

Manufacturing Technology

Associate in Applied Science

Degree Requirements

A student gains admission to the Associate in Applied Science program by completing the certificate program. All course work in the certificate will apply to the corresponding Associate in Applied Science degree.

Courses required for:

- ***Manufacturing and Technology Degree***

Industrial Technology Option (AAS C124)

Tool and Die Maintenance Technology Option (AAS C157)

Biomedical Equipment Technology Option (AAS C036)

Automated Manufacturing Option (AAS C029)

Electronics Option (AAS C067)

Computer Aided Drafting/Design Option (AAS C055)

Telecommunications (Outside Plant Design) Option (AAS C206)

Common Courses

Course	Title	Sem Hrs 36
ENG 101	English Composition I	3
MTH 100	Intermediate College Algebra	3
SPH 107 106	Fundamentals of Public Speaking <u>or</u> Fundamentals of Oral Communication	SPH 3
CIS 146	Microcomputer Applications	3
ELM 200	Electric Circuits I	3
ELM 201S	Electric Circuits II	3
ELM 215	Industrial Controls I	3
MET 190	Mechanical Tools I	4
PHY 115	Technical Physics <u>or</u> BIO 103 Principles of Biology (biomed students only)	4
	Social and Behavioral Science Elective: (ASOC) (anthropology, geography, history, economics, political science, sociology, psychology)	4
	Humanities and Fine Arts Elective: (AHUM) (art, humanities, religion, theatre, music, philosophy, foreign language, literature)	4
		4

Industrial Technology Option**(25 hours)****Courses specific to each option**

Course	Title	Sem Hrs
ATM 181W	Special Topics, Welding Basics	3
DDT 114	Industrial Blueprint Reading	3
ELM 210	Fluid Power I	3
ELM 214	Pumps and Piping Systems	3
MET 220	Mechanical Systems I	3
MET 193	Introduction to Robotics	3
ATM 211	Programmable Logic Controllers I	4
ATM 220	Advanced Motor Drives	3
Total Credit Hours		61

Tool & Die Maintenance Technology Option (36 hours)

Courses specific to each option

Course	Title	Sem Hrs
ATM 181D	Special Topics, Basic Die Construction	3
ATM 181W	Special Topics, Welding Basics	3
ATM 281D	Special Topics, Die Maintenance	3
DDT 114	Industrial blue Print Reading	3
DDT 115	Blue Print Reading for Machinists	3
ELM 210	Fluid Power I	3
MET 191	Mechanical Tools II	4
MET 192	Machinery's Handbook Functions	3
MET 201	Basic CADD	3
MET 233	Materials	3
MET 237	Inspection Principles	3
MET 239	Geometric Dimensioning & Tolerancing	2
Total Credit Hours		72

Biomedical Equipment Technology Option (33 hours)

Courses specific to each option

Course	Title	Sem Hrs
BIO 201	Human Anatomy & Physiology I	4
BET 211	Biomedical Electronic Systems I	3
BET 222	Medical Communications Systems	3
BET 233	Pulse and Computer Circuits	3
BET 234	Biomedical Electronic Systems III	3
BET 240	Clinical On-Site Study	3
BET 241	The Law and Legal Issues in Biomed	2
ELM 202	Digital Circuits I	3
ELM 205	Electronics I	3
ELM 206S	Electronics II	3
HED 231	First Aid	3
Total Credit Hours		72

Automated Manufacturing Option**(25 hours)****Courses specific to each option**

Course	Title	Sem Hrs
ATM 211	Programmable Logic Controllers I	3
ATM 212	Programmable Logic Controllers II	3
ATM 220	Advanced Motor Drives	3
ELM 210	Fluid Power I	3
DDT 114	Industrial Blueprint Reading	3
ELM 202	Digital Circuits I	3
MET 193	Introduction to Robotics	4
ATM 231	Robotics Project	3
Total Credit Hours		61

Electronics Option (28 hours)

Courses specific to each option

Course	Title	Sem Hrs
ATM 211	Programmable Logic Controllers I3	3
ATM 220	Advanced Motor Drives3	3
DDT 114	Industrial Blueprint Reading3	3
ELM 202	Digital Circuits I3	3
ELM 203	Digital Circuits II3	3
ELM 205	Electronics I3	3
ELM 210	Fluid Power I3	3
MET 193	Introduction to Robotics4	4
ATM 231	Robotics Project3	3
Total Credit hours		64

Computer Aided Drafting/Design Option (26 hours)

Courses specific to each option

Course	Title	Sem Hrs
ATM 181W	Special Topics, Welding Basics	3
MET 201	Basic CAD	3
MET 202	Advanced CAD	3
MET 204	Basic Computer Aided Modeling	3
MET 211	Advanced Computer Aided Modeling	3
MET 220	Mechanical Systems I	3
MET 239	Geometric Dimensioning and Tolerances	2
ATM 211	Programmable Logic Controllers I	3
DDT 114	Industrial Blueprint Reading	2
Total Credit Hours		62

Telecommunications (Outside Plant Design) Option

(28 hours)

Courses specific to each option

Course	Title	Sem Hrs
CMT 105	Construction Materials and Methods	3
DDT 114	Industrial Blueprint Reading	3
ELM 190 Telecom	Emerging Tech History & Basics of Telecom	4 3
ELM 202	Digital Circuits I	3
ELM 205	Electronics I	3
ELM 222	Telecommunications Design	3
ELM 223	Engineering Aerial, Buried & Underground Plant	3
ELM 225	Digital Carrier Systems	3
ELM 226	Designing Digital Systems	

Total Credit Hours 64