

MANUFACTURING TECHNOLOGY

Associate in Applied Science A.A.S.: Option 1: Advanced Manufacturing Technology Degree - Mechatronics/Automation

This 60 credit-hour Advanced Manufacturing Technology degree is designed to prepare students for the modern manufacturing environment. This program will prepare students for employment with companies that have implemented team-oriented design, production, quality and maintenance systems within the manufacturing environment. American manufacturers are increasingly using high-tech equipment that involves multiple integrated systems. It is critical that these companies be able to recruit and employ individuals who know how to operate, troubleshoot and maintain this high-tech equipment.

*This sequenced degree plan is one of four options that students may pursue to earn the Advanced Manufacturing Technology Associate in Applied Science (AAS) degree. While there are multiple specializations, **this particular degree can be awarded only once.***

FIRST SEMESTER:

Number	Course Title	Credits	Course Category
MFT 102	Introduction to Manufacturing and Safety	4	Program Requirement
MFT 104	Quality and Measurement	2	Program Requirement
MFT 108	Manufacturing Processes	3	Program Requirement
MFT 109	Introduction to Manufacturing Maintenance	2	Program Requirement
MTH 097	Basic Technical Mathematics ¹	3	Mathematics

SECOND SEMESTER:

Number	Course Title	Credits	Course Category
ELT 110	Introductory Electronics	4	Program Requirement
ELT 120	Introductory Industrial Electronics Maintenance	2	Program Requirement
ENG 101	Composition	3	Communications
MFT 119	Manufacturing Internship	2	Program Requirement
	Technical electives ²	5	Program Requirement

THIRD SEMESTER:

Number	Course Title	Credits	Course Category
ELT 135	Optics and Sensors	2	
ELT 140	Introduction to Programmable Logic Controllers	2	Program Requirement
ELT 143	Commercial Wiring	2	Program Requirement
ELT 145	Variable Frequency Drives	2	
	Social and Behavioral Science ³	6	Social and Behavioral Science

FOURTH SEMESTER:

Number	Course Title	Credits	Course Category
	Communications ⁴	3	Communications
ELT 144	AC and DC Motors	2	
ELT 215	Industrial Control Systems	4	Program Requirement
ELT 240	Advanced Programmable Logic Controllers (S)	4	
	Humanities ³	3	Humanities

1 Students make take MTH 097, MTH 101, MTH 103 or higher.

2 Select courses not listed as required that have one of the following prefixes: ELT, MFT, MNT, SCM, or WLD.

+ At least one course from the Humanities or Social and Behavioral Science must also meet the World Cultures and Diversity graduation requirement. See full list of [AAS General Education Electives](#).

4 Choose from ENG 103 or SPE 101.