



15 Science, Technology, Engineering & Mathematics

Plan of Study



Sub-Pathways: Engineering and Technology Pathway; Professional Engineering Pathway; Science and Mathematics Pathway.

High School	9th Grade	10th Grade	11th Grade	12th Grade
	English 9 or Freshman Honors English	Speech and Writing Experiences	American Literature and Advanced Writing or Guided Writing Projects	Contemporary Literature or Classical Literature or Guided Literature Projects or AP English
	Algebra 1 (or Geometry)	Geometry (or Algebra 2)	Algebra 2 (Pre-Calculus or Discrete Math)	Discrete Math, Pre-Calculus, or AP Statistics (or AP Calculus)
	Molecular Biology	Chemistry	Physics	Advanced Chemistry or AP Biology
	American Studies II	Contemporary American History or Historical Viewpoints of Modern America	Economics or Psychology or Sociology	Modern Western Civilization or Geography or World Cultures or American Government or Studies in American Government
	Lifetime Fitness Education Computer Applications I	PE/Health	PE/Health	PE/Health
Electives	<p>World Languages: In our global society, taking multiple years of a World Language is highly recommended for all post-secondary endeavors and is a requirement for many colleges.</p>			
	<p>Related High School Electives: Supplementary materials including the student 'Course Guide' showing elective course offerings that relate to each career cluster are available in the schools and on the district web site at: http://www.davenport.k12.ia.us/students.asp</p>			
	<p>Sample Focused Elective Sequences: With the diverse array of career opportunities available under each career cluster, there is no one right combination of elective course offerings. Students, in conjunction with parents, counselors and other caring adults must determine what is right for them. More details can be found at: http://davenportschools.org/curriculum/ACP/Foc_EI.pdf</p>			
	<p>Sample Career-Focused Elective Sequences Follow:</p>			
	<p>Engineering Careers: Introduction to Engineering Design 1.0 and Choose at least 2 units from the following: Principles of Engineering 1.0; Digital Electronics 1.0; Computer Integrated Manufacturing 1.0; Civil & Architectural Engineering 1.0; Engineering Design & Development 1.0; AP Chemistry 1.5</p>			
	<p>Engineering-Technology Careers: Introduction to Engineering Design 1.0; and Choose at least 2 units from the following: Engineering Drafting 1.0; Architectural Drafting 1.0; Introduction to Electronics 0.5; Digital Electronics 1.0; Computer Integrated Manufacturing 1.0; Principles of Engineering 1.0; Engineering Design & Development 1.0; Meteorology 0.5; Earth Materials 0.5; Environmental Studies 0.5; Genetics 0.5; Weather, Climate & Space 0.5</p>			
<p><i>Work in Progress</i></p>				
Post-Secondary	Hamilton Technical College	Clinton, Muscatine and Scott		Iowa State University
	www.hamiltontechcollege.com Electronics Computer Integrated Manufacturing	Pre-Engineering Biology Chemistry Physics Mathematics		www.iastate.edu <i>College of Engineering:</i> www.engineering.iastate.edu/departmentsunits.html Aerospace Engineering Agricultural & Biosystems Engineering Civil, Construction, Environmental Engineering Electrical & Computer Engineering Industrial & Manufacturing Systems Industrial Technology Material Science & Engineering Mechanical Engineering
	Black Hawk College	Mechanical Design/Pro-E CNC Machining		
www.bhc.edu Chemistry Transfer CNC Certificate Engineering Technology Pre-Engineering				

Post-Secondary	Indian Hills Community College	Augustana College	University of Northern Iowa
	www.indianhills.edu Bioprocess Technology Drafting/Virtual Reality Machine Technology Robotics/Automation	www.augustana.edu Biochemistry Biology Chemistry Engineering Mathematics	www.uni.edu Biological Sciences Biology Chemistry & Biochemistry Industrial Technology Mathematics Physics
Post-Secondary	Kirkwood College	St Ambrose University	Western Illinois University
	www.kirkwood.cc.ia.us/academics Architectural Technology Biology Biotechnology CAD/Mechanical Engineering Technology CNC Machining Industrial Technologies Chemistry Mathematics Physics Pre-Engineering	www.sau.edu Biology Chemistry Industrial engineering Mathematics Physics	www.wiu.edu Biochemistry Biology Chemistry Manufacturing Engineering Technology Mathematics Physics
		Bradley University	University of Iowa
		www.bradley.edu Civil & Construction Engineering Industrial & Manufacturing Engineering Electrical Engineering Biology Chemistry & Biochemistry Mathematics Physics	www.uiowa.edu Biological Sciences Chemistry Mathematics Physics Biomedical Engineering Chemical & Biochemical Engineering Civil & Environmental Engineering Electrical & Computer Engineering Industrial Engineering Mechanical Engineering
Career Enhancement Options	Work-based Learning Options	Short-Term Training Options	
	<input type="checkbox"/> Job-Shadowing <input type="checkbox"/> Site Tours & Field Trips <input type="checkbox"/> Guest Speakers <input type="checkbox"/> Internship/Mentorship <input type="checkbox"/> Tutoring <input type="checkbox"/> Lab-based experiences <input type="checkbox"/> School enterprises resembling <input type="checkbox"/> On-The-Job Training <input type="checkbox"/> College/Business Student Activities	<input type="checkbox"/> Safety Training <input type="checkbox"/> Visual Basic 6 <input type="checkbox"/> Visual Basic Net <input type="checkbox"/> Wireless Technology <input type="checkbox"/> Internet & Network Security <input type="checkbox"/> AutoCAD <div style="text-align: center; font-size: 2em; color: blue; font-family: cursive;">Work in Progress</div>	

Parent/Guardian: Please sign and return this document indicating that you are aware of your student's career cluster interest and have reviewed the courses recommended for this particular cluster. These are only recommendations. Students will be able to customize their Academic Career Plans to best meet their postsecondary and career goals.

PRINT Student's Name/School

Parent/Guardian's Signature

Date