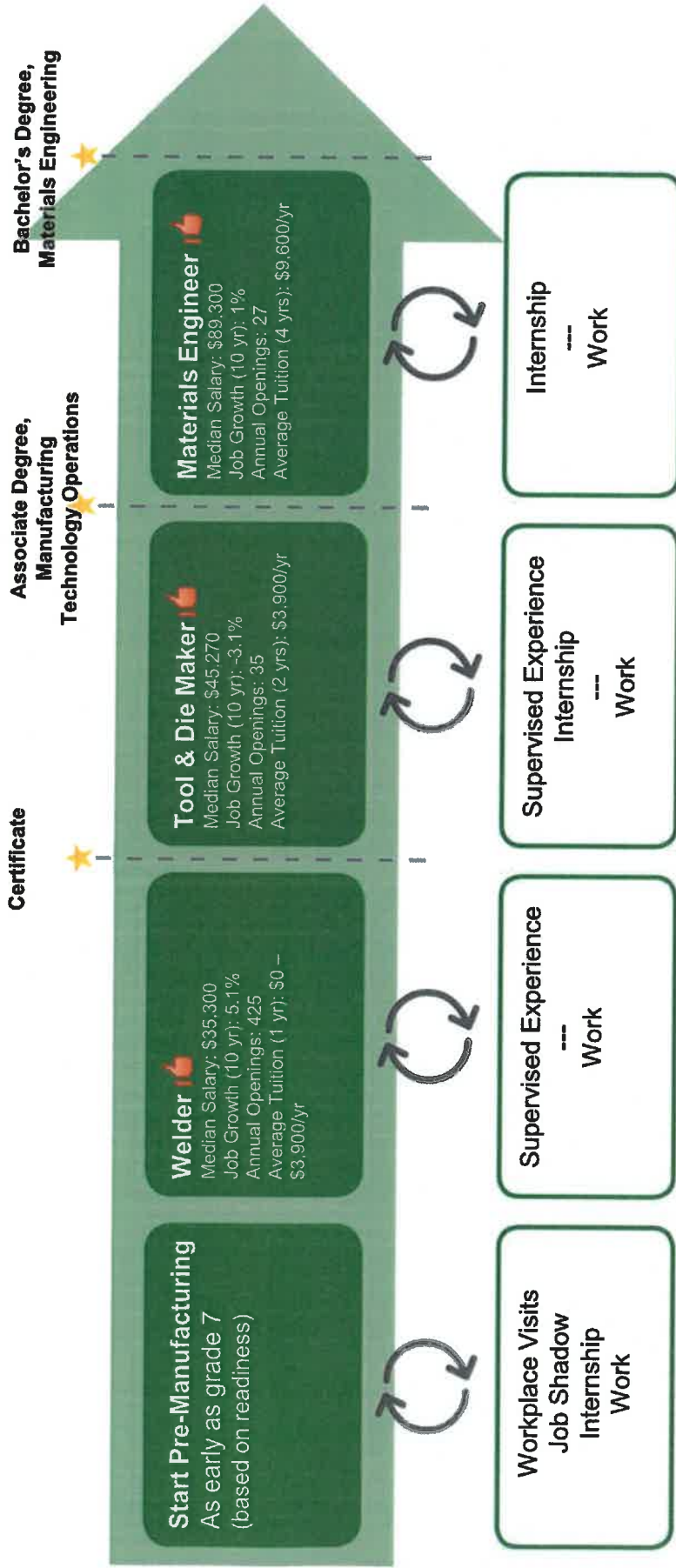




Manufacturing Technologies Career Pathway



Provided by middle schools, high schools, employers, Ohio Tech Centers, and colleges.

Preparing students for multiple options after high school:
gainful employment and/or postsecondary study.



Data reflects 2014 Ohio labor statistics and public institutions of higher education for 2013-2014. For specific tuition costs, visit ohiohighered.org.





