# Architecture and Construction

**AVCTC Sending Schools Career Cluster Program of Study**

This Program of Study Template can serve as a guide, along with other career planning materials, as you continue your career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner’s educational and career goals.

**Ask your high school counselor to help you fill in the required courses you need to graduate.**

<table>
<thead>
<tr>
<th>Grade</th>
<th>English 8 semesters</th>
<th>Math 6 semesters</th>
<th>Science 6 semesters</th>
<th>Social Studies 6 semesters</th>
<th>Other Required Courses, Recommended Electives</th>
<th>Career &amp; Technical Courses and/or Degree Major Courses @ AVCTC</th>
<th>SAMPLE Occupations Relating to this Pathway</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Comm Arts I</td>
<td>High School Math</td>
<td>High School Science Course</td>
<td>High School S.S. Course</td>
<td>Personal Finance Computer Science</td>
<td>See high school counselor for course offerings.</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Comm Arts II</td>
<td>High School Math</td>
<td>High School Science Course</td>
<td>High School S.S. Course</td>
<td>Personal Finance Computer Science</td>
<td>See high school counselor for course offerings.</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Comm Arts III &amp; Comm Arts elective</td>
<td>Pre-College Algebra or high school math course</td>
<td>High School Science Course</td>
<td>High School S.S. Electives – History &amp; Government</td>
<td>*Personal Finance *Computer Science *CADD classes *Arts *Art/Drawing (Available for Dual Enrollment)</td>
<td>*AVCTC Course Offerings: Construction Building *Ask high school counselor for additional course offerings</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Senior Comm Arts &amp; Comm Arts elective</td>
<td>*English Comp I *Public Speaking</td>
<td>Pre-College Algebra high school courses</td>
<td>High School Science Course</td>
<td>*Personal Finance *Computer Science *CADD classes *Arts *Art/Drawing (Available for Dual Enrollment)</td>
<td>*AVCTC Course Offerings: Construction Building *Ask high school counselor for additional course offerings</td>
<td></td>
</tr>
</tbody>
</table>

*Dual Credit or Dual Enrollment College courses can often be substituted for high school credit. Check with your Counselor.*

Assessments/Certifications: College Placement Assessments, Compass, ACT, SAT

Clubs/Extracurricular Activities: Ask your Counselor what is available at your school.

Work-Based Learning: After School Employment Internship/Mentorship Job Shadowing Service Learning Supervised Business Experience

Additional Learning Opportunities:

CTSO(s): FBLA FCCLA FFA
Careers in designing, planning, managing, building and maintaining the built environment.

Sample Career Specialties / Occupations

- Architect
- Architectural and Civil Drafter
- Civil Engineer (structural, geotechnical, transportation, etc.)
- Civil Engineering Technician
- Code Official
- Computer Aided Drafter (CAD)
- Cost Estimator
- Drafter
- Electrical and Electronic Engineering Technician
- Electrical Engineer (electronics, security, telecommunications)
- Environmental Designer
- Environmental Engineer (hydro engineering, acoustical, etc.)
- Environmental Engineering Technician
- Fire Prevention and Industrial Engineer
- Interior Designer • Landscape Designer
- Landscape Architect
- Materials Engineer
- Mechanical Drafter
- Mechanical Engineer (HVAC, plumbing, fire protection, etc.)
- Modeler (traditional and computer)
- Planner/Designer
- Preservationist
- Protector
- Protection Engineer
- Programmer
- Preservationist
- Planner/Designer
- Modeler (traditional and computer)
- DEGREES
- Bachelor of Science
- Associate Degree
- Diploma

- Advanced Technology Diploma
- Professional Certification
- National Professional Certification
- Other Certification

- Institution of Higher Education
- Training Provider
- Other Provider

- Vocational/Technical School
- College
- University
- Trade School

- Apprenticeship
- Apprenticeship/On-the-Job Training
- Other Training

- Job Shadowing
- Job Shadowing/Internship
- Other Job Shadowing/Internship

- Other Career Planning Activity

- BOARDS
- Certification Board
- Professional Organization
- Other Board

- Industry Association
- Professional Networking Group
- Other Industry Association

- Cluster Knowledge and Skills
- Academics • Communications • Problem Solving and Critical Thinking • Information Technology Applications • Systems
- Safety, Health and Environmental • Leadership and Teamwork • Ethics and Legal Responsibilities
- Employability and Career Development • Technical Skills

- Vendor
- Manufacturer
- Other Vendor

- Sponsor
- Consultant
- Other Sponsor

- Community Group
- Government Agency
- Other Community Group

- Professional Society
- Trade Association
- Other Professional Society

- Other Group

- Boilermaker
- Carpenter
- Carpet Installer
- Concrete Finisher
- Construction Craft Laborer
- Construction Engineer
- Construction Foreman
- Construction Inspector
- Construction Manager
- Drywall Installer
- Education and Training Director/Coordinator
- Electrical & Power Transmission Installer
- Electrician
- Electronic Systems Technician
- Elevator Installer
- Equipment and Material Manager
- Estimator
- Explosives Worker
- Field Supervisor
- Floor Layer
- General Contractor/Builder
- Glazier
- Heating, Ventilation, Air Conditioning and Refrigeration Mechanic
- Insulation Worker
- Iron/Metalworker (structural and reinforcing)
- Landscaper/Groundskeeper
- Lineworker
- Manufacturer's Representative
- Mason
- Millwright
- Painter
- Paperhanger
- Pipe Fitter
- Pipelayer
- Pipeline Installer
- Plasterer/Drywall
- Plumber
- Preservationist
- Project Inspector
- Project Manager
- Roofer
- Safety Director
- Sales and Marketing Manager
- Scheduler
- Security and Fire Alarm Systems Installer
- Service Contractor
- Sheetmetal Worker
- Specialty Contractor
- Specialty Trades Subcontractor
- Steamfitter
- Subcontractor
- Superintendent
- System Installer
- Terrazzo Worker and Finisher
- Tile and Marble Setter
- Mason
- Millwright
- Operating Engineer
- Paperhanger
- Pipe Fitter
- Pipelayer
- Plumber
- Preservationist
- Project Inspector
- Project Manager
- Refractory Technician
- Relay Technician
- Remodeler
- Restoration Technician
- Safety Director
- Sales and Marketing Manager
- Scheduler
- Security and Fire Alarm Systems Installer
- Security Controls Manager
- Service Contractor
- Sheetmetal Worker
- Specialty Trades Contractor
- Steamfitter
- Subcontractor
- Substation Mechanic
- Superintendent
- System Installer
- Terrazzo Worker and Finisher
- Tile and Marble Setter
- Utility Metering & Reg. Technician
- Systems Installer

- Basic Knowledge
- Academic Skills
- Communication Skills
- Critical Thinking Skills
- Technical Skills
- Information Technology Applications
- Leadership
- Teamwork
- Ethics
- Legal Responsibilities
- Safety, Health and Environmental
- Employability and Career Development

- Cluster Pathways

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

- Pathway 1
- Pathway 2

- Employability and Career Development
- Technical Skills

- Vendor
- Manufacturer
- Other Vendor

- Sponsor
- Consultant
- Other Sponsor

- Community Group
- Government Agency
- Other Community Group

- Professional Society
- Trade Association
- Other Professional Society

- Other Group

- Information Technology Applications
- Leadership
- Teamwork
- Ethics
- Legal Responsibilities
- Safety, Health and Environmental
- Employability and Career Development

- Tools and Equipment
- Plan
- Design
- Graph
- Diagram

- Building
- Rendering (traditional and computer)
- Environmental Design
- Electrical Design
- HVAC Design
- Plumbing Design
- Fire Protection Design
- Structural Engineering
- Geotechnical Engineering
- Transportation Engineering
- Landscape Architecture
- Interior Design

- Cluster Specifications

- K&S

- Specifications Writer • Building Renderer (traditional and computer) • Environmental Engineering Technician • Environmental Engineer (hydro engineering, Regional and Urban Landscape Architect • Interior Designer • Landscape Designer • Surveyor • Surveying and Mapping Technician • Surveyor • Specifications Writer

- NOTE: General contractors/Builders and Specialty contractors typically own the contracting company.