



# Manufacturing & Logistics

## PATHWAY: Machine Technology

Are you interested in machinery, building things, automation, working with your hands, or engineering?

**COURSES IN YELLOW** are pathway concentrator courses and must be finished with a **C- average or above** to meet Indiana's 3<sup>rd</sup> requirement to graduate. **COMPLETE ALL COURSES** below with a B- or above to graduate with **Academy recognition**.

COURSE NAME	GRADES AVAILABLE	LENGTH	PERIODS PER DAY	DUAL (COLLEGE) CREDITS POSSIBLE	FULFILLS CORE 40 CREDITS AS...
Introduction to Manufacturing <b>OR</b> Manufacturing <i>Same as Introduction to Manufacturing, but this one is only for upperclassmen</i>	9, 10	Year	1		
	11, 12	Year	1		
<b>PRECISION MACHINING I</b> (REQUIRED CONCENTRATOR COURSE)	<b>10, 11, 12</b>	<b>YEAR</b>	<b>2</b>	<b>9</b>	<b>QUANTITATIVE REASONING</b>
<b>PRECISION MACHINING II</b> (REQUIRED CONCENTRATOR COURSE)	<b>11, 12</b>	<b>YEAR</b>	<b>3</b>	<b>12</b>	<b>QUANTITATIVE REASONING</b>

Acceptance into some courses may depend on meeting additional requirements listed in the COURSE OF STUDY GUIDE.

**State- and Industry-Recognized Certification:**  
NIMS Machining Level I – CNC Mill Operations

Must earn a specified certification or dual credit to graduate with Academy recognition. Apply your senior year.

Check out the list below for more courses related to this pathway - see the Course of Study Guide for details.

- Advanced Manufacturing I: Gone Boarding
- Graphic Imaging Technology
- Integrated Chemistry and Physics
- Physics
- PLTW Digital Electronics
- PLTW Honors Computer Integrated Manufacturing

- Precision Machining III: Advanced Manufacturing I
- **Robotics Club**
- Welding Technology I
- Welding Technology II
- Work-Based Learning Capstone

**Possible Careers Requiring 0-4 Years of Additional Training or Education**

<ul style="list-style-type: none"> <li>• Assembler</li> <li>• CAD/CAM Engineer</li> <li>• CNC Machinist</li> <li>• Design Engineer</li> </ul>	<ul style="list-style-type: none"> <li>• Health and Safety Representative</li> <li>• Industrial Machinery Mechanic</li> <li>• Inspector</li> <li>• Labor Relations Manager</li> </ul>	<ul style="list-style-type: none"> <li>• Manufacturing Technician</li> <li>• Pattern and Model Maker</li> <li>• Production Manager</li> <li>• Quality Control Technician</li> </ul>	<ul style="list-style-type: none"> <li>• Safety Engineer</li> <li>• SPC Coordinator</li> <li>• Tool and Die Maker</li> <li>• Welder</li> </ul>
---	---	---	--

**Local Industry Partners**

Alpha Manufacturing Applied Thermal Technologies Inc, Avalign	Cutting Edge Machine & Tool DePuy Hi-Point Machine	Ivy Tech Community College Medtronic Precision Medical Technologies	Tecomet - Machining Zimmer-Biomet
---	--	---	--------------------------------------

**THREE GRADUATION REQUIREMENTS**

	THREE REQUIREMENTS	OPTIONS (Pick <u>at least one</u> in <u>EACH</u> box)
<b>1</b>	<b>HIGH SCHOOL DIPLOMA</b> Must complete <u>at least one</u> item Check all that apply	<input type="checkbox"/> Core 40 <input type="checkbox"/> Core 40 with Academic Honors <input type="checkbox"/> Core 40 with Technical Honors
<b>2</b>	<b>EMPLOYABILITY SKILLS</b> Must complete <u>at least one</u> item Check all that apply	<input type="checkbox"/> Project-Based Learning Experience <input type="checkbox"/> Service-Based Learning Experience <input type="checkbox"/> Work-Based Learning Experience
<b>3</b>	<b>POSTSECONDARY-READY COMPETENCIES</b> Must complete <u>at least one</u> item Check all that apply	<input type="checkbox"/> Complete: Concentrator courses and their prerequisite courses (in <b>YELLOW</b> ) from a pathway Maintain a C- average minimum in the <b>CONCENTRATOR COURSES</b> for that pathway Chosen pathway: _____ <input type="checkbox"/> Core 40 with Technical Honors diploma <input type="checkbox"/> Core 40 with Academic Honors diploma <input type="checkbox"/> AP/Dual Credit: Must earn a C- <u>average</u> or higher in at least three courses <input type="checkbox"/> ACT with college-ready benchmarks <input type="checkbox"/> SAT with college-ready benchmarks <input type="checkbox"/> ASVAB with minimum AFQT score to qualify for placement into one of the branches of the US military <input type="checkbox"/> State- and Industry-recognized credential or certification <input type="checkbox"/> State-, Federal-, or Industry-recognized apprenticeship

# \_\_\_\_\_ 's Four-Year Plan

GRAD	English	Math	Science	Social Studies	Physical Education/ Health or 3 FACS	Elective Courses	Pathway and Academy Courses	Summer School Credits
		Fill blanks with electives	Fill blanks with electives	Fill blanks with electives	Fill blanks with electives		Fill blanks with electives	
7/8	Any middle school credits							
9	English 9	Algebra I	Biology I	World History Civ. A or B (9-10th grade)	Preparing for College & Careers			Session A before 9 <sup>th</sup> grade
	(continued)	(continued)	(continued)	World History Civ. A or B (9-10th grade)	PE credit			Session B before 9 <sup>th</sup> grade
10	English 10	Geometry	Chemistry I, or ICP, or Physics I		PE credit or waiver			Session A before 10 <sup>th</sup> grade
	(continued)	(continued)	(continued)		Health or 2 other qualifying FACS credits			Session B before 10 <sup>th</sup> grade
11	English 11	Algebra II	Qualifying Core 40 science of your choice	U.S. History				Session A before 11 <sup>th</sup> grade
	(continued)	(continued)	(continued)	(continued)				Session B before 11 <sup>th</sup> grade
12	English 12	Quantitative reasoning or math recommended		Government				Session A before 12 <sup>th</sup> grade
	(continued)			Economics (fulfills requirement for quantitative reasoning)				Session B before 12 <sup>th</sup> grade