Manufacturing Technologies Career Pathway

Secondary Pathway: Manufacturing Operations

Postsecondary Program: Manufacturing Technology Operations Management

An Example of Courses with Secondary and Postsecondary Credits

Secondary	7 8	English I	Algebra I	Physical Science	Social Studies	Fine Arts	Pre-Engineering Technologies		
	9 10	English II	Geometry	Biology	World History	Health (.5) PE (.5)	Manufacturing Operations	Welding Technologies	World Languages
	11	English III	Algebra II	Chemistry	U.S. History	Gas Metal Arc Welding	Shielded Cored Arc Welding	World Languages	
	12	English IV	Trigonometry/Calculus	Physics	U.S. Government	Flux Cored Arc Welding	Gas Tungsten Arc Welding		
Postsecondary	Year 1 1st Semester	English Composition	College Algebra	Engineering Design	Manufacturing Operations	Welding	Engineering Technologies		
	Year 1 2nd Semester	Economics	Financial Accounting	Jig & Fixture Design	Advanced Manufacturing	Computer Aided Manufacturing I			
	Year 2 1st Semester	Business Entrepreneurship	Physics	Quality	Logistics	Engineering Materials			
	Year 2 2nd Semester	Technical Writing	Business Management	Hydraulics & Pneumatics	Stamping Operations & Die Design				
High School Career-Technical Education Program Courses									
High School Courses for Postsecondary Credit (Including Apprenticeship Hours) and the Corresponding Postsecondary Courses									
Required Courses									
Recommended Electives									

Visit education.ohio.gov/CareerConnections for reference information.

Course titles and sequences will vary between schools.

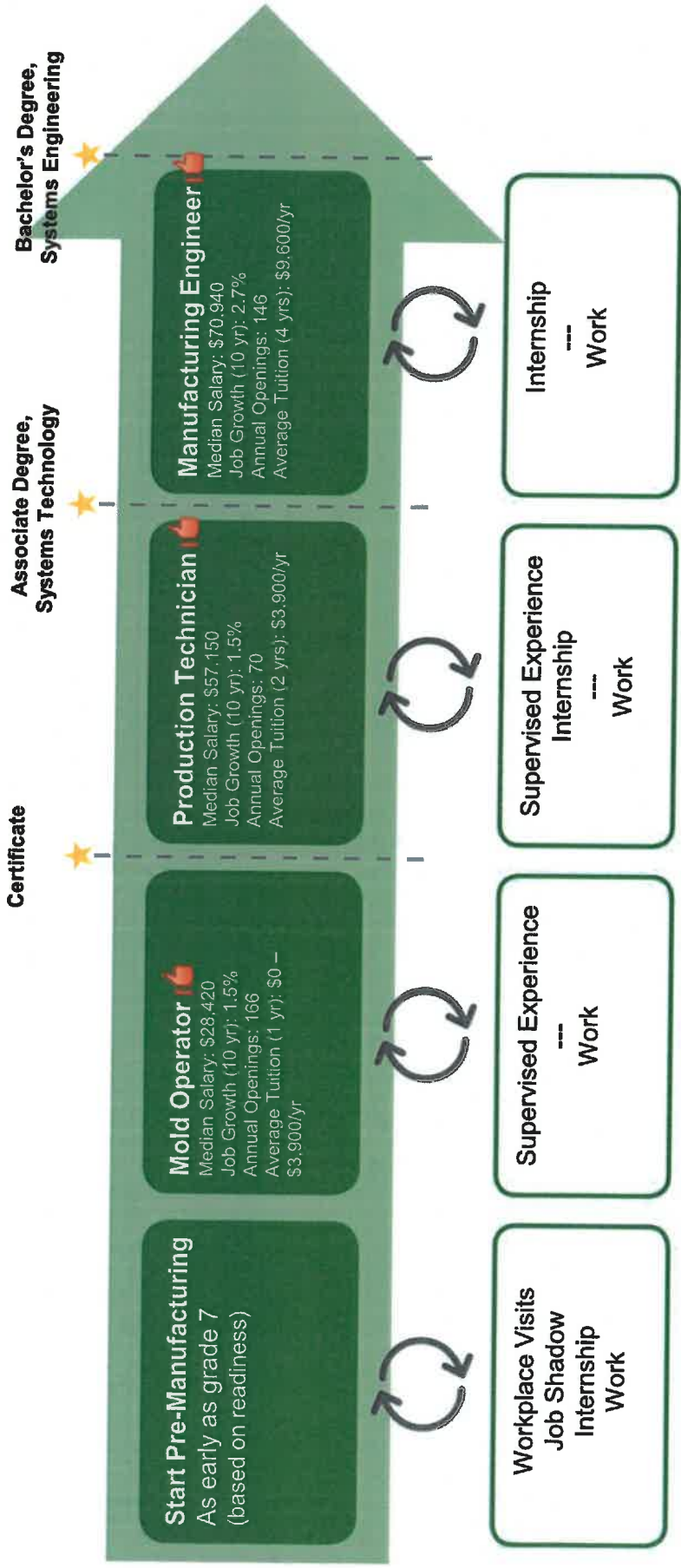
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Manufacturing Technologies Career Pathway

