



School District Engineering - 3 Credit

HS & Web Address

Minimum HS Graduation Requirements		PROGRAM OF STUDY MATRIX: MIDDLE - HIGH SCHOOL – POSTSECONDARY						Career Pathway Requirements						
	Grade	English	Math	Science	Social Studies	Additional Required Courses	Career & Technical Courses	Other Required or Elective Courses						
Student Success Plans outlining career goals should be utilized through the advisement process.														
Middle School	7	ELA 7	Math 7	Science 7	Social Studies 7			Electives						
	8	ELA 8	Math 8	Science 8	Social Studies 8			Electives						
Secondary	9	ELA 9	Algebra I	NGSS Aligned Physical/Integrated Science	Civics/Geography	World Language I		<p>This matrix represents a <i>sample</i> program of study.</p> <p>The LEA's program of study <u>must</u> be reflective of <u>local/state</u> high school graduation requirements and college entrance requirements.</p> <p>This matrix should be reflective of the school's <u>course sequence</u> and requirements.</p>						
	10	ELA 10	Algebra II	NGSS Aligned Biology	Economics/Personal Finance	World Language II	Introduction to Engineering(IED)							
	11	ELA 11	Geometry	NGSS Aligned Chemistry	US History	Physical Education (≥1 Credit)	Principles of Engineering (POE)							
	12	ELA 12	Trigonometry/Pre-Calculus	NGSS Aligned Physics		Health Education (≥ 0.5 Credit)	Aerospace Engineering (AE) OR Civil Engineering and Architecture (CEA) OR Digital Electronics (DE) OR Engineering Design and Development (EDD)							
Postsecondary	13	The Department of Education has negotiated articulation agreements with: Delaware Technical Community College's Architectural Engineering Technology, Civil Engineering Technology, Surveying and Geomatics Engineering Technology, Environmental Engineering Technology, Design Engineering (Mechanical) Technology, Computer Aided Drafting and Design, Fire Protection Engineering Technology, Electronics Engineering Technology, Electromechanical Engineering Technology, Electronics Engineering Transfer Option (2+2 with DSU), or Electronics Engineering Technology programs with the option in the Biomedical Instrumentation or Computer Engineering Technology programs; and Delaware State University's Electrical and Electronics Engineering Technology or Computer Information Systems programs.						All programs of study should meet the students' career goals with regard to required degrees and/or certifications. Required courses will vary by PS institution.						
	14													
	15								Continue courses in the area of specialization.					
	16													

Additional Learning Opportunities			
Early Career Opportunities:	Early College Opportunities:	Industry Recognized Certifications/Licenses:	Student Organization:
<input type="checkbox"/> Cooperative Education <input type="checkbox"/> Internship <input type="checkbox"/> Other: <u>Other Early Career Opportunities</u>	<input type="checkbox"/> Dual Enrollment <input type="checkbox"/> Advanced Placement <input checked="" type="checkbox"/> Articulated Credit <u>Delaware State University:</u> ENGR210 - Digital Logic Design - 3 credits <u>Delaware Technical Community College:</u> EDD171 - Introduction to Computer Aided Drafting using Autocad - 3 credits ELC127 - Digital Electronics - 4 credits <input type="checkbox"/> Pre-Apprenticeship <input type="checkbox"/> Other	<input type="checkbox"/> <u>Certification/License</u> <input type="checkbox"/> <u>Certification/License</u>	<input checked="" type="checkbox"/> <u>TSA – Technology Student Association</u>

Sample Careers By Educational Level			
Employment Opportunities (Upon Completion of HS Pathway)	Technical Training or Associate Degree	Bachelor's Degree	Master's Degree or Above
	CAD Operator Calibration Electronics Technician Certified Optical Technician Computer Electronics Technician Computer Science Technician Computer Systems Analyst Drafting Engineer*Drafter Geothermal Engineer Manufacturing Technician Packaging Technician Project Technician Quality Technician Survey Technician	Aeronautical engineer Automation Manufacturing Engineer Automotive Engineer* Biomedical Technician Building Construction Engineer Civil Engineer Computer Hardware Engineer Electrical Engineer* Industrial Materials Scientist* Manufacturing Processes Engineer Nuclear Engineer* Power Systems Engineer Robotics Engineer * Software Engineer Structural Engineer	Aeronautical engineer Architectural Engineer Biomedical Engineer Biotechnology Engineer Computer Engineer Product Design Engineer Satellite Engineer Technology Engineer

*May require higher education depending on job responsibilities.

Feeder Middle School(s):

Colleges/Universities and Articulated Credit Agreements:

Articulation agreements/Memorandums of Understanding: Delaware Technical and Community College – EDD171 and ELC127, Delaware State University – ENGR210

LEA Additional Graduation Requirements: