

HOWARDS GROVE HIGH SCHOOL

SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS Career Plan of Study
 Planning, managing, & providing scientific research & professional & technical services (e.g., physical science, social science, engineering) including laboratory & testing services, & research & development services. Pathways include: Engineering & Technology; and Science & Math.

	Entry Level Occupations	Careers with Certification/Associate Degree	Careers with Bachelors, Pre-Professional, or Higher Degree
Sample Occupations	Statistical Clerk	All are Technicians: Biological; Chemical; Civil Electronics Engineering; Engineering; Environmental; Global Positioning; Industrial Engineering; Mechanical Engineering; Nuclear; Petroleum; Veterinary; Wind System	Types of Engineers: Aerospace; Biomedical; Chemical; Civil; Computer; Electrical; Environmental; Fiber Optics; Industrial; Mechanical; Mining; Nuclear; Robotics; Solar. Other Careers: Geologist; Industrial Hygienist; Mathematician; Physicist; Statistician

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.

High School Requirements	Grade	English (4 credits total)	Math (2 credits total)	Science (2 credits total)	Social Studies (3 credits total)	Additional 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 <i>Fine Arts/Humanities:</i> 1 credit from Art, Music, Foreign Language, or Mythology <i>Career & Technical Education:</i> 1 credit from Agribusiness, Business Ed, Family & Consumer Ed, or Tech Ed
	12	English Electives (see list below)			Political Systems & Issues	Grade 11 or 12: P.E. Elective

High School Electives	English Electives	Math Electives	Science Electives	Social Studies Electives	Recommended 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	Communications Design; Electronic Communications; Studies in Advanced Technology Education; Future Prep; Technology Ed Co-op; Industrial Equipment Technology Youth Apprenticeship; Manufacturing Youth Apprenticeship; Business Economics; Accounting; Entrepreneurship; World Language; Psychology

POST SECONDARY PROGRAMS

	Certificates	Technical Diplomas	Associate Degrees
Technical Colleges	Lab Science Technician: Mid-State	Electronic Systems Installation & Maintenance: Western Electrical Power Distribution: MATC, MPTC, NWTC Electricity: FVTC, MATC, MPTC, NWTC	Civil Engineering Technician: Gateway, Madison Area, MATC, NNWT Electricity Technician: Mid-State Electrical Engineering Technology: FVTC Electronics: FVTC, MATC, NWTC Electronics - Computer: MATC Electronics & Computer Engineering Tech: FVTC Engine Research & Development Technician: MPTC Engineering Technologist: MPTC Industrial Engineering Technician: MATC Mechanical Design Technology: FVTC, LTC, MATC, MPTC, NWTC Renewable Nuclear Technology: LTC Tool Design Engineering Technology: MPTC

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

	Public Colleges	Private Colleges
Four Year Colleges	Astronomy - Physics: Madison Atmospheric & Oceanic Sciences: Madison, Milwaukee Biochemistry: Madison, Milwaukee, Stevens Point Biology: Green Bay, Madison, Milwaukee, Oshkosh, Stevens Point Biomedical Engineering: Madison Botany; Genetics; Zoology (separate majors): Madison Chemistry: Green Bay, Madison, Milwaukee, Oshkosh, Stevens Point Computer Engineering: Madison, Milwaukee Earth Science: Green Bay, Madison Geology/Geophysics: Madison, Milwaukee, Oshkosh, Stevens Point Mathematics: All UW System schools Microbiology: Madison, Milwaukee, Oshkosh Natural Science: Madison, Oshkosh, Stevens Point	Bio-Cytotechnology: Marian Biology: Concordia, Lakeland, Marian, Marquette, St. Norbert, Silver Lake Chemistry: Concordia, Lakeland, Marian, St. Norbert Earth Science: Edgewood, St. Norbert Engineering Technology: MSOE Environmental Studies: Concordia General Science: St. Norbert Math & Computer Science: Lakeland & Marquette Mathematics: All WI private colleges except MIAD and MSOE Natural Science (Broadfield): Concordia, Lakeland, Marian, St. Norbert Psychology: Concordia, Lakeland, Marian, Marquette, St. Norbert, Silver Lake

*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.