

# Machining Emphasis

## Manufacturing Technologies Degree

Associate of Applied Science

The manufacturing technologies, machining emphasis AAS degree program, is a two-year program designed to provide training and technical job skills to students seeking employment and/or skill upgrades within the manufacturing and machine trades. The program is competency-based, requiring students to complete a variety of hands-on learning exercises ranging from manually machined projects to advanced multi-axis CNC tasks. This program is offered in a flexible open-entry/open-exit format to respond to the needs of industry and the working professional.

### Degree Outcomes

Students completing the degree will:

- Fulfill the requirements of the Associate of Applied Science.
- Demonstrate competency in their specified emphasis.

### Emphasis Outcomes

Students completing the emphasis will:

- Demonstrate an ability to read and interpret technical prints for the production and inspection of manufactured work pieces.
- Demonstrate an ability to produce precision machined work pieces within print specifications on manually controlled machine tools.
- Demonstrate an ability to produce precision machined work pieces within print specifications on computer numerical controlled (CNC) machine tools.

### General Education Requirements

<b>Diversity</b>	<b>(3 credits)</b>
Recommended: AAD 201	
<b>English/Communications</b>	<b>6 credits</b>
Recommended: ENG 101, ENG 107	
<b>Human Relations</b>	<b>3 credits</b>
Recommended: CE 201	
<b>Quantitative Reasoning</b>	<b>3 credits</b>
Recommended: MATH 108	
<b>Science</b>	<b>3 credits</b>
Recommended: PHYS 100	
<b>Social Science/Humanities</b>	<b>3 credits</b>
Recommended: AAD 201	
<b>U.S. and Nevada Constitutions</b>	<b>3 credits</b>
Recommended: PSC 101	
<b>Total General Education Requirements</b>	<b>21 Credits</b>

### Core Requirements

AIT 110	General Industrial Safety	1
DFT 110	Print Reading for Industry	3
MPT 140	Quality Control	3

**Total Core Requirements 7 Credits**

### Emphasis Requirements

MTT 101	Introduction to Machine Shop	3
MTT 105	Machine Shop I	3
MTT 110	Machine Shop II	3
MTT 140	Inspection Techniques	3
MTT 230	Computer Numerical Control I	4
MTT 232	Computer Numerical Control II	4
MTT 292	Computer Aided Manufacturing I	4

**Total Emphasis Requirements 24 Credits**

### Elective Requirements

Choose nine credits from the following:

CE 290	Work Experience	3
LGM 201	Essentials of Logistics Management	3
LGM 208	Logistics and Quality Management Tools I	3
MT 150	Material Science	3
MTT 250	Machine Shop III	3
MTT 260	Machine Shop IV	3
MTT 293	Computer Aided Manufacturing (CAM) II	4
	Any WELD Class	3

**Total Elective Requirements 9 Credits**

**Total Degree Requirements 61 Credits**

### Suggested Course Sequence

First Year	Course #	Title	Credits
<b>1st Semester</b>			
Core	AIT 110	General Industrial Safety	1
Core	DFT 110	Print Reading for Industry	3
Quantitative Reasoning	MATH 108	Math for Technicians	3
Core	MPT 140	Quality Control	3
Emphasis	MTT 101	Introduction to Machine Shop	3
Emphasis	MTT 105	Machine Shop I	3
<b>Total</b>			<b>16</b>
<b>2nd Semester</b>			
Elective		Choose from list	3
Humanities/ Diversity	AAD 201	History of the Built Environment	3
Communications	ENG 107	Technical Communications I	3
Emphasis	MTT 110	Machine Shop II	3
Science	PHYS 100	Introductory Physics	3
<b>Total</b>			<b>15</b>
Second Year	Course #	Title	Credits
<b>3rd Semester</b>			
English	ENG 101	Composition I	3
Emphasis	MTT 230	Computer Numerical Control I	4
Emphasis	MTT 292	Computer Aided Manufacturing I	4
U.S. and Nevada Constitutions	PSC 101	Introduction to American Politics	3
<b>Total</b>			<b>14</b>
<b>4th Semester</b>			
Elective		Choose from list	6
Human Relations	CE 201	Workplace Readiness	3
Emphasis	MTT 140	Inspection Techniques	3
Emphasis	MTT 232	Computer Numerical Control II	4
<b>Total</b>			<b>16</b>
<b>Degree Total</b>			<b>61</b>