

Jobs in this career cluster focus on designing, building, and maintaining homes, industrial buildings, streets, and bridges. Many skilled tradespeople pursue career and technical education (CTE) in addition to on-the-job training, though education requirements vary. People who are passionate about design and home improvement tend to choose these careers.

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### INTERESTS & ABILITIES

#### **Activities that describe what I like to do:**

- Read and follow blueprints and/or instructions
- Picture in my mind what a finished product looks like

#### **Personal qualities that describe me:**

- Curious
- Good at following directions
- Pay attention to detail
- Interdisciplinary interests
- Good at visualizing possibilities Patient and persistent

#### **Work with my hands.**

- Perform work that requires precise results
- Solve technical problems
- Visit and learn from beautiful, historic, or interesting buildings
- Follow logical, step-by-step procedures

#### **School subjects that I like:**

- Math
- Drafting
- Physical Sciences
- Construction Trades
- Electrical Trades/Heat, Air Conditioning and
- Refrigeration/Technical Education

### PATHWAYS IN THIS CLUSTER

- Design/Pre-Construction
- Construction
- Maintenance/Operations



# Architecture & Construction

## Potential Career Options with Post Secondary Education Requirements

### CAREER OPTIONS FROM HIGH SCHOOL | *On-the-job training and/or minimal experience*

- Construction Laborer
- Bricklayer apprentice
- Concrete Installer apprentice
- Masonry
- Highway Maintenance Worker
- Roofer
- Tile Setter
- Iron Worker
- Grading & Leveling Machine Operator
- Heavy Equipment Operator
- Groundskeeper and Gardener
- Heating and Air Conditioning

### CAREERS WITH CERTIFICATION/ASSOCIATE DEGREE | *Technical college/ Junior College*

- HVAC Technician
- Architectural Drafter
- Interior Design
- Bricklayer
- Civil Engineering Technician
- Carpenter
- Cement Mason
- Landscaper
- Drywall Installer
- Electrician
- Pipefitter
- Surveying
- Tile Setter
- Electrical Engineering Technician
- Plasterer
- Plumber
- Construction

### BACHELORS, PRE-PROFESSIONAL OR HIGHER DEGREE | *4 Year Colleges/University and Selective 4 Year Colleges/University*

- Architect
- Building Contractor
- C.A.D. Designer
- Project manager
- Civil Engineer
- Cost Estimator
- Electrical Engineer
- Construction Management
- Grounds Supervisor
- Interior Design
- Landscape Architect
- Environmental Design



# CAREER CLUSTER COURSE PATHWAYS

## SPASD Department Offerings: Architecture and Construction Electives Blueprints

Introduction	Intermediate	Intermediate	Advanced
<b>BioMedical Engineering</b>			
<b>Exploring Technology</b> <u>Course 8300TED</u> Course Guide p.118	<b>Exploring Engineering Graphics</b> <u>Course 8303TED</u> Course Guide p.118		<b>Biomedical Engineering</b> <u>Course 8305TED</u> Course Guide p.119
			<b>*BioTechnology Work Based Learning/YOUTH APPRENTICESHIP</b> <u>Course 5831YAP</u> Course Guide p.119
<b>Manufacturing/Welding</b>			
<b>Exploring Technology</b> <u>Course 8300TED</u> Course Guide p.118	<b>Manufacturing Metals Fabrication I</b> <u>Course 8031TED</u> Course Guide p.124	<b>Manufacturing Metals Fabrication II</b> <u>Course 8032TED</u> Course Guide p.124	<b>*Manufacturing / Welding Work Based Learning / YOUTH APPRENTICESHIP</b> <u>Course: 5815YAP</u> Course Guide p.27
<b>Woodworking</b>			
<b>Exploring Technology</b> <u>Course 8300TED</u> Course Guide p.118	<b>General Woodworking</b> <u>Course 8403TED</u> Course Guide p.122	<b>Cabinetry and Advanced Woodworking</b> <u>Course 8404TED</u> Course Guide p.122	<b>*Construction Work Based Learning / YOUTH APPRENTICESHIP</b> <u>Course: 5822YAP</u> Course Guide p.123
<b>Construction</b>			
<b>Exploring Technology (PLTW)</b> <u>Course 8300TED</u> Course Guide p.118	<b>Construction Skills: Interior</b> <u>Course 8428TED</u> Course Guide p.122	<b>Construction Skills: Exterior</b> <u>Course 8429TED</u> Course Guide p.122	<b>**Home Construction HFH</b> <u>Course 8409TED Semester 1</u> <u>Course 8410TED Semester 2</u> Course Guide p.123

