . . .	Applied Physics II . . . . .	3

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#### Third Semester:

CIMN 2190 . . . . .	Manufacturing Methods and Costs . . . . .	3
CIMN 2240 . . . . .	Jig and Fixture Design I . . . . .	3
MECT 2230 . . . . .	Strength of Materials . . . . .	3
PHYS 2100 . . . . .	Applied Physics III . . . . .	2
	Choose course(s) from the Technical Electives list . . . . .	2

#### (1st 8 weeks)

CIMN 1420 . . . . .	Computer Numerical Control Part Programming . . . . .	2
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#### (2nd 8 weeks)

CIMN 1430 . . . . .	Introduction to Computer Assisted Part Programming . . . . .	2
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#### Fourth Semester:

CIMN 2390 . . . . .	Fluid Power Technology . . . . .	3
CIMN 2875 . . . . .	Design and Manufacturing Capstone . . . . .	3
QENT 1200 . . . . .	Quality Concepts and Techniques . . . . .	2

<b>SPCH 1050**</b> . . . . .	<b>Fundamentals of Public Speaking</b> . . . . .	2
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#### OR

<b>SPCH 1150</b> . . . . .	<b>Fundamentals of Interpersonal Communication</b>	
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	Choose course(s) from the Arts and Humanities Electives list . . . . .	3
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	Choose course(s) from the Social and Behavioral Sciences Electives list . . . . .	3
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	Choose course(s) from the Technical Electives list . . . . .	3
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**Program Total: 72**

*\*English course selection is based on placement test results (ENGL 1111 is 4 credits, only 3 credits apply to the degree).*

*\*\*Students may substitute either SPCH 1000 or SPCH 1100. One of these 3 credit courses may be required for students transferring to a four-year college.*

#### Technical Electives: minimum 5 credits

BUSM 1800 . . . . .	Essentials of Management and Supervision . . . . .	3
CADT 1500 . . . . .	Advanced AutoCAD . . . . .	3
CADT 2100 . . . . .	Introduction to SolidWorks . . . . .	3
CADT 2500 . . . . .	Advanced SolidWorks . . . . .	3
CIMN 1440 . . . . .	Advanced Computer Assisted Part Programming . . . . .	2
CIMN 1450 . . . . .	Programming CNC Lathes . . . . .	2
CIMN 1460 . . . . .	Programming CNC Machining Centers . . . . .	2
CIMN 2340 . . . . .	Jig and Fixture Design II . . . . .	3
CIMN 2450 . . . . .	Oxyfuel Gas Welding . . . . .	2
CIMN 2550 . . . . .	Stick Welding . . . . .	2
CIMN 2610 . . . . .	Automation and Robotics . . . . .	3
CIMN 2660 . . . . .	MIG, TIG and Flux-Cored Arc Welding . . . . .	3
CNET 1100 . . . . .	Cisco Networking Technology I . . . . .	2
CNET 1200 . . . . .	Cisco Networking Technology II . . . . .	2
CNET 1300 . . . . .	Cisco Networking Technology III . . . . .	2
CPET 1100 . . . . .	C Programming for Engineering Technology I . . . . .	2
CPET 1200 . . . . .	Visual Basic for Engineering Technology II . . . . .	2

#### Arts and Humanities Electives: minimum 3 credits

ARTS 1120, 2220, 2230, 2240; ENGL 2250, 2260, 2280, 2290; HUMX 1100, 1200; MUSC 1200, 2200, 2250; PHIL 1500, 2000

#### Social and Behavioral Sciences Electives: minimum 3 credits

ANTH 1160; ECON 1150, 2500, 2600; GEOG 1500, 1600, 2500; HIST 1100, 1200, 2100, 2200, 2400; POLS 1300, 2500; PSYC 1500; SOCY 1150