



Name _____

Learner ID _____

School/College/University _____

Sample Program of Studies

Cluster: Science, Technology, Engineering and Mathematics

Pathway: Engineering and Technology

Career Pathway Plan of Study for ► Learners ► Parents ► Counselors ► Teachers/Faculty

This Career Pathway Plan of Study (based on the Science, Technology, Engineering and Mathematics Career Cluster) can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals. *This Plan of Study, used for learners at an educational institution, should be customized with course titles and appropriate high school graduation requirements as well as college entrance requirements.

EDUCATION LEVELS	GRADE	English/ Language Arts	Math	Science	Social Studies/ Sciences	Other Required Courses Other Electives Recommended Electives Learner Activities	*Career and Technical Courses and/ or Degree Major Courses for Engineering and Technology Pathway	SAMPLE Occupations Relating to This Pathway	
Interest Inventory Administered and Plan of Study Initiated for all Learners									
SECONDARY	9	English Composition	Algebra I or Geometry	Biology	Social Studies 9		Introduction to Engineering Design	<ul style="list-style-type: none"> ► Aeronautical Engineer ► Aerospace Engineer ► Agricultural Engineer ► Agricultural Technician ► Application Engineer ► Architectural Engineer ► Automotive Engineer ► Biomedical Engineer ► Biotechnology Engineer ► CAD Technician ► Chemical Engineer ► Civil Engineer ► Communications Engineer ► Computer Engineer ► Computer Programmer ► Construction Engineer ► Electrical Engineer ► Electronics Technician ► Geothermal Engineer ► Industrial Engineer ► Manufacturing Engineer ► Manufacturing Technician ► Marine Engineer ► Mechanical Engineer ► Metallurgist ► Mining Engineer ► Nuclear Engineer ► Petroleum Engineer ► Product/Process Engineer ► Survey Technician ► Systems Engineer ► Transportation Engineer 	
	10	English Literature	Geometry or Algebra II	Chemistry	Modern Europe		Principles of Engineering Information Technology Applications		
	11	Literature & Composition	Pre-Calculus or Trigonometry	Physics	U.S. History		Product Engineering and Development Digital Electronics		
	College Placement Assessments-Academic/Career Advisement Provided								
	12	English Composition	Intermediate Algebra or Trig or Calculus or Math Analysis	Advanced Chemistry or Organic Chemistry	World Issues		Civil Engineering and Architecture Engineering Innovation Computer Integrated Manufacturing		
Articulation/Dual Credit Transcribed-Postsecondary courses may be taken/moved to the secondary level for articulation/dual credit purposes.									
POSTSECONDARY	Year 13	English Composition	Algebra or Trig Calculus I Calculus II	Physics Chemistry	American Government Global Issues		Engineering Analysis Engineering Design		
	Year 14	Speech/Oral Communication Technical Writing	Intro to Differential Equations Calculus & Statistics	Organic Chemistry Microbiology	Modern Western Traditions Ethics/Legal Issues		Engineering Processes		
	Year 15						Continue Courses in Area of Specialization		
	Year 16						Complete Engineering and Technology Major (4-Year Degree Program)		