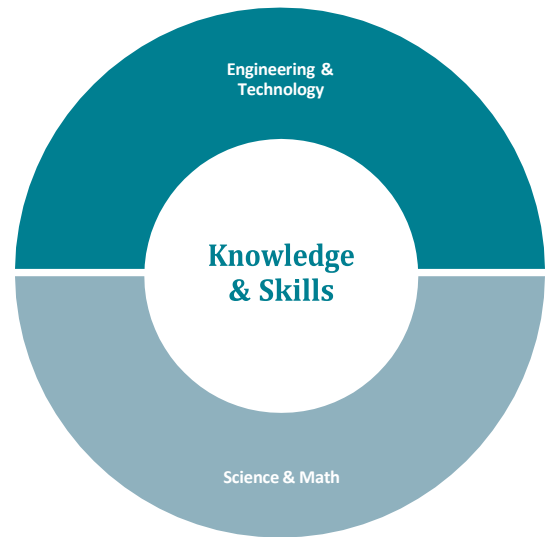


STEM (SCIENCE, TECHNOLOGY, ENGINEERING & MATH)

This Program of Study prepares learners for careers in designing, planning, managing, building and maintaining the building environment. People employed in this cluster work on new structures, restorations, additions, alterations and repairs

Pathways:

- Engineering & Technology
- Science & Math



Suggested Learning Experiences

Middle School Electives		
Courses	Grade 7	Grade 8
Additional Electives	<ul style="list-style-type: none"> • Band • Choir • Orchestra • Advanced Art 7 • Exploring AgriScience • Exploring French & Spanish • Online Language Exploration 	<ul style="list-style-type: none"> • Advanced Art 8 • Art 8 • Online Language Exploration • Exploring French & Spanish • French I • Spanish I • Band • Choir • Orchestra • Exploring AgriScience & Gateway Innovation & Robotics

High School Electives				
Courses	Grade 9	Grade 10	Grade 11	Grade 12
Additional Electives	<ul style="list-style-type: none"> • World Languages • AP Human Geography • Principles of Biomedical Sciences (PLTW) 	<ul style="list-style-type: none"> • World Languages • Drawing, Human Body Systems (PLTW) 	<ul style="list-style-type: none"> • World Languages • AP Economics • AP Psychology • Medical Intervention (PLTW) 	<ul style="list-style-type: none"> • World Languages • Biomedical Innovations (PLTW)
Career & Technical Education	<ul style="list-style-type: none"> • Electronics & Electricity • Intro to Metal Tech • Intro Programming • Web Design • Intro to Engineering Design (PLTW) 	<ul style="list-style-type: none"> • Comp Hardware Sys • TC Metal Tech I • Adv. Web Design • Intermediate Programming • Principles of Engineering (PLTW) 	<ul style="list-style-type: none"> • Computer Networking • TC Metal Tech II • TC Business Core • AP Comp Science • Digital Electronics (PLTW) 	<ul style="list-style-type: none"> • Construction Tech Capstone • TC Metal Tech Capstone • See Work-Based Learning Options below • Civil Engineering and Architecture (PLTW)

High School Electives Cont.

Courses	Grade 9	Grade 10	Grade 11	Grade 12
English	<ul style="list-style-type: none"> English I R/H/Essentials 	<ul style="list-style-type: none"> English II R/H/Essentials AP Lang/US History Speech 	<ul style="list-style-type: none"> English III R/H/Essentials AS Oral and Interpersonal Communication AP Lang & Comp 	<ul style="list-style-type: none"> AS Written Communication TC English 101/102 AP Lit & Comp Contemporary Media & Literature English IV Essentials
Math	<ul style="list-style-type: none"> Algebra I Geometry 	<ul style="list-style-type: none"> Algebra II 	<ul style="list-style-type: none"> Adv. Math Applications Pre-Calculus, AP Statistics 	<ul style="list-style-type: none"> AS Technical Math Math 105/110 AP Calculus
Science	<ul style="list-style-type: none"> Biology Earth and Space 	<ul style="list-style-type: none"> Chemistry AP Biology 	<ul style="list-style-type: none"> Anatomy and Physiology 	<ul style="list-style-type: none"> Physics
Social Studies	<ul style="list-style-type: none"> US History & American Gov R/Essentials/AP 	<ul style="list-style-type: none"> American Republic R/Essentials AP US History AP Lang/US History 	<ul style="list-style-type: none"> World Studies AP World History AP European History 	<ul style="list-style-type: none"> Psychology R/AP or Social Science Elective
Other Required	<ul style="list-style-type: none"> Computer Applications, Healthy Choices Physical Education 	<ul style="list-style-type: none"> Physical Education Computer Applications 	<ul style="list-style-type: none"> Consumer & Personal Finance Physical Education 	<ul style="list-style-type: none"> Consumer & Personal Finance Physical Education
Work-Based Learning Options	Youth Apprenticeship			
Other Activities	National Honor Society, Pathway Partners, Skills USA, Youth Service Learning			

Career Types by Pathway

HIGH SCHOOL DIPLOMA ON-THE-JOB TRAINING	CERTIFICATE/LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/DOCTORAL PROFESSIONAL DEGREE
SCIENCE AND MATHEMATICS				
		<ul style="list-style-type: none"> Biology Chemistry Laboratory Science Technology Medical Laboratory Technology 	<ul style="list-style-type: none"> Chemistry Economics Mathematics Molecular Biology Physics 	<ul style="list-style-type: none"> Biochemistry Biological Sciences Chemistry Physics and Astronomy Statistics
ENGINEERING AND TECHNOLOGY				
	<ul style="list-style-type: none"> Industrial Technology 	<ul style="list-style-type: none"> Architectural Design Technology Civil Engineering Technology Industrial Technology Surveying and Computer Aided Drafting (CAD) 	<ul style="list-style-type: none"> Agricultural Engineering Biological Systems Engineering Chemical Engineering Construction Engineering Technology Industrial Engineering 	<ul style="list-style-type: none"> Agricultural and Biological Systems Architectural Engineering Chemical Engineering Civil Engineering Mechanical Engineering