Introduction to Architecture and Construction

Career Cluster	Architecture and Construction
Course Code	17006
Prerequisite(s)	None
Credit	.5
Program of Study and Sequence	Intro to Architecture and Construction is the recommended prerequisite for the three career pathways in Architecture and Construction: 1) Architectural Drafting Pathway 2) Cabinetry Pathway, and 3) Residential Construction Pathway
Student Organization	SkillsUSA
Coordinating Work-Based Learning	Tours, guest speakers, job shadowing
Industry Certifications	None
Dual Credit or Dual Enrollment	None
Teacher Certification	Architecture & Construction Cluster Endorsement; Building Trades Endorsement; 7-12 Technology Education Endorsement
Resources	None

Course Description:

This course will prepare students to delve into the architecture and construction industry. It covers all three construction career pathways offered, including architecture/drafting along with cabinetry and building construction. Students will explore many different topics where they will be able to complete hands on activities to enhance the learning process.

Program of Study Application

Intro to Architecture and Construction is the recommended prerequisite for the three career pathways in Architecture and Construction:

- Architectural Drafting Pathway
- Cabinetry Pathway
- Residential Construction Pathway

Course Standards

Indicator# IAC 1   **Explore the different career opportunities involved in the architecture and construction industries.**

Webb Level	Sub-indicator	Integrated Content
Two Apply	IAC 1.1 Compare career possibilities in the drafting industry. Examples: • Using SDMyLife career discovery to explore all drafting careers • Visiting the Occupational Outlook Handbook to explore drafting careers	
Two Apply	IAC 1.2 Investigate and examine career opportunities in cabinetry industry Examples: • Using SDMyLife career discovery to explore all cabinetry careers • Visiting the Occupational Outlook Handbook to explore cabinetry careers	
Two Apply	IAC 1.3 Research career opportunities in the architecture and construction fields. Examples: • Using SDMyLife career discovery to explore all Architecture and construction careers • Visiting the Occupational Outlook Handbook to explore drafting careers	

Notes

Indicator# IAC 2   Introduce safety concepts in the architecture and construction industries.

Webb Level	Sub-indicator	Integrated Content
Two Apply	IAC 2.1 Apply general shop safety principles	NCCER Core Basic Safety Module 00101-09
One Identify	IAC 2.2 Identify job site and career safety concepts	
One Define	IAC 2.3 Define OSHA (Occupational Safety Health Administration) and its role in the construction industries	
Two Apply	IAC 2.4 Apply general hand and power tool safety procedures	NCCER Core Introduction to Hand Tools Module 00103-09 NCCER Core Introduction to Power Tools Module 00104-09

Notes

Indicator# IAC 3   Apply basic math principles used in the architecture and construction industries.

Webb Level	Sub-indicator	Integrated Content
Two Demonstrate	IAC 3.1 Demonstrate proper use of appropriate math skills Examples: • Addition, subtraction, multiplication and division of fractions • Calculate distance, area, volume	NCCER Core Introduction to Construction Math Module 00102-09
Two Demonstrate	IAC 3.2 Demonstrate proper measuring and layout skills Examples: • Read a tape/ruler to the 16th inch • Display working knowledge of decimal conversions • Demonstrate use of the metric system	

Notes

Indicator# IAC 4   Recognize the materials used in the architecture and construction industries.

Webb Level	Sub-indicator	Integrated Content
One Identify	IAC 4.1 Identify wood species and engineered building materials. Examples: • Hardwood, softwoods • Panel materials, concrete materials, metal materials, plastics, etc.	
One Recognize	IAC 4.2 Recognize proper application of fasteners, adhesives, and hardware. Examples: • Screws, glues, nails • General hardware • Hangers, straps, gussets, etc.	
One Explore	IAC 4.3 Explore new upcoming materials used in building industry.	

Notes:

Indicator# IAC 5   Examine Basic drafting skills used in architecture and construction.

Webb Level	Sub-indicator	Integrated Content
One Recognize	IAC 5.1 Recognize basic drafting terms and abbreviations	
Two Differentiate	IAC 5.2 Differentiate between different drafting styles Example: • Board and hand drafting vs Computer Aided Drafting (CAD)	
Two Demonstrate	IAC 5.3 Identify different aspects of blueprints/project plans to show a working knowledge of specifications.	NCCER Core Introduction to Construction Drawings Module 00105-09
Two Classify	IAC 5.4 Classify the different styles of residential architectural structures Example: • Colonial, ranch, modern, Victorian, etc.	

Notes:

Indicator# IAC 6   Display skills needed in architecture and construction industries.

Webb Level	Sub-indicator	Integrated Content
Two Apply	IAC6.1 Apply proper measuring and cutting techniques to perform job related tasks	
Two Display	IAC 6.2 Display a working knowledge of tools and equipment used in the industry Examples: • Use of proper hand tools for specific tasks • Use of powered hand tools for job related tasks • Use of stationary equipment to saw, shape, sand, etc. • Use of pneumatic tools for fastening, sanding, etc.	NCCER Core Introduction to Hand Tools Module 00103-09 NCCER Core Introduction to Power Tools Module 00104-09
Two Construct	IAC 6.3 Construct a project using the assigned design process Examples: • Classify the materials used for the project • Identify the joinery methods and assembly • Create a finished project	
Two Demonstrate	IAC 6.4 Demonstrate necessary job skills needed in architecture and construction industries Examples: • Attendance and punctuality • Positive attitude • Positive work ethic • Use of proper social skills • Display ability to work as part of team and take direction from others	NCCER Core Basic Communication Skills Module 00107-09 NCCER Core Employability Skills Module 00108-09

Notes: