

# Career and Technical Education Department

## Architecture and Construction Trades

### Senior High School



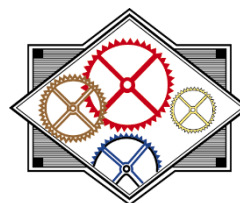
Arts & Communications



Business, Management  
Marketing & Technology



Health  
Science



Engineering/Manufacturing  
& Industrial Technology



Human  
Services



Natural Resources  
& Agriscience

VPAA – Meets Visual, Performing & Applied Arts Requirement

OLE – Meets Online Learning Experience Requirement

SMR – Senior Math Related

CP - CTE Completer

21F – Course Available through Section 21F: Expanded Virtual Learning

\*CAREER ZONES - Broad groupings of careers that share similar characteristics and whose employment requirements call for many common interests, strengths, and competencies.

**ARCHITECTURE I – CAD** (VPAA/SMR) – V650 9, 10, 11, 12 1.0 credit

This course is designed to teach students basic knowledge and develop specific skills in the Architecture and Construction field. Common terms and symbols are learned in interpreting drawings. Line control, lettering, sketching and manipulating drawing tools are the skills developed. Sketching, floor plans, acceptable design within local building codes, sectioning, and dimensioning techniques are taught along with an introduction to CAD programs such as; Archi-CAD and A+CAD. Students may visit business partners and colleges/universities to help students explore the possibilities in Architecture and Construction. This course is for anyone who has an interest in pursuing a career in Architecture, Interior Design or Construction.

*\*Course content may address skills pertaining to these potential Career Zones: Engineering, Manufacturing & Industrial Technology*

**ARCHITECTURE II – CAD** (VPAA/SMR/CP) – V660 10, 11, 12 1.0 credit

PREREQUISITE: Architectural I - CAD

This course builds upon Architecture I. Students will primarily use CAD software, such as ArchiCad and A+CAD, to design working site drawings, project assemblies, technical illustration, home/commercial design and other related skills. During the year, occupations related to Architecture are investigated and discussed. Students will visit business partners and/or colleges/universities to help students explore the opportunities available in the Design and Architecture profession. This course is for anyone who has an interest in pursuing a career in the Interior Design, Architecture or the Construction field. Students in this course may qualify for an internship placement through the School to Work program. Successful completion of this course may qualify the student for articulated college credit.

*\*Course content may address skills pertaining to these potential Career Zones: Engineering, Manufacturing & Industrial Technology*

**CTE ARCHITECTURE - CAD (VPAA/SMR/CP) – V510** 11, 12 2.0 credits

This is a 2-hour block course designed for students who are interested in architecture as a career. This course will take an in-depth look at the field of architecture while teaching the students the technical skills necessary to be successful in the field. CTE Architecture will cover the content and use the same software as Architecture I and II; however, students will be able to develop projects in more depth with an uninterrupted two-hour block. Successful completion of this course may qualify the student for articulated college credit.

*\*Course content may address skills pertaining to these potential Career Zones: Engineering, Manufacturing & Industrial Technology*

**ARCHITECTURE CAPSTONE (VPAA/SMR) – V670** 11, 12 1.0 credit

PREREQUISITE: Architecture II-CAD or CTE Architecture-CAD

This course is available to students who have reached an adequate level of skill obtained from I & II, or CTE and have a strong interest in the area of Architecture. Course is designed to teach students occupational skills. This course is project based and requires students to work independently as well as in a team-oriented setting. Students are required to follow performance objectives, compile a portfolio, and complete required CAD assignments using ArchiCAD and A+CAD. This course is for anyone who has an interest in pursuing a career in Interior Design, Architecture or Construction fields.

*\*Course content may address skills pertaining to these potential Career Zones: Engineering, Manufacturing & Industrial Technology*

**CONSTRUCTION TRADES (VPAA/SMR/CP) – V400** 10, 11, 12 2.0 credits

SHARED TIME: **May require travel to another building**

This course is designed to provide insight and experience in the Construction trades industry. Residential construction is integrated with commercial construction techniques and materials. Students will participate in several aspects of the construction process. Upon successful completion of this program, students can qualify for paid internship training as well as articulated college credit.

Examples include:

- Safety
- Site layout
- Concrete
- Floor Framing
- Rough Frame
- Roofing
- Siding and windows
- Electrical
- Plumbing
- Insulation
- Drywall
- Painting
- Finish Carpentry

*\*Course content may address skills pertaining to these potential Career Zones: Engineering, Manufacturing & Industrial Technology*

**CONSTRUCTION TRADES CAPSTONE I (VPAA/SMR/CP) – V** 11, 12 2.0 credits

SHARED TIME: **May require travel to another building**

PREREQUISITE: Construction Trades

This course is designed to provide students with advanced experience within the Construction industry to include the mechanical, electrical and plumbing trades. Upon successful completion of this program, students can qualify for paid internship training as well as articulated college credit. Students in this program are eligible to receive a credential for the builder's license 60-hour pre licensure certificate and the OSHA 10 credential.

SHARED TIME: **May require travel to another building**

PREREQUISITE: Construction Trades

This course is designed to provide advanced experience in the Commercial Construction trades industry. Students will participate in several aspects of the construction process. Upon successful completion of this program, students can qualify for paid internship training as well as articulated college credit. Students in this program are eligible to receive a credential for the builder's license 60-hour pre licensure certificate and the OSHA 10 Credential.