DRAFTING AND MACHINING TECHNOLOGY

Associate of Applied Science, 65-68 Credit Hours, 18-Month Program

This program will graduate skilled technicians who are able to bring value to those employers in multiple ways because they will be skilled enough to participate in multiple areas of the business. These workers will be flexible and will be seen as a valuable asset by any of these employers.

In the drafting area, graduates will be able to meet the growing demand from industry for skilled technicians who can demonstrate skill and knowledge in 2D and 3D computer-aided drafting. In addition, graduates will leave the program prepared to apply the basic fundamentals of drafting and blueprint reading.

In the machining area, graduates will be able to set up and operate a variety of machine tools to produce precision metal parts, instruments, and tools. Machinists use machine tools that are either conventionally controlled or computer numerically controlled, such as lathes, milling machines, and grinders, to produce precision metal parts. Although they may produce large quantities of one part, precision machinists often produce small batches or one-of-a-kind items. The parts that machinists make range from simple bolts of steel or brass to titanium bone screws for orthopedic implants. Hydraulic parts, anti-lock brakes and automobile pistons are other widely known products that machinists make.

Course	No.	Course Title	Credits
		General Education Requirements	
CIS	105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ECON	202	PRINCIPLES OF MACROECONOMICS	3
ENGL	201	TECHNICAL WRITING I*	3
MATH	100	ELEMENTARY ALGEBRA** ***or higher***	3
MATH	101	INTERMEDIATE ALGEBRA*** ***or higher***	3
MATH	120	TRIGONOMETRY	3
PSYC	103	HUMAN RELATIONS IN THE WORKPLACE	3
		Total	**21**
		Technical Requirements	
CAD	101	DRAFTING FUNDAMENTALS	3
CAD	139	2D CAD	3
CAD	142	MECHANICAL 3D CAD	3
CAD	232	MECHANICAL PRINCIPLES	3
CAD	234	MECHANICAL PRINT READING	2
CAD	244	3D ENGINEERING DESIGN	3
CAD	247	COMPUTER AUTOMATED MANUFACTURING	3
INT	299	INTERNSHIP (OPTIONAL)	3
MACH	110	MACHINCE SHOP OPERATIONS	3
MACH	115	TURNING THEORY AND OPERATIONS I	3
MACH	120	MILLING THEORY AND OPERATIONS I	3
MACH	125	MECHANICAL BLUEPRINT READING	3
MACH	130	MATERIALS APPLICATIONS	3
MACH	135	TURNING THEORY AND OPERATIONS II	3
MACH	140	MILLING THEORY AND OPERATIONS II	3
MACH	145	APPLIED COMPUTER AIDED DRAFTING FUNDAMENTALS	3
		Total	**44-47**

*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.
**Prerequisite: Acceptable ACCUPLACER score or Basic Math.
***Prerequisite: Acceptable ACCUPLACER score or Elementary Algebra.

Semester breakdown on next page

Semester Breakdown*

First Semester		CR
MACH 110	Machine Shop Operations	3
MACH 115	Turning Theory & Operations I	3
MACH 120	Milling Theory & Operations I	3
MACH 125	Mechanical Blueprint Reading	3
CIS 105	Microcomputer Software Applications I	3
MATH 100	Elementary Algebra ***or higher***	3
	Total Credit Hours	**18**

Second Semester		CR
MACH 130	Materials Applications	3
MACH 135	Turning Theory & Operations II	3
MACH 140	Milling Theory & Operations II	3
MACH 145	Applied Computer Aided Drafting Fundamentals	3
ENGL 201	Technical Writing I	3
PSYC 103	Human Relations in the Workplace	3
	Total Credit Hours	**18**

Third Semester		CR
CAD 101	Drafting Fundamentals	3
CAD 139	2D CAD	3
CAD 142	Mechanical 3D CAD	3
ECON 202	Principles of Macroeconomics	3
MATH 101	Intermediate Algebra ***or higher***	3
	Total Credit Hours	**15**

Fourth Semester		CR
CAD 232	Mechanical Principles	3
CAD 234	Mechanical Print Reading	2
CAD 244	3D Engineering Design	3
CAD 247	Computer Automated Manufacturing	3
INT 299	Internship ***optional***	3
MATH 120	Trigonometry	3
	Total Credit Hours	**14-17**