

## Technology and Engineering Education Pathways

### Architectural Design (CAD/Drafting)

### Electronics

### Engineering

### Mechanical Design (CAD/Drafting)

### Robotics

#### Pathway: Architectural Design (CAD/Drafting)

##### Foundation Courses: (1.50-2.00 credits required)

CAD Architectural Design 1 – .50  
CAD Architectural Design 2 – .50  
CAD Architectural Design 3 – .50

##### Or, choose one of the following courses:

PLTW Civil Engineering and  
Architecture – 1.00  
PLTW Introduction to Engineering  
Design – 1.00

##### Elective Courses: (1.00-1.50 credits required)

Cabinetmaking – 1.00  
 Carpentry 1 – 1.00  
 Construction Trades Foundation – .50  
 Electrician 1 – .50  
 Engineering Technology – .50  
 GIS Remote Sensing – .50

HVAC – 1.00  
 Interior Design 1 – .50  
 Introduction to Geographical Information Systems  
(GIS) – .50  
 Physics with Technology – 1.00  
 Plumbing 1 – 1.00  
 Workplace Skills – .50

**3.00 credits required for completion**

#### Pathway: Electronics

##### Foundation Courses: (1.50-2.00 credits required)

Electronics 1 – .50  
Electronics 2 – .50  
Electronics 3 – .50

##### Or, choose one of the following courses:

PLTW Digital Electronics – 1.00  
PLTW Introduction to Engineering  
Design – 1.00

##### Elective Courses: (1.00-1.50 credits required)

ASE Electrical/Electronics \* – .50  
 CAD Architectural Design 1 – .50  
 CAD Mechanical Design 1 – .50  
 Electrician 1 – .50  
 Engineering Technology – .50

Introduction to Automotive \* – .50  
 Physics with Technology – 1.00  
 PLTW Principles of Engineering – 1.00  
 Radio Broadcasting 1 \* – .50  
 Video Production 1 \* – .50  
 Workplace Skills – .50

\* Course can be taken up to 1.00 credit.

**3.00 credits required for completion**

#### Pathway: Engineering

##### Foundation Courses: (2.00 credits required)

**CAD/Drafting Component**  
CAD Mechanical Design 1 – .50  
CAD Mechanical Design 2 – .50

##### Or, choose the following course:

PLTW Introduction to Engineering  
Design – 1.00

##### Design Component

Engineering Principles 1 – .50  
Engineering Principles 2 – .50

##### Or, choose the following course:

PLTW Principles of Engineering – 1.00

##### Elective Courses: (1.00 credit required)

CAD Mechanical Design 3 – .50  
 Electronics 1 – .50  
 Electronics 2 – .50  
 Engineering Capstone – 1.00  
 Introduction to Geographic Information  
Systems (GIS) – .50  
 PLTW Aerospace Engineering – 1.00  
 PLTW Civil Engineering and  
Architecture – 1.00

PLTW Computer Integrated  
Manufacturing – 1.00  
 PLTW Digital Electronics – 1.00  
 PLTW Engineering Design and Development –  
1.00  
 Robotics 1 – .50  
 Robotics 2 – .50  
 Workplace Skills – .50

**3.00 credits required for completion**

#### Pathway: Mechanical Design (CAD/Drafting)

##### Foundation Courses: (1.50-2.00 credits required)

**Mechanical Design Engineering track**  
CAD Mechanical Design 1 – .50  
CAD Mechanical Design 2 – .50  
CAD Mechanical Design 3 – .50

##### Or, choose following course:

PLTW Introduction to Engineering  
Design – 1.00  
PLTW Principles of Engineering – 1.00

##### Elective Courses: (1.00-1.50 credits required)

Engineering Technology – .50  
 Industrial Design – 1.00  
 Machining 1 \* – .50  
 Machining 2 \* – .50

Manufacturing Principles 1 – .50  
 Manufacturing Principles 2 – .50  
 Physics with Technology – 1.00  
 Welding Technician – Entry Level \* – .50  
 Workplace Skills – .50

\* Course can be taken up to 1.00 credit.

**3.00 credits required for completion**

#### Pathway: Robotics

##### Foundation Courses: (1.00 credits required)

Robotics 1 – .50  
Robotics 2 – .50

##### Elective Courses: (2.00 credits required)

CAD Architectural Design 1 – .50  
 CAD Mechanical Design 1 – .50  
 Computer Programming 1 – 1.00  
 Electrician 1 – 1.00  
 Electronics 1 – .50  
 Industrial Maintenance Technician – 1.00  
 Machinist Technician/CNC – 1.00

Manufacturing Principles 1 – .50  
 Manufacturing Principles 2 – .50  
 Material Handling – 1.00  
 Physics with Technology – 1.00  
 PLTW Digital Electronics – 1.00  
 Workplace Skills – .50

**3.00 credits required for completion**

- > Foundation courses taken beyond the required credits can be used as elective credit.
- > Core curriculum and elective requirements may vary district to district.
- > Many CTE courses may qualify for concurrent enrollment credit, which in some cases may earn up to 1.0 credit toward Pathway completion. Talk to your school counselor about availability.
- > Many Utah postsecondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional postsecondary Pathways for details.
- > Visit [UtahCTE.org](http://UtahCTE.org) for additional information.