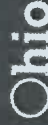



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Manufacturing Technologies Career Pathway

Secondary Pathway: Manufacturing Operations

Postsecondary Program: Systems Technology

An Example of Courses with Secondary and Postsecondary Credits

Secondary	7 8	English I	Algebra I	Physical Science	Social Studies	Fine Arts	Pre-Engineering Technologies	
	9 10	English II	Geometry	Biology	World History	Health (.5) PE (.5)	Manufacturing Operations	World Languages
	11	English III	Algebra II	Chemistry	U.S. History	CNC Technology	Machine Tools	World Languages
	12	English IV	Trigonometry/ Calculus	Physics	U.S. Government	Computer Integrated Manufacturing	Robotics	
	Year 1 1st Semester	English Composition	College Algebra	Computer Applications	Environmental Health & Safety	Operations Management I	Print Reading & Sketching	
Year 1 2nd Semester	Technical Writing	Statistics	Quality Management Systems	Manufacturing Processes	Operations Management II	Human Relations in the Workplace		
Year 2 1st Semester	Communication	Labor Relations	Effective Management	CNC Programming	Lean Systems			
Year 2 2nd Semester	Psychology	Manufacturing Automation	Machine Reliability	Problem Solving & Decisions				

High School Career-Technical Education Program Courses

High School Courses for Postsecondary Credit (Including Apprenticeship Hours) and the Corresponding Postsecondary Courses

Required Courses

Recommended Electives

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Course titles and sequences will vary between schools.

