

**MCHN 2303** 

**MCHN 1426** 

Year 2 Total

**Fundamentals of CNC Machine Controls** 

equipment.

**Introduction to CAM** 

Programming and operation of CNC machine shop

Study of CAM software with emphasis on tool geometry,



# ADVANCED TECHNOLOGY AND MANUFACTURING ACADEMY

#### **1st Year Program of Studies**

Courses in blue articulate into associate of applied science degree (AAS).

Fall Semester		Credit	Spring Semester		Credi
MCHN 1343	Machine Shop Math Technical, applied mathematics necessary for future machine shop related courses.	3	RBTC 1305	Robotic Fundamentals Introduction to flexible automation to include installation, repair, maintenance, & development.	3
MCHN 1270 TOhr OSHA MSSC Safety	MSSC & OSHA 10 Study of fundamentals in manufacturing environment and provides instructional information to prepare students to attain MSSC Safety certification.	2	MCHN 1438	Basic Machine Shop I Introduction to student machining fundamentals to include lathe, milling machine, drill press, power saw, and bench grinder. Emphasis is placed on shop safety,	4
NMT 2303	Pumps Compressors & Mechanical Drives Study of theory and operations of various types of pumps and compressors to include mechanical power transmission systems.	3		housekeeping, and preventative maintenance.	
Fall Semester Total		8	Spring Semester Total		7
Year 1 Total	Level I Certificate of Completion Industrial Maintenance Assistant				15
	1	lst Year S	ummer		
Summer Semeste	er				Credi
MCHN 2486	Internship				4
Summer Semest	er Total				4
	<b>2nd Ye</b> Courses in blue articulat		m of Studies e of applied scienc		
Fall Semester   <i>P</i>	roduction Tool Operator/Maintenance Associate	Credit [OR]	Fall Semester   M	lanufacturing Maintenance Associate	Cred
MCHN 1320 MSSC Quality	Precision Tools & Measurements Emphasis on the identification, selection, and application of various types of precision instruments.	3	CETT 1409	DC-AC Circuits Fundamentals of DC circuits and AC circuits operation in cluding Ohm's Law, Kirchoff's Laws, networks, transformers, resonance, phasors, and circuit analysis techniques.	1-
ICHN 1302	Print Reading for Machining Trade Study of blueprints for machining trades with emphasi	<b>3</b>	ELMT 1305 *MSSC Quality	Basic Fluid Power Basic fluid power course includes vacuum systems, pneumatic & hydraulic systems, fluid power symbols,	3
	on machine drawings.	6		operating theory, electrical & manual controls.	7

tool selection, and tool library.			robotic systems.		
Spring Semeste	er Total	7	Spring Semester Total		
Veer O Total	Level I Certificate of Completion	12	Level I Certificate of Completion		

3

4

13

3

**INTC 1357** 

**RBTC 1347** 

**AC/DC Motor Control** 

speed control & stopping systems.

**Electromechanical Devices** 

Study of electrical motors with emphasis on starting,

Study of basic electro-mechanical devices found in

### **Level I Certificate of Completion**

**Production Tool Operator / Maintenance Associate** 

**ASSOCIATE OF APPLIED SCIENCES** 

## **CNC Manufacturing Technician**

Courses in blue articulate into associate of applied science (AAS) degree.

### **Level I Certificate of Completion**

**Manufacturing Maintenance Associate** 

**ASSOCIATE OF APPLIED SCIENCES** 

#### **Automated Industrial Process**

Courses in blue articulate into associate of applied science (AAS) degree.

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MCHN 1438   Basic Machine Shop	MCHN 1320	Precision Tools & M	leasurements	3	<b>CETT 1409</b>	AC/DC Circuits		4
Semester 2   Credit   Semester 3   Credit   Semester 5   Credit   Semester 7   Semester 3   Credit   Semester 3   Credit   Semester 3   Credit   Semester 3   Credit   Semester 5   Credit   Semester 6   Credit   Semester 7   Credit   Cre	MCHN 1302	Print Reading for M	achine Trades	3	<b>ELMT 1305</b>	<b>Basic Fluid Power</b>		3
Semester   Total   Semester   Total   Semester   Credit   Semester   Composition   3	MCHN 1438	Basic Machine Sho	o I	4	ECON 1301	Introduction to Eco	nomics	3
Semester 2   Credit   Semester 2   Credit   Semester 2   Credit	MATH 1332	Contemporary Math	or Mathematics Core 20	3	-	Select Course 1 in S	Specialization	3
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