

**Career Pathways for Apollo High School
Recommended courses for the Engineering, Manufacturing and Technology Career Cluster**

Do you like to:

- Work in math and physical science areas?
- Use problem-solving skills and use of logic?
- Use oral and Dissect smaller pieces from the big picture?
- Work with critical details?

Engineering, Manufacturing and Technologies:

People attracted to careers in this pathway like to work with things. They like to work with their hands with objects, machines, and tools. This career path includes programs related to the technologies necessary to design, develop, install, or maintain physical systems. These may include engineering and related technologies, mechanics, and repair, manufacturing technology, precision production, electronics, and construction.

GRADES				
	9	10	11	12
Language Arts	3 Credits Language Arts 9 Literature, Speech & Writing	3 Credits Language Arts 10	3 Credits Language Arts 11	3 Credits Language Arts 12
Mathematics	3 Credits	3 Credits -AP Statistics	3 Credits -AP Statistics	-AP Statistics
Science (Must take 3 credits of Biology any year)	3 Credits	3 Credits -Chemistry ## -Applied Science -Science Laboratory Assistant	3 Credits -Chemistry AP-** -Chemistry ## -Independent Science Studies -Applied Science -AP Physics** -Physics## -Science Laboratory Assistant	Chemistry AP-** -Chemistry ## -Independent Science Studies -Applied Science -AP Physics** -Physics## -Science Laboratory Assistant
Social Studies	3 Credits Geography -AP Human Geography**	2 Credits World History -AP Human Geography**	3 Credits U.S. History -AP Human Geography**	3 Credits Senior Social Economics and Government -AP Human Geography**
Fitness/Health	1.5 Credits Fitness	1 Credit Health .5 Credit Fitness		
Art (Must take 1 year any time)	3 Credits			
Industrial Tech	Electives in this area: -Digital Photography : Photo I -Advanced Digital Photography (Formerly Photo II) -Metal Fabrication (Formerly Metals I & II) -Small Engines -Manufacturing Technology (Formerly Woods I) -Wood Fabrication (Formerly Woods II) -Construction Technology	3 Credits of Electives in this area -General Automotive Service (Formerly Auto I & II)++ -Intro to Engineering Design-A Project Lead the Way Course -Digital Photography: Photo I -Advanced Digital Photography (Formerly Photo II) -Multimedia I – Graphic Arts and Video Production -Multimedia II – Advanced Video Production, Audio Studio Recording -Metal Fabrication (Formerly Metals I & II) -Small Engines -Manufacturing Technology (Formerly Woods I) -Wood Fabrication (Formerly Woods II) -Construction Technology	5 Credits of Electives in this area -General Automotive Service (Formerly Auto I & II)++ -Intro to Engineering Design-A Project Lead the Way Course -AYES-Discovery Academy for Automotives -Digital Photography: Photo I -Advanced Digital Photography (Formerly Photo II) -Multimedia I – Graphic Arts and Video Production -Multimedia II – Advanced Video Production, Audio Studio Recording -CISCO – Discovery Academy Computer Networking -Metal Fabrication (Formerly Metals I & II) -Small Engines -Manufacturing Technology (Formerly Woods I) -Wood Fabrication (Formerly Woods II) -Construction Technology -Independent Study -Student Instructor	10 Credits of Electives in this area -General Automotive Service (Formerly Auto I & II)++ -Intro to Engineering Design-A Project Lead the Way Course -AYES-Discovery Academy for Automotives -Digital Photography: Photo I -Advanced Digital Photography (Formerly Photo II) -Multimedia I – Graphic Arts and Video Production -Multimedia II – Advanced Video Production, Audio Studio Recording -CISCO – Discovery Academy Computer Networking -Metal Fabrication (Formerly Metals I & II) -Small Engines -Manufacturing Technology (Formerly Woods I) -Wood Fabrication (Formerly Woods II) -Construction Technology -Independent Study -Student Instructor
Required Courses		** AP Course		
Suggested Courses		++ SCTC Tech Prep Course		
		## SRS Course		

Potential Careers in the Engineering, Manufacturing and Technology Career Pathway

