

# Engineering and Technology

Grade/Subject (credits)	Language Arts (4.0)	Math (3.0)	Science (3.0)	Social Studies (3.0)	Other Requirements (PE, Fine Arts)	Pathway Courses	Other Electives	Total Credits
<b>9th</b> (7.0)	<input type="checkbox"/> English 9 or Adv. English 9 (1.0)	<input type="checkbox"/> Geometry, Adv. Geometry, Algebra, Introduction to Algebra or Adv. Algebra II (1.0)	<input type="checkbox"/> Biology or Adv. Biology (1.0)		<input type="checkbox"/> Health 9 (.5) <input type="checkbox"/> Fine Arts or PE (.5)	<input type="checkbox"/> Introduction to Information Technology(.5) <input type="checkbox"/> Introduction to Engineering (.5)	<input type="checkbox"/> Electives (2.5)	7.0
<b>10th</b> (7.0)	<input type="checkbox"/> English 10 or Adv. English 10 (.5) <input type="checkbox"/> Appreciation of Literature or Epic Tradition (.5)	<input type="checkbox"/> Algebra II, Adv. Algebra II, Geometry, or Other Math Course (1.0)*	<input type="checkbox"/> Chemistry, Physics or Other Science Elective (1.0)	<input type="checkbox"/> Modern World History or AP European History (1.0)	<input type="checkbox"/> Fine Arts or PE (1.0)	<input type="checkbox"/> Engineering Design I & II (1.0) <input type="checkbox"/> Drafting/CAD I & II (1.0) <input type="checkbox"/> Computer Programming I & II(.5 ea) <input type="checkbox"/> Graphic Design I & II(.5 ea) <input type="checkbox"/> Computer Science Essentials (.5) <input type="checkbox"/> Cybersecurity (.5) <input type="checkbox"/> Computer Programming—Game Design(.5) <input type="checkbox"/> Digital Electronics (.5) <input type="checkbox"/> Web Page Design (.5)	<input type="checkbox"/> Electives (1.0)	7.0
<b>11th</b> (7.0)	<input type="checkbox"/> American Literature I or Adv. American Literature (.5) <input type="checkbox"/> English Elective (.5)	<input type="checkbox"/> Analysis, Pre-Calculus or Other Math Course (1.0)	<input type="checkbox"/> Physics or Other Science Elective (1.0)	<input type="checkbox"/> US History I & II or AP US History I & II (1.0)		<i>Choose 1.0 Credit from above <u>or</u> from the following:</i> <input type="checkbox"/> Networking Fundamentals (.5) <input type="checkbox"/> Programming Fundamentals (.5) <input type="checkbox"/> CompTIA A+ Essentials (.5) <input type="checkbox"/> CompTIA A+ Practical Applications (.5) <input type="checkbox"/> HTML & CSS (.5) <input type="checkbox"/> Digital Design (.5) <input type="checkbox"/> AP Computer Science (1.0) <input type="checkbox"/> Robotics (.5)	<input type="checkbox"/> Electives (2.0)	7.0
<b>12th</b> (7.0)	<input type="checkbox"/> English Elective (1.0)*			<input type="checkbox"/> US Government and Social Studies Elective (1.0) <b>OR</b> <input type="checkbox"/> AP Government & Politics (1.0)		<i>Choose 2.0 Credits from above <u>or</u> from the following:</i> <input type="checkbox"/> Engineering Design and Development I (.5) <input type="checkbox"/> Engineering Design and Development II (.5) <input type="checkbox"/> Project Management (.5)	<input type="checkbox"/> Electives (3.0)	7.0

