INDUSTRIAL TECHNOLOGY: MAINTENANCE AND AUTOMATION

INDUSTRIAL TECHNOLOGY: MAINTENANCE AND AUTOMATION A.A.S.

Program Code: E.MFG.AAS.IMA

Associate in Applied Science (A.A.S.)
Graduation requirement — 60 semester hours

The Industrial Technology program prepares students for careers in manufacturing. Students learn science, math, technology, and communications in real-life settings.

Program Notes*

- Prior to enrolling in MFT 151, students must complete a minimum of 12 hours of curriculum and MFT 131 or approval of the department chair or program director.
- General education electives include mathematics and at least one elective from the following categories: communications, social/behavioral sciences, humanities/fine arts, physical/life sciences.
- Students considering transferring to earn a bachelor's degree are advised to take ENG 101 and MAT 124. Discuss this with your academic success advisor before selecting a math or English course.
- ENG 102 has a prerequisite of ENG 101.
- MFX substitutions are accepted for MFT 110 and MFT 113.
  - MFT 110 = MFX 170 + MFX 171 + MFX 172 + MFX 173
  - MFT 113 = MFX 130 + MFX 131 + MFX 150 + MFX 151
- WLX substitutions are accepted for WLD 111.
  - WLD 111 = WLX 112 + WLX 113 + WLX 114 + WLX 115

Suggested Full-time Sequence

FALL	*SPRING*	*SUMMER*
1st Semester	*2nd Semester*	*3rd Semester*
MFT 130	MFT 137	MFT 151
MFT 131	CAD 113	
CAD 114	ENG 101	
MAT 131	*or* ENG 111	
WLD 111	Gen Ed elec	

FALL	*SPRING*
4th Semester	*5th Semester*
MFT 110	MFT 113
ENG 102 *or* COM 103	MFT 139
or COM 200	ELT 150
Technical elective	Technical elective
Technical elective	Technical elective
	Gen Ed elec

Required Program Courses (34 hours) **Cr. Hrs.**

MFT 110	Mechanical Assemblies	3
MFT 113	Introduction to Hydraulics and Pneumatics	3
MFT 130	Basic Machine Processes	3
MFT 137	Introduction to CNC Programming	4
MFT 139	Quality Assurance	3
MFT 131	Introduction to Manufacturing and Industrial Safety	3
MFT 151*	Manufacturing Work Experience I	2
CAD 113	Computer-Aided Machine Design I	4
CAD 114	Introduction to AutoCAD (Computer-Aided Drafting)	2
ELT 150	Introduction to Electricity and Electronics	3
WLD 111	Introduction to Welding	4

Technical Electives (10 hours)

Select options to meet minimum 60-hour degree requirement.

CTC 110	Beginning Computers	3
ELT 131	Residential Wiring	3
ELT 134	Motors, Controls, and Drives	3
ELT 171	Analog Control Devices	3
ELT 179	Industrial Control Devices	3
ELT 231	Programmable Controllers	3
ELT 292	Process Control	3
MFT 117	Pumps, Compressors, and Vacuum Systems	3

Required General Education Courses (16 hours)

ENG 101	Composition I	
or ENG 111	Workplace Writing	3
ENG 102	Composition II	
or COM 103	Introduction to Public Speaking	
or COM 200	Leadership and Small Group Communication	3
MAT 131	Applied Mathematics	
or MAT 124	College Algebra	4
General Education electives*		6
Total Semester Credit Hours		*60*

INDUSTRIAL TECHNOLOGY: MACHINE TOOLS

INDUSTRIAL TECHNOLOGY: MACHINE TOOLS A.A.S.

Program Code: E.MFG.AAS.MCT

Associate in Applied Science (A.A.S.)
Graduation requirement — 60 semester hours

The Industrial Technology Program prepares students for careers in manufacturing. Students learn science, math, technology, and communications in real-life settings.

Program Notes*

- Prior to enrolling in MFT 151, students must complete a minimum of 12 hours of curriculum and MFT 131 or approval of the department chair or program director.
- General education electives include mathematics and at least one elective from the following categories: communications, social/behavioral sciences, humanities/fine arts, physical/life sciences.
- ENG 102 has a prerequisite of ENG 101.
- Students considering transferring to earn a bachelor's degree are advised to take ENG 101 and MAT 124. Discuss this with your academic success advisor before selecting a math or English course.
- MFX substitutions are accepted for MFT 110 and MFT 113.
  - MFT 110 = MFX 170 + MFX 171 + MFX 172 + MFX 173
  - MFT 113 = MFX 130 + MFX 131 + MFX 150 + MFX 151
- WLX substitutions are accepted for WLD 111.
  - WLD 111 = WLX 112 + WLX 113 + WLX 114 + WLX 115

Suggested Full-Time Sequence

FALL	*SPRING*	*SUMMER*
1st Semester	*2nd Semester*	*3rd Semester*
MFT 130	MFT 137	MFT 151
MFT 131	CAD 113	
CAD 114	ENG 101	
MAT 131	or ENG 111	
WLD 111	Gen Ed elec	