HS Diploma (some additional training may be necessary)	Technical Training or 2-year Degree		4-year Degree and Beyond
<p>Airline Grounds Crew Worker Ambulance Driver (Minimum) Assistant Drafter Bicycle Repairers Blue Collar Worker Supervisor Brick Layers and Stone Masons Building Maintenance Worker Bus Drivers Camera and Photographic Equipment Repairers (minimum) Carpenter Clothes Pressers Concrete Mason Construction and Well Drillers (minimum) Construction Helper Construction Worker Court Clerks Crane Operator Deck Hands Die Designer Apprentice Dispatchers Electrician Apprentice Explosive Workers (minimum) Fence Builders Flight Attendants (Minimum) Forklift Operators Freight Handlers Furniture Finishers Gas and Oil Plant Operators General Construction Workers Glaziers Hazardous Material Workers Highway Maintenance Workers Insulation Installers Ironworker Lather Licensed Clerks (minimum) Light Truck Drivers (minimum) Locomotive Engineers Log Graders and Scalers (Minimum) Machinist Apprentice Mail Carriers Mechanic and Repair Helpers Mechanic and Repairer Operators (minimum) Medical Equipment Preparers (minimum) Metal and Plastic Processing Workers Meter Readers Packaging and Filling Machine Operators Packers and Packagers Painting and Coating Machine Operators Paving Equipment Operators Pharmacy Aides Photograph Processing Workers Pipe Layers Plumbing Apprentice Postal Clerks Postmasters and Mail Superintendents (minimum) Precision Welder Production and Planning Clerks Production Helpers Pulp and Paper Workers Pump Operators Quality Control Inspectors Railroad Brake, Signal and Switch Operators Riggers Roofers (minimum) Roustabouts School Bus Driver Septic Tank Servicers and Sewer Pipe Cleaners Subway and Street Car Operators Taxi Drivers and Chauffeurs Textile Machine Operators Tire Building Machine Operators Tire Repairers and Changers (minimum) Title Setters (Minimum) Tool and Die Apprentice Truck Driver Vehicle Cleaners Wallpaper Hangers (minimum)</p>	<p>Airplane Assembler Airplane Mechanic Airplane Pilot (minimum) Auto Body Repairers* Auto Body Technician* Auto Glass Installers Automatic Teller Machine Services Automobile Mechanics* Automotive* Boilermakers Bus Mechanics Truck Mechanics* Cabinet Makers* Calibration Carpenters* Cement Masons Chemical Equipment Operators Chemical Plant Operators Coin and Vending Machine Repairers Commercial Drivers Communications Equipment Mechanics Computer Equipment Repairers Construction and Building Inspectors Crane & Tower Operators Dental Laboratory Technicians* Drafters (minimum)* Drywall Finishers Drywall Installers Electric Motor Repairers* Electrician Helpers* Electricians* Electronic Equipment Repairer* Electronics Engineering* Elevator Installers and Repairers Engineering Technicians Farm Equipment Mechanics Fire-Protection Engineering Floor and Carpet Layers Floor Sanding Machine Operator Glass Blowers Heating and Cooling System Mechanics* Heavy Equipment Mechanics* Heavy Truck Drivers* Hoist and Winch Operators Home Electronic Repairers Hydraulic Repairer Industrial Electronic Repairers* Industrial Machinery Mechanics* Instrumentation Technician* Jeweler Land Surveyor* Laser Technician Lens Grinders and Polishers Line Installers and Repairers Locksmith</p>	<p>Loggers Machinist Mathematical Technicians Mechanic/Technician Medical Appliance Technician Medical Equipment Repairer Medical Laboratory Technologist+ Millwrights* Motor Boat Mechanics Motorcycle Mechanics Musical Instrument Tuners and Repairers Numerical Control Machine Operators Numerical Control Tool Programmers Office Machine Repairers Operating Engineers and Construction Equipment Operators Page Layout Workers Painters Pipe Fitters Plasterers Plumber* Potters Power Plant Operators Precision Assemblers Refrigeration Technician* Research Electrician Sawing Machine Operators Science Technicians Semiconductor Processing Operators Sewing Machine Operators Sheet Metal Workers Shoe and Leather Workers Small Engine Mechanics Social Science Research Assistant+ Stationary Engineers Surveyors* Storage and Transportation Managers (Minimum) Structural Metal Workers Surveying and Mapping Technicians* Tank Car, Truck and Ship Loaders Tailors Technical Illustrator+ Technician Tool and Die Makers* Tool Grinders* Tool Programmer* Train Conductors and Yardmasters Transportation Agents (Minimum) Upholsterers Vehicle Painters* Watch Repairers Web-Page Programmer*+ Welders and Solderers* Welding and Soldering Machine Operators* Woodworking Machine Operators</p>	<p>Aerospace Engineers Agricultural Engineers Air Traffic Controller Aircraft Mechanics- Airport Engineer Anthropologists- Archeologists Architects Archivists Astronomers Biologists-^ Biomedical Engineer- Buyers and Purchasing Agents Cartographers & Photogrammetrists Chemical Engineers- Chemists-^ Civil Engineer- Computer Programmer-^ Computer System Administrator-^ Construction Managers Construction Site Supervisor Cost Estimators Electrical Engineer- Electronic Engineer Energy Systems Designer Engineering Manager- Environmental Engineer Environmental Scientist- Food Scientist Geographers- Geologist and Geophysicist- Historian-^ Industrial Designer Industrial Engineer Mapping Scientist Marine Biologist Material Machine Operators Material Moving Machine Operators Materials Engineer Mathematician-^ Mechanical Engineer- Medical Laboratory Technologist- Medical Scientist Metallurgist Meteorologist- Natural Sciences Manager Nuclear Engineer Petroleum Engineer Photogrammetric Engineer Physicist-^ Political Scientist-^ Quality Control Manager Safety Engineer Ship Captains and Mates Ship Engineer Sociologist-^ Ship Pilots Social Science Research Assistant-^ Software Developer- Statistician- Stress Analyst Structural Engineer Surveyor Supervisor Systems Analyst Systems Engineer Traffic Technicians Transportation Inspectors Welding Engineer</p>