**\*Construction Work Based Learning / YOUTH APPRENTICESHIP**  
Course: 5822YAP  
 Course Guide p.123

**Automotive**

<p><b>Exploring Technology</b>  <u>Course 8300TED</u>          Course Guide p.118</p>	<p><b>**Automotive Technology 1 and 2 Compacted</b>  <u>Course: 8851COMPTED</u>  <b>Semester 1</b>  <u>Course: 8852COMPTED</u>  <b>Semester 2</b>          Course Guide p.124</p>	<p><b>**Automotive Technology 3 and 4 Compacted</b>  <u>Course: 8853COMPTED</u>  <b>Semester 1</b>  <u>Course: 8854COMPTED</u>  <b>Semester 2</b>          Course Guide p.125</p>	<p><b>**Advanced Automotive Certification</b>  <u>Course 8826TED Semester 1</u>          Course Guide p.125</p>
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<p><b>Consumer Auto</b>  <u>Course 8806TED</u>          Course Guide p.124</p>	<p><b>Power Mechanics</b>  <u>Course 8801TED</u>          Course Guide p.124</p>		<p><b>Transportation Work Based Learning / YOUTH APPRENTICESHIP</b>  <u>Course:8840YAP</u>          Course Guide p.124</p>
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**Architecture**

<p><b>Drawing I</b>  <u>Course 7325 ART</u>          Course Guide p.41</p>	<p><b>Architecture</b>  <u>Course 7336 ART</u>          Course Guide p.39</p>	<p><b>Digital Media Art 1</b>  <u>Course 7340 ART</u>          Course Guide p.43</p>	<p><b>**Civil Engineering and Architecture (CEA) – Project Lead the Way</b>  <u>Course 8311TED Semester 1</u>  <u>Course 8312TED Semester 2</u>          Course Guide p.117</p>
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	<p><b>3-D Art Course: Art Medals</b>  <u>Course 7440ART</u>          Course Guide p.39</p>	<p><b>3-D Art Course: Sculpture</b>  <u>Course 7316ART</u>          Course Guide p.39</p>	<p><b>Architecture / Construction Work Based Learning/YOUTH APPRENTICESHIP</b>  <u>Course 5822YAP</u>          Course Guide p.27</p>
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<p><b>**Introduction to Engineering Design (IED) – Project Lead the Way</b>  <u>Course 8307TED</u>  <b>Semester 1</b>  <u>Course 8308TED</u>  <b>Semester 2</b>          Course Guide p.120</p>	<p><b>**Principles of Engineering (POE) – Project Lead the Way</b>  <u>Course 8309TED Semester 1</u>  <u>Course 8310TED Semester 2</u>          Course Guide p.119</p>	<p><b>**Digital Electronics (DE) – Project Lead the Way</b>  <u>Course 8313TED</u>  <b>Semester 1</b>  <u>Course 8314TED</u>  <b>Semester 2</b>          Course Guide p.118</p>	<p><b>**Engineering Design and Development (EDD) – Project Lead the Way</b>  <u>Course 8315TED Semester 1</u>  <u>Course 8316TED Semester 2</u>          Course Guide p.121</p>
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<p><b>Exploring Technology</b>  <u>Course 8300 TED</u>          Course Guide p.118</p>	<p><b>Digital Electronics: Project Lead the Way</b>  <u>Course 8313TED</u>  <u>Course 8314TED</u>          P. 121  <b>**Prerequisite: Introduction to Engineering Design</b></p>	<p><b>**Civil Engineering and Architecture (CEA) – Project Lead the Way</b>  <u>Course 8311TED</u>  <b>Semester 1</b>  <u>Course 8312 TED</u>  <b>Semester 2</b>          Course Guide p.120</p>	<p><b>*Engineering Work Based Learning / YOUTH APPRENTICESHIP</b>  <u>Course: 5833YAP</u>          Course Guide p.120</p>
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The course number and the page number (course guide) are included in the chart above.

\*Students requesting a Work Based Learning / Youth Apprenticeship course need to request a complete (full) course load. A student's schedule will be changed after the student is accepted into the program and has secured a job in the field. For additional information regarding this program, please contact your College, Career, and Life Readiness Coordinator or School Counselor.

\*\*Year long courses-Need to include both course numbers when requesting your class!

## CAREER CLUSTER SUPPORT COURSES

English Comp I  
US Government and Politics (AP)  
Chemistry/AP Chemistry  
Business and Marketing Courses  
World Language

Physics I & II (AP)  
Algebra 2  
Micro-Economics  
Statistics (AP)  
Environmental Science (AP)

Art Courses  
Band/Orchestra Courses  
Choir Courses