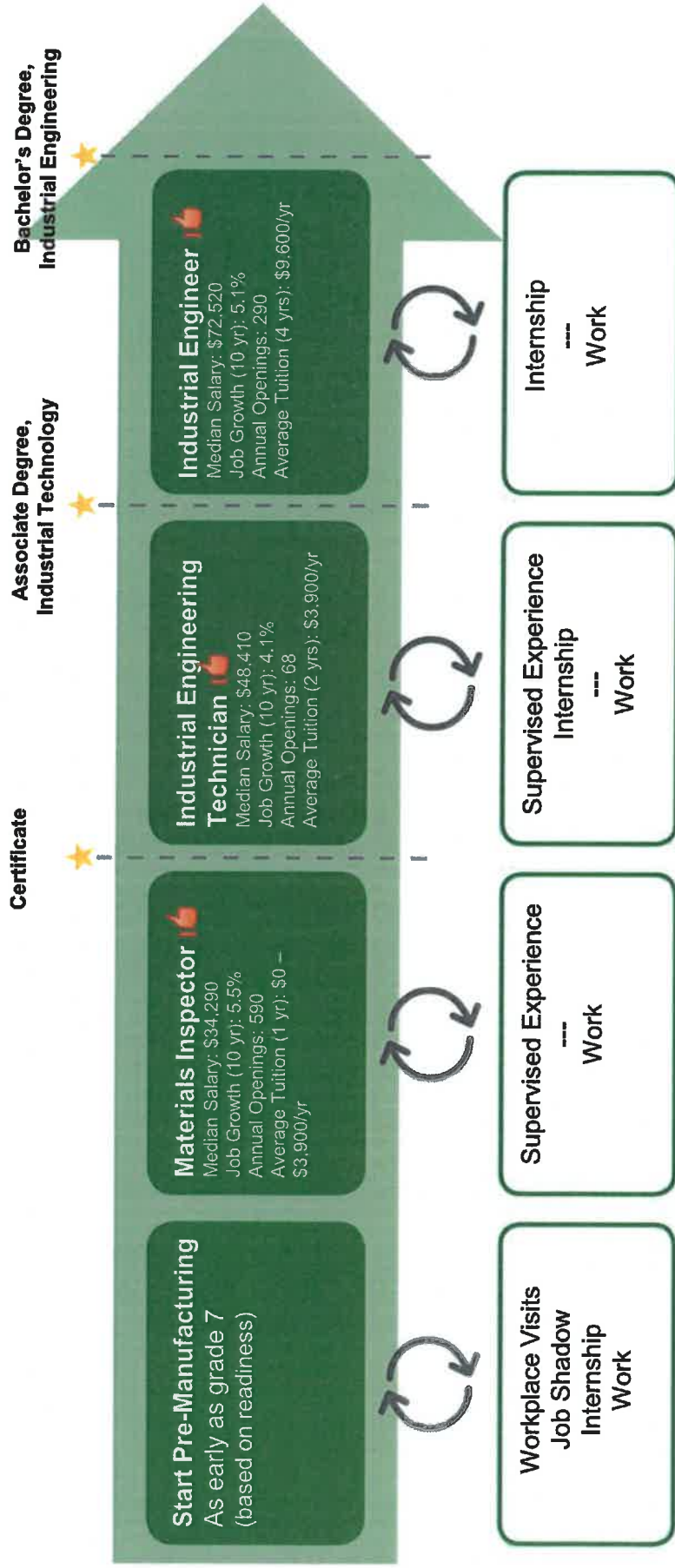
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Manufacturing Technologies Career Pathway