FALL	*SPRING*
4th Semester	*5th Semester*
MFT 110	MFT 113
ENG 102 *or* COM 103	MFT 139
or COM 200	ELT 150
Technical elective	Technical elective
Technical elective	Technical elective
	Gen Ed elec

Required Program Courses (34 hours)

		Cr. Hrs.
MFT 110	Mechanical Assemblies	3
MFT 113	Introduction to Hydraulics and Pneumatics	3
MFT 130	Basic Machine Processes	3
MFT 137	Introduction to CNC Programming	4
MFT 139	Quality Assurance	3
MFT 131	Introduction to Manufacturing and Industrial Safety	3
MFT 151*	Manufacturing Work Experience I	2
CAD 113	Computer-Aided Machine Design I	4
CAD 114	Introduction to AutoCAD (Computer-Aided Drafting)	2
ELT 150	Introduction to Electricity and Electronics	3
WLD 111	Introduction to Welding	4

Technical Electives (10 hours)

Choose ten hours from the following:

CAD 119	Computer-Aided Machine Design II	4
DRT 119	Blueprint Reading and Technical Drawing	3
MFT 132	Intermediate Machine Processes	3
MFT 138	Intermediate CNC Programming —Milling	4
MFT 211	Advanced Machining Processes and Inspection Practices	4
MFT 238	Advanced CNC Programming	4

Required General Education Courses (16 hours)

ENG 101	Composition I	
or ENG 111	Workplace Writing	3
ENG 102*	Composition II	
or COM 103	Introduction to Public Speaking	
or COM 200	Leadership and Small Group Communication	3
MAT 131	Applied Mathematics	
or MAT 124	College Algebra	4
General Education electives*		6
Total Semester Credit Hours		*60*

INDUSTRIAL TECHNOLOGY: WELDING

INDUSTRIAL TECHNOLOGY: WELDING A.A.S.

Program Code: E.MFG.AAS.WLD

Associate in Applied Science (A.A.S.)
Graduation requirement — 61–62 semester hours

The Industrial Technology Program prepares students for careers in manufacturing. Students learn science, math, technology, and communications in real-life settings.

Program Notes*

- Prior to enrolling in MFT 151, students must complete a minimum of 12 hours of curriculum and MFT 131 or approval of the department chair or program director.
- General education electives include mathematics and at least one elective from the following categories: communications, social/behavioral sciences, humanities/fine arts, physical/life sciences.
- Students considering transferring to earn a bachelor's degree are advised to take ENG 101 and MAT 124. Discuss this with your academic success advisor before selecting a math or English course.
- Students should select a section of CAD 114 with advice from a welding program advisor.
- ENG 102 has a prerequisite of ENG 101.
- MFX substitutions are accepted for MFT 110 and MFT 113.
  - MFT 110 = MFX 170 + MFX 171 + MFX 172 + MFX 173
  - MFT 113 = MFX 130 + MFX 131 + MFX 150 + MFX 151
- WLX substitutions are accepted for WLD 111, WLD 112, and WLD 212.
  - WLD 111 = WLX 112 + WLX 113 + WLX 114 + WLX 115
  - WLD 112 = WLX 116 + WLX 117
  - WLD 212 = WLX 210 + WLX 211

Suggested Full-Time Sequence

FALL	*SPRING*	*SUMMER*
1st Semester	*2nd Semester*	*3rd Semester*
MFT 130	MFT 137	MFT 151
MFT 131	CAD 113	
CAD 114	ENG 101 or	
MAT 131	ENG 111	
or MAT 124	WLD 113	
WLD 111	WLD 213	

FALL	*SPRING*	*SUMMER*
4th Semester	*5th Semester*	*6th Semester*
MFT 110	MFT 113	General Ed Elective
ENG 102	MFT 139	General Ed Elective
or COM 103	ELT 150	
or COM 200	WLD 216	
WLD 112		
WLD 212		

Required Program Courses (45–46 hours)

		Cr. Hrs.
CAD 113	Computer-Aided Machine Design I	4
CAD 114*	Introduction to AutoCAD (Computer-Aided Drafting)	2
ELT 150	Introduction to Electricity and Electronics	3
WLD 111	Introduction to Welding	4
MFT 110	Mechanical Assemblies	3
MFT 113	Introduction to Hydraulics and Pneumatics	3
MFT 130	Basic Machine Processes	3
MFT 137	Introduction to CNC Programming	4
MFT 139	Quality Assurance	3
MFT 131	Introduction to Manufacturing and Industrial Safety	3
MFT 151*	Manufacturing Work Experience I	2
WLD 112	Gas Metal Arc Welding	2
WLD 113	Gas Tungsten Arc Welding	2
WLD 212	Advanced Gas Metal Arc Welding	2
WLD 213	Advanced Gas Tungsten Arc Welding	2
WLD 216	Welding Certification	
or PFT 117	Basic Pipefitting and Welding	3-4

Required General Education Courses (16 hours)

ENG 101*	Composition I	
or ENG 111	Workplace Writing	3
ENG 102*	Composition II	
or COM 103	Introduction to Public Speaking	
or COM 200	Leadership and Small Group Communication	3
MAT 131*	Applied Mathematics	
or MAT 124	College Algebra	4
General Education electives*		6
Total Semester Credit Hours		*61–62*