# Design, Production and Repair

| 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 |
|---|---|---|---|---|---|---|---|---|
| **9th** (7.0) | ❑ English 9 or Adv. English 9 (1.0) | ❑ Geometry, Adv. Geometry, Algebra, Introduction to Algebra or Adv. Algebra II (1.0) | ❑ Biology or Adv. Biology (1.0) | | ❑ Health 9 (.5)<br>❑ Fine Arts or PE (.5) | ❑ Introduction to Design, Production and Repair (.5)<br>❑ Introduction to Engineering (.5) | | 7.0 |
| **10th** (6.0) | ❑ English 10 or Adv. English 10 (.5)<br>❑ Appreciation of Literature or Epic Tradition (.5) | ❑ Algebra II, Adv. Algebra II, Geometry, or Other Math Course (1.0)▪ | ❑ Chemistry, Physics or Other Science Elective (1.0) | ❑ Modern World History or AP European History (1.0) | ❑ Fine Arts or PE (1.0) | ❑ Auto/Welding for the Novice (1.0)<br>❑ Woodworking for the Novice (.5)<br>❑ Drafting I (.5) ❑ Drafting II (.5)<br>❑ Engineering I (.5) ❑ Engineering II (.5) | | 6.0 |
| **11th** (6.0) | ❑ American Literature I or Adv. American Literature (.5)<br>❑ English Elective (.5) | ❑ Analysis, Pre-Calculus or Other Math Course (1.0) | ❑ Physics or Other Science Elective (1.0) | ❑ US History I & II or AP US History I & II (1.0) | | *Choose 1.0 Credit from above <u>or</u> from the following:*<br>❑ Automotive Technology I & II (1.0)<br>❑ Welding I & II (1.0)<br>❑ Cabinetry I & II (1.0)<br>❑ Construction I & II (1.0)<br>❑ Architecture & Design I (.5)<br>❑ Architecture & Design II (.5)<br>❑ Design/Build I & II (1.0) | ❑ Electives (1.0) | 6.0 |
| **12th** (5.0) | ❑ English Elective (1.0)▪ | | | ❑ US Government and Social Studies Elective (1.0)<br>**<u>OR</u>**<br>❑ AP Government & Politics (1.0) | | *Choose 2.0 Credits from above <u>or</u> from the following:*<br>❑ Automotive Technology III & IV (1.0)<br>❑ Welding III & IV (1.0)<br>❑ Cabinetry III & IV (1.0)<br>❑ Construction III & IV (1.0)<br>❑ HVAC I & II (1.0)<br>❑ Engineering Design and Development I & II | ❑ Electives (1.0) | 5.0 |

