Mechanical Technology A.A.S. (MET)

This program is designed to prepare students for employment as industry technicians who can construct detail and design drawings. The program provides students with knowledge and experiences in the areas of computer-aided drafting (CAD), 3D modeling, robotics and computer robotics, and computer-aided manufacturing (CAM), so that they are prepared for the high-technology methods employed by industry.

Graduates assist engineers and designers in the investigation, experimentation, and development of products, tools, mechanisms, and machines. Efforts continue with graduates preparing appropriate detail and design drawings for use in production.

Jobs for which graduates are expected to be qualified are detail draftsperson, design draftsperson, product design, machine design, and tool design.

Upon successful completion of this program, graduates will be able to:

- use common standards and symbols to make detail and assembly drawings according to accepted industrial practice.
- construct drawings using various special areas of drafting, such as drafting of electronic schematics, piping, welding, structural, sheet metal layout, and castings.
- explain the differences between various common manufacturing materials and possess knowledge of the processes available to transform these materials into finished products.
- work from handbooks, catalogs, and other informational sources to obtain the data necessary for selecting machine components.
- design basic tools, jigs, fixtures, and punch dies.
- use creative thinking and good judgment when considering all the factors involved in the evolution of a mechanical design.
- demonstrate and apply the basic principles of fluid power.
- operate a typical computer drafting system.
- organize and write a technical report indicating the data that was determined for the selection of a machine component.
- determine by calculation the various operational values related to machine components, such as force, speed, and power.
- determine by the design of a product or machine the effect it will have on the human element.
- analyze and determine force systems acting on simple designs.
- calculate simple stress and strain occurring from different loading conditions.

First Semester		**Credits**
ENG 105	Research and Composition	3
MET 101	Mechanical Print Reading	3
MET 104	Manufacturing	3
MAT 130	Industrial Mathematics	3
Elective	Social Science/Humanities	3
		15
Second Semester		
BGT 103	Fluid Power	3
ENG 106	Introduction to Literature	
or ENG 107	Writing in the Workplace	3
MET 111	Computer-Aided Drafting	4
MET 115	Computer-Aided Manufacturing	3
PHY 201	Introduction to Physics I	4
		17
Third Semester		
BGT 101	Basic Statics	3
MET 106	Mechanical Drafting	4
MTD 201	Basic Mechanisms	4
BGT 240	Industrial Automation	3
		14
Fourth Semester		
BGT 102	Strength of Materials	3
MTD 206	Machine Design	4
MTD 208	Tool Design	4
ENG 111	Speech	3
Elective	Social Science/Humanities	3
		17
	Credit Total	**63**

Prior Learning Assessment: Previous job training, certificates and work experience that may qualify for college credit *(see academic advisor)*.

Gateway Courses: Based on placement testing in reading, writing and math, these prerequisite courses may have to be taken before placement in College English or Mathematics beginning the first semester and concurrently.

RSS 099	Basic Skills Reading	3
RSS 100	Critical Reading	3
ENG 099	Basic Skills Writing	3
ENG 100	Fundamentals of Writing	3
MAT 090	Mathematical Literacy	6
ESL 251	English for Academic Purpose *(Required for ESL students only.)*	6

Please note, taking gateway courses will increase your time for completion.

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