

**SCHOOL OF INDUSTRIAL TECHNOLOGY**

**Precision Machining and Manufacturing AAS Degree (MT13)**

*Offered at Clarkesville Campus*

Entrance Dates ..... Fall, Spring, Summer  
 Length of Program..... 4 Terms  
 Credit Hours Required for Graduation ..... 66

**Purpose:** The Precision Machining and Manufacturing Associate of Applied Science degree program prepares students for careers the Machine Tool Technology field. Learning opportunities develop academic, technical, and professional knowledge and skills required for job acquisition, and advancement. The program emphasizes a combination of machine tool theory and practical application necessary for successful employment.

**Admission Requirements:**

- Age 16 or older or student with dual/joint enrollment in high school or GED® students seeking access to quality instruction at the postsecondary level
- High school diploma or GED®
- Completion of application process including placement test; or provide SAT or ACT scores

**Program Courses**

**Credits**

**General Core Courses**

**Total 15 credit hours**

Area I	Language Arts/Communication	3
	ENGL 1101 Composition and Rhetoric (required)	
Area II	Social/Behavioral Sciences	3
Area III	Natural Sciences/Mathematics	3
	<b><i>(one of the following required)</i></b>	
	MATH 1101 Mathematical Modeling	
	MATH 1103 Quantitative Skills and Reasoning	
	MATH 1111 College Algebra	
Area IV	Humanities/Fine Arts	3
	General Education Elective from any area	3

*Contact program advisor for program-specific courses and see General Education Requirements for Associate Degrees for course options.*

**Occupational Courses**

**Total 54 credit hours**

AMCA 2110	CNC Fundamentals	4
AMCA 2130	CNC Mill Manual Programming	5
AMCA 2150	CNC Lathe Manual Programming	5
AMCA 2190	CAD/CAM Programming	4
COLL 1010	College and Career Success Skills	3
MCHT 1011	Introduction to Machine Tool	4
MCHT 1012	Print Reading for Machine Tool	3
MCHT 1013	Machine Too Math	3
MCHT 1020	Heat Treatment and Surface Grinding	4
MCHT 1119	Lathe Operations I	4
MCHT 1120	Mill Operations I	4
MCHT 1219	Lathe Operations II	4
MCHT 1220	Mill Operations II	4

Estimated cost of books and supplies for full program is approximately \$2000.

**SCHOOL OF INDUSTRIAL TECHNOLOGY**

**Precision Machining and Manufacturing Diploma (MTT2)**

*Offered at Clarkesville Campus*

Entrance Dates ..... Fall, Spring, Summer  
 Length of Program..... 4-5 Terms  
 Credit Hours Required for Graduation ..... 49-51

**Purpose:** The Precision Machining and Manufacturing diploma program is a sequence of courses that prepares students for careers in the machine tool technology field. Learning opportunities develop academic, technical and professional knowledge and skills required for job acquisition, retention, and advancement. The program emphasizes a combination of machine tool theory and practical application necessary for successful employment. Program graduates receive a Precision Machining and Manufacturing diploma and have the qualification of a machine tool technician.

**Admission Requirements:**

- Age 16 or older or student with dual/joint enrollment in high school or GED® students seeking access to quality instruction at the postsecondary level
- High school diploma or GED®
- Completion of application process including placement test; or provide SAT or ACT scores

**Program Courses**

**Credits**

**Basic Skills Courses**

**Total 9 credit hours**

COLL	1010	College and Career Success Skills	3
ENGL	1010	Fundamentals of English I	3
MATH	1012	Foundations of Mathematics	3

**Occupational Courses**

**Total 40 credit hours**

AMCA	2110	CNC Fundamentals	4
MCHT	1011	Introduction to Machine Tool	4
MCHT	1012	Print Reading for Machine Tool	3
MCHT	1013	Machine Tool Math	3
MCHT	1020	Heat Treatment and Surface Grinding	4
MCHT	1119	Lathe Operations I	4
MCHT	1120	Mill Operations I	4
MCHT	1219	Lathe Operations II	4
<b>OR</b>			
AMCA	2150	CNC Lathe Manual Programming	(5)
MCHT	1220	Mill Operations II	4
<b>OR</b>			
AMCA	2130	CNC Mill Manual Programming	(5)
Occupational Electives			6

Estimated cost of books and supplies for full program is approximately \$1,180.

**SCHOOL OF INDUSTRIAL TECHNOLOGY**

**Basic Machining Operator Certificate (BMO1)**

*Offered at Clarkesville Campus*

Entrance Dates ..... Fall, Spring, Summer  
 Length of Program..... 2 Terms  
 Credit Hours Required for Graduation ..... 22

**Purpose:** The Basic Machining Operator certificate program prepares students for entry-level machine shop employment by providing the knowledge and skills in basic machining operations. Instruction is provided in blueprint reading, lathe, mill, and surface grinder operation, mathematical functions, and an introduction to the machine tool industry.