## Related Careers

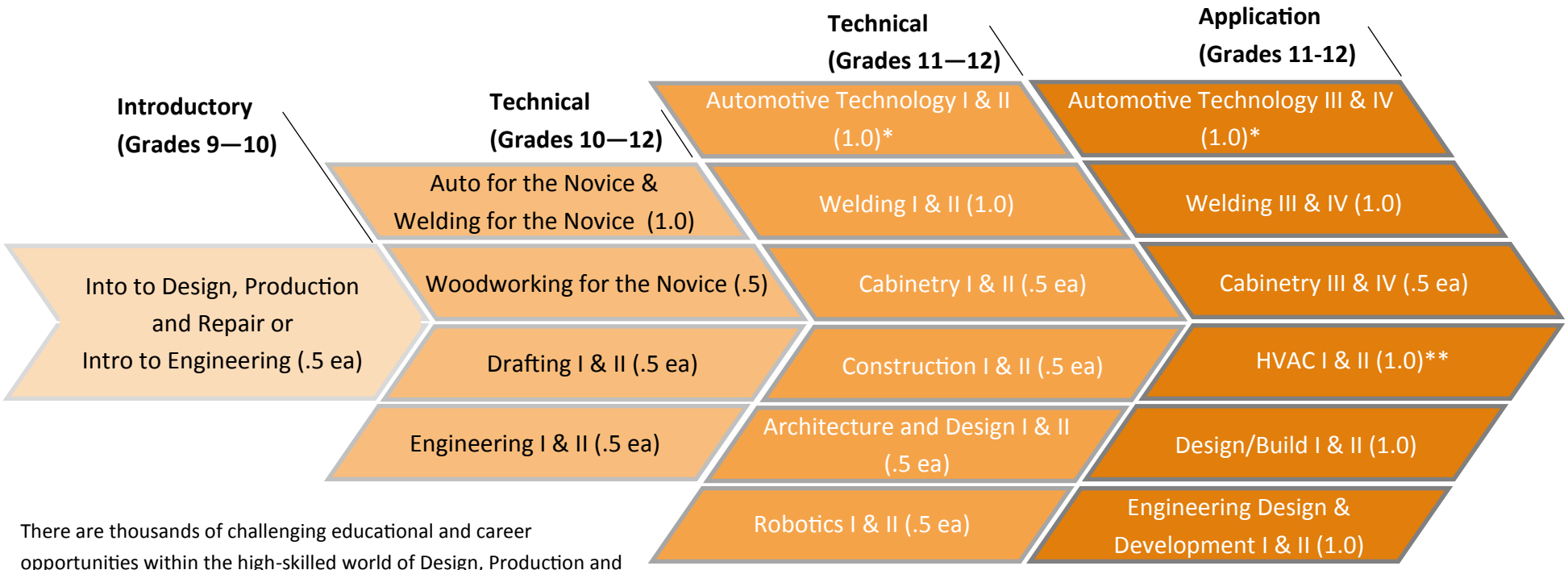
- Aircraft Mechanic
- Architect/Draftsman
- Automotive Service Technician
- Bricklayer/Stonemason
- Cabinetmaker
- Civil Engineer/Tech
- Construction Laborer/ Manager
- Custodian
- Driver/Courier/ Messenger
- Electrician
- Electrical Engineer
- HVAC Technician
- Heavy Equipment Operator
- Industrial Engineer
- Industrial Mechanic
- Installer/Repairer
- Machine Operator
- Machinist
- Manufacturing Manager
- Pilot
- Plumber/Pipefitter

## Related Degrees

- Associate of Applied Science in Automotive Technology (JCCC)
- Associate of Applied Science in Heating, Ventilation and Air Conditioning (NCCC)

Other degree programs are available. Please see your teacher or counselor for more information.

# Design, Production and Repair




There are thousands of challenging educational and career opportunities within the high-skilled world of Design, Production and Repair. The pathway includes concentration in Automotive, Manufacturing (Woods, Metals and Service), Engineering and Architecture and Construction. Learners need a solid background in math, science and technical skills. Industry plays a major role in training and career development by supporting apprenticeships, craft training, joint industry/school programs and industry training leading to certification and college credit.

* Johnson County Community College

Students who complete Automotive Technology I & II can earn 3 college credits for .AUTO 125 Introduction to Automotive Shop Practices. Students who complete Auto II & IV can earn 3 college credits for AUTO 129 Brakes I or AUTO 156 Electrical I.

** Neosho County Community College — The education you need. The attention you deserve.

Students who complete HVAC I can earn 9 college credits (CMCT 105—OSHA 10 Safety Orientation, HVAC 102—General Construction Skills & HVAC 103—Electrical Fundamentals). Those who complete HVAC II can earn 9 college credits (HVAC 101—Workplace Skills, HVAC 107 Heating Systems Fundamentals & HVAC 109 Heating Systems Lab).

### Free State High School

- Intro to Design, Production and Repair
- Intro to Engineering
- Drafting I & II
- Engineering I & II
- Woodworking for the Novice
- Architecture and Design I & II
- Construction I & II

### Lawrence High School

- Intro to Design, Production and Repair
- Intro to Engineering
- Drafting I & II
- Engineering I & II
- Woodworking for the Novice
- Architecture and Design I & II
- Cabinetry I, II, III & IV

### College & Career Center

- Auto for the Novice & Welding for the Novice
- Automotive Technology I, II, III & IV
- Welding I, II, III & IV
- HVAC I & II
- Design Build I & II
- Robotics
- Engineering Design and Development