



High School to College and Career Pathway: Secondary Career and Technical Education

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

Technology and Engineering Education Pathways (continued)

Pathway: Engineering		
<p>Foundation Courses: (2.00 credits required)</p> <p>CAD/Drafting Component CAD Mechanical Design 1 – .50 CAD Mechanical Design 2 – .50</p> <p>Or, choose the following course: PLTW Introduction to Engineering Design – 1.00</p> <p>Design Component Engineering Principles 1 – .50 Engineering Principles 2 – .50</p> <p>Or, choose the following course: PLTW Principles of Engineering – 1.00</p>	<p>Elective Courses: (1.00 credit required)</p> <ul style="list-style-type: none"> <input type="checkbox"/> CAD Mechanical Design 3 – .50 <input type="checkbox"/> Electronics 1 – .50 <input type="checkbox"/> Electronics 2 – .50 <input type="checkbox"/> Engineering Capstone – 1.00 <input type="checkbox"/> Introduction to Geographic Information Systems (GIS) – .50 <input type="checkbox"/> PLTW Aerospace Engineering – 1.00 <input type="checkbox"/> PLTW Civil Engineering and Architecture – 1.00 	<ul style="list-style-type: none"> <input type="checkbox"/> PLTW Computer Integrated Manufacturing – 1.00 <input type="checkbox"/> PLTW Digital Electronics – 1.00 <input type="checkbox"/> PLTW Engineering Design and Development – 1.00 <input type="checkbox"/> Robotics 1 – .50 <input type="checkbox"/> Robotics 2 – .50 <input type="checkbox"/> Workplace Skills – .50 <p style="text-align: right;">3.00 credits required for completion</p>
Pathway: Mechanical Design (CAD/Drafting)		
<p>Foundation Courses: (1.50-2.00 credits required)</p> <p>Mechanical Design Engineering track CAD Mechanical Design 1 – .50 CAD Mechanical Design 2 – .50 CAD Mechanical Design 3 – .50</p> <p>Or, choose following course: PLTW Introduction to Engineering Design – 1.00 PLTW Principles of Engineering – 1.00</p>	<p>Elective Courses: (1.00-1.50 credits required)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Engineering Technology – .50 <input type="checkbox"/> Industrial Design – 1.00 <input type="checkbox"/> Machining 1 * – .50 <input type="checkbox"/> Machining 2 * – .50 <input type="checkbox"/> 	<ul style="list-style-type: none"> <input type="checkbox"/> Manufacturing Principles 1 – .50 <input type="checkbox"/> Manufacturing Principles 2 – .50 <input type="checkbox"/> Physics with Technology – 1.00 <input type="checkbox"/> Welding Technician – Entry Level – .50 <input type="checkbox"/> Workplace Skills – .50 <p style="text-align: right;">* Course can be taken up to 1.00 credit. 3.00 credits required for completion</p>
Pathway: Robotics		
<p>Foundation Courses: (1.00 credits required)</p> <p>Robotics 1 – .50 Robotics 2 – .50</p>	<p>Elective Courses: (2.00 credits required)</p> <ul style="list-style-type: none"> <input type="checkbox"/> CAD Architectural Design 1 – .50 <input type="checkbox"/> CAD Mechanical Design 1 – .50 <input type="checkbox"/> Computer Programming 1 – 1.00 <input type="checkbox"/> Electrician 1 – 1.00 <input type="checkbox"/> Electronics 1 – .50 <input type="checkbox"/> Industrial Maintenance Technician – 1.00 <input type="checkbox"/> Machinist Technician/CNC – 1.00 	<ul style="list-style-type: none"> <input type="checkbox"/> Manufacturing Principles 1 – .50 <input type="checkbox"/> Manufacturing Principles 2 – .50 <input type="checkbox"/> Material Handling – 1.00 <input type="checkbox"/> Physics with Technology – 1.00 <input type="checkbox"/> PLTW Digital Electronics – 1.00 <input type="checkbox"/> Workplace Skills – .50 <p style="text-align: right;">3.00 credits required for completion</p>

- > 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 for additional information.