

ADVANCED CONSTRUCTION METHODS

Read blueprints, estimate, framing, drywall, operate tools, and other relevant duties. Curriculum includes on site work experience through construction of a student-built house.

blueprint reading | cost estimation | framing | roofing
interior & exterior finishing | safety | operation of tools

Suggested Abilities

- 8th grade English reading, writing, speaking, and listening
- Understand basic algebra
- Lift 30 pounds
- Sustained activity for 5 hours at a time

Prerequisites

- *High School Students: Meet with counselor for eligibility requirements*

Class Hours

- Morning: 7:50am - 10:40am, Mon. - Fri.
- Afternoon: 12:05pm - 2:55pm, Mon. - Fri.

SEMESTER 1

CAR 1003 Carpentry Basics

4 credits

Provides a basic introduction to construction work for all crafts, safety concerns and procedures, and the safety and use of hand and power tools.

CAR 1004 Floor And Wall Construction

4 credits

Basics of framing: wood floor/wall layout, and selection/installation of metal framing for interior and non-load-bearing exterior walls.

CAR 1006 Construction and Roof Design

4 credits

Covers basic stair terminology and layout, also basic understanding of roof design and installation.

CON 1006 Site Prep Through Foundation

3 credits

Blueprint reading for construction sites, site layout methods, concrete forms and foundations, and reinforcement techniques including rebar and welded-wire fabric.

SEMESTER 2

CAR 1034 Exterior Finishes and Trim

4 credits

Hands-on training in exterior moisture control, trim, and door/window installation.

CAR 1035 Thermal & Moisture Methods/Materials

1 credit

Focuses on selection and installation of various types of insulating materials in walls, floors, and attics. Covers the uses and installation practices for vapor barriers and waterproofing materials.

CAR 1046 Interior Finishes/Drywall Construction

1 credit

Use gypsum wall board and the techniques of concealing joints and fasteners, construction methods, and a variety of texture finishes.

CAR 1047 Interior Carpentry

4 credits

interior doors, baseboard, casement, and other trim—focusing on material choices, installation techniques, work methods, and estimation.

CON 1009 Flooring, Tile and Wood

3 credits

Installation and finishing of hardwood, laminate/engineered, and tile flooring, with discussion of each option's advantages and disadvantages to guide material and finishing choices.

SEMESTER 3

CAR 2006 Advanced Floor and Wall Construction

4 credits

Advanced floor and wall framing. Covers complex framing issues, leadership/foreman duties, and hands-on practice to refine previously learned skills.

CAR 2007 Advanced Construction and Roof Design

4 credits

Advanced course on residential and commercial stair construction. Covers complex curved/multi-level stairs, stringer alternatives, finishing techniques, balusters, and rails.

CON 1013 Jobsite Planning through Foundation

4 credits

Explore complex plot plans, multi-unit site layouts, and deeper blueprint application, expanding first-year theories, systems, and form requirements for job-site practice

CON 1030 Blueprint Reading

2 credits

Focuses on the techniques for reading and using blueprints and specifications with an emphasis placed on those drawings and types of information that are relevant to the carpentry craft.

SEMESTER 4

CON 1028 Cost Estimation

2 credits

Provides an overview of the estimation process. Bid requirements, and package are discussed along with an introduction to the CSI divisions.

CAR 2008 Advanced Exterior Finishes and Trim

4 credits

Hone skills as an exterior carpenter and build skills in a leadership roll.

CAR 2009 Advanced Interior Carpentry

4 credits

Advanced interior carpentry course: techniques, material selection, estimating, efficiency, premium doors/trim, fine woodworking, mantels/fireplaces, custom shelving, closets, and moulding.

CON 2010 Advanced Flooring, Tile and Wood

3 credits

Advances estimation and ordering of flooring/tile, and practices advanced layout and design techniques for various flooring and tile installations.

Advanced Construction Methods Certificate

2 Years

55 Credit Hours