HOWARDS GROVE HIGH SCHOOL

MANUFACTURING Career Plan of Study

Planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance, and manufacturing/process engineering. Pathways include: Production; Manufacturing Production Process Development; Maintenance, Installation & Repair; Quality Assurance; Logistics & Inventory Control; and Health, Safety & Environmental Assurance.

	Entry Level Occupations	Careers with Certification/Associate Degree	Careers with Bachelors, Pre-Professional, or Higher Degree
Sample Occupations	Factory Worker Maintenance/Janitorial Worker Oil Well Driller Order Filler Production & Planning Clerk Production Assembler	Computer Technician; Electric Motor Technician; Electrical Appliance Servicer; Electronic Engineering Technician, Industrial Equipment Technician; Industrial Maintenance Mgr; Industrial Welder; Machinist; Mechanical Designer; Quality Control Technician; Robotics Technician; Tool & Die Maker	CAD Drafter; Electrical Engineer; Electronic Engineer; Environmental Engineer; Industrial Engineer; Mechanical Engineer; Occupational Health & Safety Inspector; Production Supervisor; Stage & Sound Equipment Manufacturing; Technical Trainer

This plan of study should serve as a guide, along with other career planning materials, as you continue on your career path. Courses listed within this plan are only recommended courses and should be individualized to meet each learner's educational and career goals. All plans should meet high school graduation requirements as well as post-secondary school entrance requirements.

	Grade	English (4 credits total)	Math (2 credits total)	Science (2 credits total)	Social Studies (3 credits total)	Additional Requirements
High School Requirements	**9**	English 9		Physical Science	Geography	Computer App. OR Info. & Computer Tech. Physical Education Health
	10	Sophomore Composition		Biology	World History	Physical Education Health
	11	Speech & .5 credit (see list below)			U.S. History	***Grades 9 - 12*** *Fine Arts/Humanities:* 1 credit from Art, Music, Foreign Language, or Mythology *Career & Technical Education*: 1 credit from Agribusiness, Business Ed, Family & Consumer Ed, or Tech Ed ***Grade 11 or 12*:** P.E. Elective
	12	English Electives (see list below)			Political Systems & Issues	

	English Electives	Math Electives	Science Electives	Social Studies Electives	Recommended Electives
High School Electives	***with Speech:*** American Lit Mythology Mass Media ***grade 12:*** Advanced Comp & World Lit; Advanced Comp & Mythology; Lit A & Lit B AP English	Applied Math I Algebra I Geometry Algebra II Intro to Stats Trigonometry Elementary Functions Calculus	Applied Chemistry Chemistry Physics AP Adv. Chemistry AP Adv. Biology	Social Problems	Intro to Tech; Applied Tech; Hard Metals; Plastics, Woods & Composites; Technology Engineering; Industrial Design; Enterprise; Communications Design; Electronic Communications; Studies in Advanced Technology Education; Future Prep; Technology Ed Co-op; Manufacturing Youth Apprenticeship; Drafting & Design Youth Apprenticeship; Welding Youth Apprenticeship; Business Economics

POST SECONDARY PROGRAMS

Technical Colleges

Certificates	Technical Diplomas	Associate Degrees
Production Welding: FVTC Welding/Maintenance & Fabrication LTC	Appliance Technician: MATC CNC Mach. Oper/Prog: MATC, Madison Area CNC Technician: NWTC CNC Tool & Die Technologies: MPTC Industrial Maintenance Technician: MPTC Industrial Mechanic: LTC, NWTC Jewelry Repair & Fabrication: NWTC Machine Tool Operation: LTC, MATC, NWTC Mechanical & Computer Drafting: MATC Metal Fabrication/Welding: FVTC Tool & Die Making: MATC Welding: LTC, MATC, MPTC, NWTC Wood Manufacturing Technology: FVTC	Automated Manufacturing Systems Tech: FVTC Automation Systems Technology: NWTC Computer Control Engineering Technology: FVTC Industrial Welding Technician: FVTC, MATC Plastics Technology: Madison Area Quality Assurance Technician: LTC

Key to Abbreviations: FVTC: Fox Valley; LTC: Lakeshore; MATC: Milwaukee Area; MPTC: Moraine Park; NWTC: Northeast Wisconsin

Four Year Colleges

Public Colleges	Private Colleges
Industrial Engineering: Madison, Milwaukee, Platteville, Stout Industrial Technology Management : Platteville, Stout Manufacturing Engineer: Stout Materials Engineering: Milwaukee Mechanical Engineering: Madison, Milwaukee, Platteville Occupational Safety: Whitewater	Industrial Design: MIAD Industrial Engineering: MSOE Mechanical Engineering: Marquette, MSOE

These are some of the programs at Wisconsin Technical Colleges and some of the majors at UW System Colleges and WI Private Colleges and Universities.
For information about technical college programs go to ***www.witechcolleges.org****.*
For information about UW System colleges go to ***www.wisconsin.edu****.*
For information about private colleges and universities in Wisconsin go to ***www.wisconsinmentor.org****.*
For information about transfer agreements between technical colleges and UW System schools and between technical colleges and private schools go to ***www.uwsa.edu/tis****.*

This is one of sixteen career clusters. For more information about career clusters go to **www.careerclusters.org.**