

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.

F = Fall only course S = Spring only course U = Summer only course

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	AAS General Education

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 I	3	AAS General Education
MFT 119	Manufacturing Internship	2	Program Requirement
	Technical electives ²	5	Program Requirement

THIRD SEMESTER:

Number	Course Title	Credits	Course Category
	AAS General Education electives ⁺	6	AAS General Education
ELT 135	Optics and Sensors	2	Program Requirement
ELT 140	Introduction to Programmable Logic Controllers	2	Program Requirement
ELT 143	Commercial Wiring	2	Program Requirement
ELT 145	Variable Frequency Drives	2	Program Requirement

FOURTH SEMESTER:

Number	Course Title	Credits	Course Category
	AAS General Education elective ⁺	3	AAS General Education
ELT 144	AC and DC Motors	2	Program Requirement
ELT 215	Industrial Control Systems	4	Program Requirement
ELT 240	Advanced Programmable Logic Controllers (S)	4	Program Requirement
	Technical elective ²	3	Program Requirement

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 of the AAS General Education electives must meet the World Cultures and Diversity graduation requirement. See full list of [AAS General Education Electives](#).