

Science and Mathematics

Career Goal (O*NET Code): Hydrologist (19-2043), Chemist (19-2031), Biologist (19-1011), Environmental Science and Protection Technician (19-4091), Materials Scientist (19-2032).

Cluster Overview: Planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering) including laboratory and testing services, and research and development services.

SUGGESTED COURSEWORK

EXTENDED LEARNING EXPERIENCES

High School	9th	Core Courses:	English I Algebra I Biology	World Geography Languages other than English I Health/PE or Equivalent	Curricular Learning Experiences: TSA	Extracurricular Experiences: Destination ImagiNation FIRST High School Robotics Competition International Bridge Building Contest Junior Engineering Technical Society National Engineering Design Competition National Engineers Week
		Career-Related Electives:	Technology Systems (Modular Lab Based)** Bio-related Technology			
	10th	Core Courses:	English II Geometry Chemistry	World History Languages other than English II Technology Applications		
		Career-Related Electives:	Engineering Principles or Astronomy or Engineering Graphics or Electricity/Electronics Technology			
	11th	Core Courses:	English III Algebra II Physics	United States History PE or Equivalent Communication Applications		
Career-Related Electives:		Bio-related Technology Systems or Energy, Power, and Transportation Systems or Geology, Meteorology, and Oceanography or Health Science Technology				
12th	Core Courses:	English IV Calculus AP Physics	Government/Economics Fine Arts			
	Career-Related Electives:	Research Design and Development or Problems and Solutions in Technology or Communication Graphics or Computer Multimedia and Animation				
Postsecondary	On-the-Job Training				Career Options:	Professional Associations: American Chemical Society American Institute of Aeronautics and Astronautics American Institute of Chemical Engineering American Society of Civil Engineers American Society of Mechanical Engineers Institute of Electrical and Electronic Engineers Mathematical Association of America National Society of Black Engineers Society of Automotive Engineers Society of Hispanic Professional Engineers Society of Women Engineers
	Certificates	OSHA CareerSafe NOTE: Students may earn all or part of these certificates as part of the High School experience.				
	Associate's Degree	Not applicable for a science and mathematics degree.				
	Bachelor's Degree	Chemistry Physical Science Information Science	Applied Mathematics Mathematics	Geological and Related Science Biology		
	Graduate Degree	Analytical Chemistry Physical Science Information Science	Applied Mathematics Climatology Mathematics	Geological and Related Science Toxicology Biology		

* May substitute for the required credit for Physical Education
 ** Satisfies the required credit for Technology Applications
 *** May substitute for the required credit for Health Education

Students should take Advanced Placement (AP), International Baccalaureate (IB), dual credit, Advanced Technical Credit (ATC), or locally articulated courses, if possible.

This plan of study serves as a guide, along with other career planning materials, for pursuing a career path and is based on the most recent information as of 2007.
 All plans should meet high school graduation requirements as well as college entrance requirements.
 Students may select other elective courses for personal enrichment purposes.