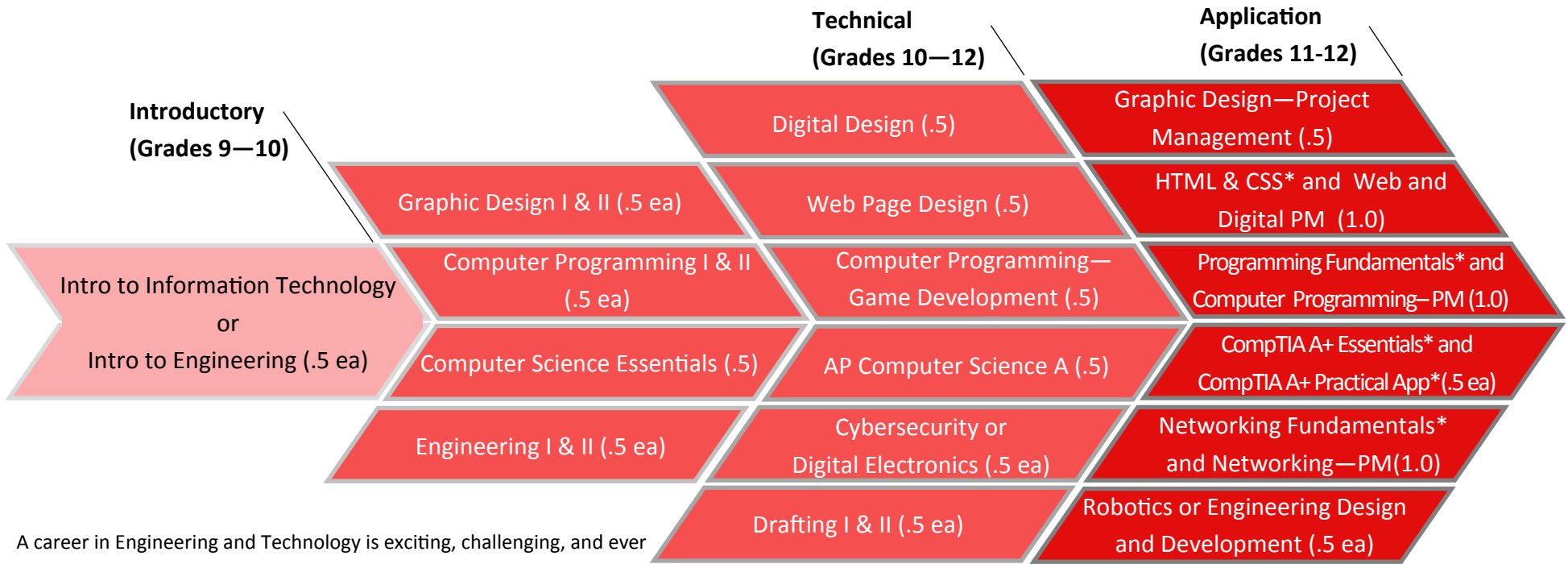
## Related Careers

- Aerospace Engineer
- Business Systems Analyst
- Chemical Engineer/Tech
- Civil Engineer/Tech
- Computer Animator
- Computer Hardware Engineer
- Computer Network Specialist
- Computer Support Technician
- Database Developer
- E-Business Consultant
- Electrical Engineer/Tech
- Environmental Engineer/Tech
- Information Security Analyst
- Inventor
- Mechanical Engineer/Tech
- Nuclear Engineer/Tech
- Project Manager
- Scientist
- Technical Writer
- Video Game Developer
- Web Developer

## Related Degrees

- Associate of Applied Science in Computer Support (JCCC)
  - Associate of Applied Science in Networking (JCCC)
  - Associate of Applied Science in Computer Information Systems (JCCC)
  - Associate of Applied Science in Web and Digital Media (JCCC)
- Other degree programs are available. Please see your teacher or counselor for more information.

# Engineering and Technology



A career in Engineering and Technology is exciting, challenging, and ever-changing. Learners need a solid background in math, science and technical skills. Technology careers involve the design, development, \* support and management of hardware, software, multimedia and systems integration services. Given the critical nature of much of the work in science, technology, engineering and mathematics, job possibilities abound even in times of economic downturn.



Students have the opportunity to enroll in Johnson Community College Courses at the Lawrence College & Career Center. Some courses are online and others are face-to-face. The following courses are available:

- WEB 110—HTML and CSS (3)
- CS134—Programming Fundamentals (4)
- ELEC 186—CompTIA A+ Essentials (3)
- IT 120—CompTIA A+ Practical Applications (3)
- IT 140 Networking Fundamentals (4)
- GAME 140—Introduction to Game Development (1)

## Free State High School

Intro to Information Technology  
Intro to Engineering  
Graphic Design I & II  
Computer Programming I & II  
Computer Science Essentials  
Engineering I & II  
Digital Design  
Graphic Design-Project Management

## Lawrence High School

Intro to Information Technology  
Intro to Engineering  
Graphic Design I & II  
Computer Programming I & II  
Computer Science Essentials  
Engineering I & II  
Digital Design  
Graphic Design-Project Management

## College & Career Center

Computer Science Essentials  
Web Page Design  
Computer Programming—Game Development  
AP Computer Science A  
Cybersecurity  
Digital Electronics  
HTML & CSS  
Programming Fundamentals  
CompTIA A+ Fundamentals  
CompTIA A+ Practical Applications  
Networking Fundamentals  
Robotics  
Engineering Design and Development  
Web and Digital, Computer Programming, Networking and Computer Support Project Management