

## **CERTIFICATE DESCRIPTIONS**

### **CNC Machinist Certificate**

This certificate is designed to prepare students for employment as a Computer Numerical Control (CNC) machine operator, machinist, and/or a set-up person. This certificate will be awarded to students who complete the requirements with a 2.0 GPA or higher. Courses may be taken in any sequence as long as prerequisites are met.

### **Manual Machinist Certificate**

This certificate prepares students for entry-level employment as a manual mill and/or manual lathe operator. This certificate will be awarded to students who complete the requirements with a 2.0 GPA or higher. Courses may be taken in any sequence as long as prerequisites are met.

### **CNC Programming Certificate**

This certificate is designed to prepare students for employment as a Computer Numerical Control (CNC) programmer. This certificate will be awarded to students who complete the requirements with a 2.0 GPA or higher. Courses may be taken in any sequence as long as prerequisites are met.

### **Quality Assurance Certificate**

This certificate is designed to prepare students for employment as an inspector, production control and/or a quality assurance technician. This certificate will be awarded to students who complete the requirements with a 2.0 GPA or higher. Courses may be taken in any sequence as long as prerequisites are met.

## **REQUIRED COURSES**

### **CNC Machinist Certificate**

<i>General Requirements:</i>		<i>Credits</i>
EMET 105	Technical Blueprints and Schematics	3
CADD 101	Intro to Computer Aided Design	3 or
CADD 102	Intermediate Computer Aided Design	3
CAMM 101	Numerically Controlled Machines	3
CAMM 111	Machine Tool Processes I	4
CAMM 112	Machine Tool Processes II	4
CAMM 156	Geometric Dimensioning & Tolerancing	3
CAMM 201	CNC Programming (MasterCAM)	3 or
CAMM 206	CNC Specialization Programming (GibbsCAM)	3
CAMM 251	Measuring And Gauging	3
CAMM 252	CNC Milling Machine Operation	3
CAMM 253	CNC Lathe Operation	3
CAMM142	Principles of Manufacturing	3

*Total Number of Credits Required for Certificate* 35

### **Manual Machinist Certificate**

<i>General Requirements:</i>		<i>Credits</i>
EMET 105	Technical Blueprints and Schematics	3
CAMM 111	Machine Tool Processes I	4
CAMM 112	Machine Tool Processes II	4
CAMM 152	Turning Technology	3
CAMM 156	Geometric Dimensioning & Tolerancing	3
CAMM 161	Milling Machine Operation	3
CAMM 251	Measuring And Gauging	3
CAMM142	Principles of Manufacturing	3

*Total Number of Credits Required for Certificate* 26

## **CNC Programming Certificate**

<i>General Requirements:</i>		<i>Credits</i>
EMET 105	Technical Blueprints and Schematics	3
CADD 101	Intro to Computer Aided Design	3 or
CADD 102	Intermediate Computer Aided Design	3
CAMM 101	Numerically Controlled Machines	3
CAMM 156	Geometric Dimensioning & Tolerancing	3
CAMM 201	CNC Programming	3
CAMM 202	Advanced CNC Programming	3
CAMM 206	CNC Specialization Programming	3
CAMM142	Principles of Manufacturing	3
<i>Total Number of Credits Required for Certificate</i>		<i>24</i>

## **Quality Assurance Certificate**

<i>General Requirements:</i>		<i>Credits</i>
EMET 105	Technical Blueprints and Schematics	3
CAMM 156	Geometric Dimensioning & Tolerancing	3
CAMM142	Principles of Manufacturing	3
CAMM 251	Measuring and Gauging	3
EMET 155	Quality Concepts of Manufacturing	3
<i>Total Number of Credits Required for Certificate</i>		<i>15</i>