Secondary Pathway: Manufacturing Operations

Postsecondary Program: Industrial Technology

An Example of Courses with Secondary and Postsecondary Credits

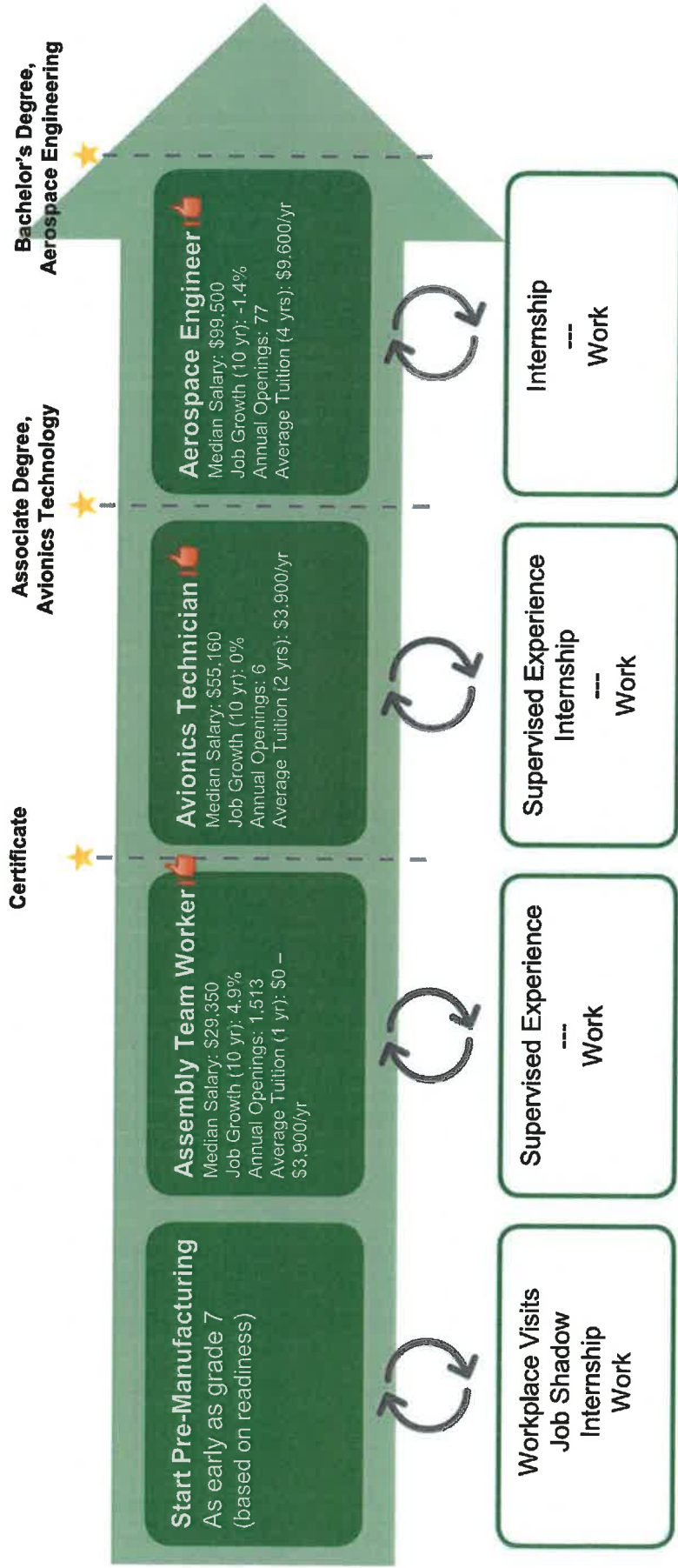
Grade	English I	Algebra I	Physical Science	Social Studies	Fine Arts	Pre-Engineering Technologies
7	English I	Algebra I	Physical Science	Social Studies	Fine Arts	Pre-Engineering Technologies
8	English I	Algebra I	Physical Science	Social Studies	Fine Arts	Pre-Engineering Technologies
9	English II	Geometry	Biology	World History	Health (.5) PE (.5)	Manufacturing Operations
10	English II	Geometry	Biology	World History	Health (.5) PE (.5)	Manufacturing Operations
11	English III	Algebra II	Chemistry	U.S. History	Engineering Principles	Machine Tools
12	English IV	Trigonometry/ Calculus	Physics	U.S. Government	Computer Integrated Manufacturing	Mechanisms & Drives
Year 1 1st Semester	Computer-Aided Design	Industrial Safety	Electrical Systems	Mechanical Maintenance	Introduction to Engineering Technology	Technical Math
Year 1 2nd Semester	Employability Skills	Hydraulics & Pneumatics	Programmable Logic Control	Dimensional Metrology	Software Applications	Motor and Motor Controls
Year 2 1st Semester	English	Hydraulic Troubleshooting	Electrical Troubleshooting	Electrical Distribution	Automated Systems	
Year 2 2nd Semester	Business Communication	Small Group Communication	Micro-economics	Industrial Machine Maintenance	Industrial Technology Projects	Humanities Elective
High School Career-Technical Education Program Courses						
High School Courses for Postsecondary Credit (Including Apprenticeship Hours) and the Corresponding Postsecondary Courses						
Required Courses						
Recommended Electives						

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Course titles and sequences will vary between schools.

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