**Admission Requirements:**

- Age 16 or older or student with dual/joint enrollment in high school or GED® students seeking access to quality instruction at the postsecondary level
- High school diploma or GED®
- Completion of application process including placement test; or provide SAT or ACT scores

**Program Courses**

**Credits**

MCHT 1011	Introduction to Machine Tool	4
MCHT 1012	Print Reading for Machine Tool	3
MCHT 1013	Machine Tool Math	3
MCHT 1020	Heat Treatment and Surface Grinding	4
MCHT 1119	Lathe Operations I	4
MCHT 1120	Mill Operations I	4

Estimated cost of books and supplies for full program is approximately \$400

**CNC Specialist Certificate (CS51)**

*Offered at Clarkesville Campus*

Entrance Dates ..... Fall, Spring, Summer  
 Length of Program..... 2 Terms  
 Credit Hours Required for Graduation ..... 22

**Purpose:** The CNC Specialist certificate program provides training for graduates to gain employment as Computerized Numerical Controls (CNC) machine tool technicians. Topics include CNC fundamentals, mill and lathe manual programming, CNC practical applications, and CAD/CAM programming. The program emphasizes a combination of CNC theory and practical application necessary for successful employment.

**Admission Requirements:**

- Age 16 or older or student with dual/joint enrollment in high school or GED® students seeking access to quality instruction at the postsecondary level
- High school diploma or GED®
- Completion of application process including placement test; or provide SAT or ACT scores

**Program Courses**

**Credits**

AMCA 2110	CNC Fundamentals	4
AMCA 2130	CNC Mill Manual Programming	5
AMCA 2150	CNC Lathe Manual Programming	5
AMCA 2170	CNC Practical Applications	4
AMCA 2190	CAD/CAM Programming	4

Estimated cost of books and supplies for full program is approximately \$880.

## SCHOOL OF INDUSTRIAL TECHNOLOGY

### Lathe Operator Certificate (LP11)

*Offered at Clarkesville Campus*

Entrance Dates ..... Fall, Spring, Summer  
 Length of Program..... 2 Terms  
 Credit Hours Required for Graduation ..... 15

**Purpose:** The Lathe Operator certificate program prepares students to use lathes, lathe set up, and lathe tool grinding. Emphasis is placed on cutting threads, boring holes to precise measurements, and cutting tapers. Topics include an introduction to machine tool technology, blueprint reading for machine tool, and basic and advanced lathe operations.

**Admission Requirements:**

- Age 16 or older or student with dual/joint enrollment in high school or GED® students seeking access to quality instruction at the postsecondary level
- High school diploma or GED®
- Completion of application process including placement test; or provide SAT or ACT scores

<u>Program Courses</u>	<u>Credits</u>
MCHT 1011 Introduction to Machine Tool	4
MCHT 1012 Print Reading for Machine Tool	3
MCHT 1119 Lathe Operations I	4
MCHT 1219 Lathe Operations II	4

Estimated cost of books and supplies for full program is approximately \$500.

### Mill Operator Certificate (MP11)

*Offered at Clarkesville Campus*

Entrance Dates ..... Fall, Spring, Summer  
 Length of Program..... 2 Terms  
 Credit Hours Required for Graduation ..... 15

**Purpose:** The Mill Operator certificate program prepares students to effectively operate milling machinery. Students become proficient in blueprint reading, general mathematical operations, and are provided the necessary knowledge and skills to obtain employment as a milling machinist.

**Admission Requirements:**

- Age 16 or older or student with dual/joint enrollment in high school or GED® students seeking access to quality instruction at the postsecondary level
- High school diploma or GED®
- Completion of application process including placement test; or provide SAT or ACT scores
- Precision Machining and Manufacturing diploma, comparable coursework or Prior Learning Assessment required

<u>Program Courses</u>	<u>Credits</u>
MCHT 1011 Introduction to Machine Tool	4
MCHT 1012 Print Reading for Machine Tool	3
MCHT 1120 Mill Operations I	4
MCHT 1220 Mill Operations II	4

Estimated cost of books and supplies for full program is approximately \$500.

**SCHOOL OF INDUSTRIAL TECHNOLOGY**

**Tool and Die Specialist Certificate (TA11)**

*Offered at Clarkesville Campus*

Entrance Dates ..... Fall, Spring, Summer  
 Length of Program..... 2 Terms  
 Credit Hours Required for Graduation ..... 18

**Purpose:** The Tool and Die Specialist certificate program provides students advanced study in machine tool technology to prepare students to become tool and die specialists. Program objectives are to provide a sequence of advanced courses in the area of Tool and Die and to provide advanced training for employees in the machine tool industry.

**Admission Requirements:**

- Age 16 or older or student with dual/joint enrollment in high school or GED® students seeking access to quality instruction at the postsecondary level
- High school diploma or GED®
- Completion of application process including placement test; or provide SAT or ACT scores
- Precision Machining and Manufacturing diploma, comparable coursework or Prior Learning Assessment required

**Program Courses**

**Credits**

AMCA 2205	Die Design I	5
AMCA 2210	Die Construction I	3
AMCA 2230	Die Design II	7
AMCA 2240	Die Construction II	3

Estimated cost of books and supplies for full program is approximately \$400.