HIGH SCHOOL PLANNER
SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

This information should serve as a guide, along with other career planning materials, as you continue your career path. Courses listed within this guide are only recommended coursework and should be individualized to meet each learner's education and career goals. All plans should meet high school graduation requirements as well as college entrance requirements.

HIGH SCHOOL

9th	10th	11th	12th
Core Requirements	Core Requirements	Core Requirements	Core Requirements
English 9 Secondary Math 1 Science World Geography	English 10 Secondary Math 2 Science World Civilizations	English 11 Secondary Math 3 (PreCalculus) Science U.S. History	English 12 Calculus or Statistics American Gov. & Citizenship

Required Electives

PE, The Arts, CTE, Computer Tech., Health, Financial Literacy

Career Electives (Choose Three Credits)

9th	10th	11th	12th
Intro to Engineering Principals of Engineering Design Technology	Design Technology Auto Mechanics Graphics Introduction to Engineering Design Principles of Engineering Computer Integrated Manufacturing Electronics	Design Technology, Auto Mechanics, Graphics, Digital Electronics, Computer Integrated Manufacturing, Occupational Auto, Occupational Graphics, Engineering Design & Development, Home Building Classes, Electronics, Metals/Welding.	

Career Enhancement Options

GTI	STATE CTE CAREER PATHWAYS	Work Based Learning	CTSO Participation
Intro to Engineering Design Principles of Engineering Engineering Design & Development Digital Electronics Computer Integrated Manufacturing Biotechnology Biomanufacturing	The state Skilled & Tech Sciences pathway has Mechanics & Repair, Electronics. The Tech & Engineering pathway has Pre-engineering & Project Lead the Way For more information see: http://www.schools.utah.gov/CTE/main/CTE-Programs.aspx	See your Career Center Coordinator for Information about: Job Shadowing Internship Seminars Apprenticeships	You are strongly advised to participate in Career & Technical Student Organizations. CTSOs related to this cluster are TSA and Skills USA depending on pathway chosen

Post Secondary

SLCC School of Applied Technology	Tech Training/ AS Degree	College/University
Offers certificated training in the following technologies: Network Administrator, Electronics Assembly Tech, Electromechanical Assembly Technician,Electronics Communications Tech, Electronics Engineering Tech., Automation and Instrumentation Technician For information see: www.slcc.edu/sat	Engineering Design/Drafting Technology, Pre-Engineering, Electronics Technology, Biology, Chemistry, Physics, Mathematics, Lab Technology For information: www.slcc.edu	Engineering Programs include Mathematical, Biological, Biochemical, Chemical, etc. Physics, Management Science and Systems Analysis, Astronomy, Botany, Zoology, Aerospace Engineer, etc. The U.S. Navy offers education in Nuclear Engineering. For information about schools offering specific programs see UtahFutures

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.

Sample Career Specialties / Occupations	Aerospace Engineer* Aeronautical Engineer* Agricultural Engineer* Agricultural Technician* Application Engineer* Architectural Engineer* Automotive Engineer* Biomedical Engineer* Biotechnology Engineer* Chemical Engineer* Civil Engineer* Communications Engineer* Computer Engineer* Computer Hardware Engineer* Computer Programmer* Computer Science Technician* Computer Software Engineer* Construction Engineer* Consultant* Development Engineer* Drafter* Electrical Engineer* Electrician* Electronics Technician* Energy Transmission Engineer* Environmental Engineer* Facilities Technician* Fire Protection Engineer* Geothermal Engineer* Hazardous Waste Engineer* Hazardous Waste Technician* Human Factors Engineer * Industrial Engineer* Industrial Engineering Technician* Licensing Engineer* Manufacturing Engineer* Manufacturing Technician* Manufacturing Processes Engineer* Marine Engineer* Materials Engineer* Materials Lab & Supply Technician* Mechanical Engineer* Metallurgic Engineer* Mining Engineer* Naval Engineer* Network Technician* Nuclear Engineer* Ocean Engineer* Operations Research Engineer* Packaging Engineer* Packaging Technician* Petroleum Engineer* Pharmaceutical Engineer* Plastics Engineer* Power Systems Engineer* Product Design Engineer* Project Engineer* Project manager* Prototype Engineer* Quality Engineer* Quality Technician* Radio/TV Broadcast Technician* Radiology Engineer* Researcher* Safety Engineer* Software Engineer* Sound Technician* Structural Engineer* Survey Technician* Systems Design Engineer* Technical Sales Manager* Technical Writer* Telecommunications Engineer* Textile Engineer* Transportation Engineer*	Analytical Chemist* Anthropologist* Applied mathematician* Archeologist* Astronomer* Astrophysicist* Atmospheric scientist* Biologist* Botanist* CAD operator* Cartographer* Chemist* Communications technologist* Conservation scientist* Cosmologist* Cryptographer* Crystallographer* Demographer* Dye chemist* Ecologist* Economist* Electronmicroscopist * Environmental scientist* Expert systems scientist* Geneticist* Geologist* Geophysicist* Geoscientist* Herpetologist* Hydrologist* Ichthyologist* Inorganic chemist* Laboratory Technician * Mammalogist* Marine scientist* Materials analyst* Materials scientist* Mathematician * Mathematics* Metallurgist* Meteorologist* Microbial Physiologist* Mycologist* Nanobiologist* Nuclear chemists* Nuclear technician* Numerical analyst* Nutritionist* Oceanographer* Organic chemist* Ornithologist* Paleontologist* Physicist* Polymer scientist* Programmer* Protein scientist* Protozoologist* Quality-control scientist* Radio chemist* Research chemist* Research Technician* Science Teacher * Lab Technician* Scientific visualization / graphics expert* Spectroscopist* Statistician* Technical writer* Technologist* Toxicologist* Zoologist*
Pathways	**Engineering and Technology**	**Science and Math**
Cluster K&S	**Cluster knowledge and skills** ♦Academic Foundations ♦Communications ♦Problem Solving and Critical Thinking ♦Information Technology Applications ♦ Systems ♦ Safety, Health and Environment ♦Leadership and Teamwork ♦Ethics and Legal Responsibilities ♦Employability and Career Development ♦Technical Skills	

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