



Name: _____

Grade: _____

Parent Signature: _____



Pre-Engineering Program

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

This Career Cluster Plan of Study (based on the Engineering and Technology Program of 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 Ponaganset High School is customized with course titles and appropriate high school graduation requirements as well as career program requirements.

EDUCATION LEVELS	GRADE	English/ Language Arts (4 credits)	Math (4 credits = 3 + 1 math-related)	Science (3 credits; 3 lab sciences for 4 year college)	Social Studies/ Sciences (3 credits)	Physical Education/Health (2 credits = 0.5 x 4 years)	Other	Scheduling Notes	SAMPLE Occupations Relating to This CTE Program
GRADUATION REQUIREMENTS	Interest Inventory Administered and Plan of Study Initiated for all Learners								
	9	English 9 CP/H OR Humanities English CP/H (1 credit)	Algebra I CP OR Alg II CP/H (1 credit)	Biology CP / H (1 credit)	Topics in Social Studies CP/H or other SS elective (1 credit)	Physical Education/Health 9/10 (0.5 credit)	Spanish I or Chinese I (1 credit) Required for 4 yr. college students		► 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 10 CP/H (1 credit)	Geometry CP/H OR Algebra II CP (1 credit)	Physical Science CP/H (1 credit)	U.S. History CP/H/EEP/AP (1 credit)	Physical Education/Health 9/10 (0.5 credit)	Spanish II or Chinese II (1 credit) Required for 4 yr. college students		
	11	English 11 CP/H OR AP Language (1 credit)	Algebra II CP OR PreCalc CP/H OR Stats (1 credit)	Physics, AP Physics I OR Chemistry CP / H (1 credit)	Twentieth Century CP/H or other SS elective (1 credit)	Physical Education/Health 11/12 or Strength Training (0.5 credit)	Spanish III or Chinese III (1 credit) Recommended for many 4 yr. college students		
	College Placement Assessments-Academic/Career Advisement Provided								
12	English 12 CP/H OR AP Literature (1 credit)	PreCalculus, Principles of Stats, AP Statistics, Personal Finance, AP Calculus or math-related course	AP Physics II / AP Biology / AP Chemistry	Elective: Economics, US/Global Affairs, Sociology, etc.	Physical Education/Health 11/12 or Strength Training (0.5 credit)	Spanish IV H/EEP or Chinese IV (1 credit) Recommended for some 4 yr. college students	# Need to have completed Physics and PreCalculus as part of the pathway		
PLAN of STUDY: Program Courses and Additional Electives						TOTAL CREDITS	SCHEDULING REMINDERS		
CAREER RELATED ELECTIVES	9	PLTW Introduction to Engineering Design-Honors (1 credit)	Mandatory for the Program				Fine Art elective (0.5 credits)	*All plans of study need to meet learner's career goals and program requirements. *All course selections should meet required annual credit maximum. *All course requests are utilized to build the master schedule for the following school year. *Please be sure to select the appropriate courses at the time of registration. *Participation in FRC and other work-based learning activities to support and reinforce classroom and laboratory learning is recommended for all students.	
	10	PLTW Principles of Engineering-Honors (1 credit)	Mandatory for the Program						
	11	PLTW Digital Electronics-Honors OR AP/PLTW Computer Science Principles-Honors (1 credit each)	Mandatory for the Program						
	12	PLTW Engineering Design and Development-Honors (1 credit)	Must take a minimum of 3 years of engineering courses - 4 is recommended.	Recommended Courses: PreCalc or AP Calc; AP Physics; College Writing or AP English Lang & Comp.					