

Florida Department of Education
Curriculum Framework

Program Title: Cabinetmaking
Program Type: Career Preparatory
Career Cluster: Architecture and Construction

Career Certificate Program

Program Number	C410400
CIP Number	0648070303
Grade Level	30,31
Standard Length	1200 Hours
Teacher Certification	Refer to the <u>Program Structure</u> section.
CTSO	SkillsUSA
SOC Codes (all applicable)	47-3012 - Helpers—Carpenters 51-7011 - Cabinetmakers and Bench Carpenters
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml
Basic Skills Level	Mathematics: 9 Language: 9 Reading: 9

Purpose

The purpose of this program is to prepare students for employment in the cabinetmaking industry.

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Architecture and Construction career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the Architecture and Construction career cluster.

The content includes but is not limited to carpentry and cabinetmaking.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of four occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length	SOC Code
A	BCV0200	Cabinetmaker Helper	CAB WOODWK @7 7G	300 Hours	47-3012
B	BCV0235	Cabinet Finisher	CARPENTRY @7 7G	150 Hours	51-7011
C	BCV0240	Cabinet Assembler	BLDG CONSTR @7 7G	300 Hours	51-7011
D	BCV0243	Cabinetmaker	TEC CONSTR @7 7G	450 Hours	51-7011

Common Career Technical Core – Career Ready Practices

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

1. Act as a responsible and contributing citizen and employee.
2. Apply appropriate academic and technical skills.
3. Attend to personal health and financial well-being.
4. Communicate clearly, effectively and with reason.
5. Consider the environmental, social and economic impacts of decisions.
6. Demonstrate creativity and innovation.
7. Employ valid and reliable research strategies.
8. Utilize critical thinking to make sense of problems and persevere in solving them.
9. Model integrity, ethical leadership and effective management.
10. Plan education and career path aligned to personal goals.
11. Use technology to enhance productivity.
12. Work productively in teams while using cultural/global competence.

Standards

After successfully completing this program, the student will be able to perform the following:

- 01.0 Apply shop safety skills.
- 02.0 Utilize manual and power tools relevant to the cabinetmaking profession.
- 03.0 Demonstrate mathematics knowledge and skills relevant to the cabinetmaking field.
- 04.0 Recommend appropriate building materials for specific scenarios.
- 05.0 Select appropriate fasteners and hardware for specific scenarios.
- 06.0 Apply occupational safety skills.
- 07.0 Select and use hand and power tools relevant to the cabinetmaking profession.
- 08.0 Read and design construction documents.
- 09.0 Prepare cabinets for finish.
- 10.0 Apply finishes.
- 11.0 Fasten stock and joints.
- 12.0 Install various countertop surfaces.
- 13.0 Install cabinets.
- 14.0 Apply laminates.
- 15.0 Install cabinets and components.
- 16.0 Identify and describe interior and exterior doors (wood and/or metal).
- 17.0 Plan, design and lay out casework.
- 18.0 Utilize power tools specific to cabinet making.
- 19.0 Construct joints.
- 20.0 Cut casework components.
- 21.0 Assemble casework components.
- 22.0 Construct cabinet drawers.
- 23.0 Construct cabinet doors.
- 24.0 Construct curved pieces.
- 25.0 Construct millwork details.
- 26.0 Use computer applications in cabinetmaking where available and applicable.
- 27.0 Explain the importance of employability and entrepreneurship skills.

Florida Department of Education
Student Performance Standards

Program Title: Cabinetmaking
Career Certificate Program Number: I480704

Course Number: BCV0200	
Occupational Completion Point: A	
Cabinetmaker Helper – 300 Hours – SOC Code 47-3012	
01.0	Apply shop safety skills--The student will be able to:
01.01	Maintain a clean, orderly and safe work area.
01.02	Transport, handle and store materials safely.
01.03	Operate a fire extinguisher.
01.04	Qualify in basic first-aid procedures.
01.05	Identify safety hazards.
01.06	Demonstrate the use and care of personal protective equipment (PPE).
02.0	Utilize manual and power tools relevant to the cabinetmaking professions--The student will be able to:
02.01	Identify various hand and power tools.
02.02	Select correct tools for specific jobs.
02.03	Clean and care for tools and equipment.
02.04	Demonstrate proficiency in the safe use of hand and power tools.
02.05	Read and use carpenter's measuring tools.
03.0	Demonstrate mathematics knowledge and skills relevant to the cabinetmaking field--The student will be able to:
03.01	Apply geometry skills to solve math problems related to cabinetmaking with and without a calculator/ phone calculator.
03.02	Demonstrate knowledge of arithmetic operations.
03.03	Analyze and apply data and measurements to solve problems and interpret documents.
04.0	Recommend appropriate building materials for specific scenarios--The student will be able to:

04.01	Identify the grades and species of lumber and their appropriate uses.
04.02	Identify the actual and nominal sizes of lumber.
04.03	Identify the grades of plywood and wood products.
04.04	Identify defects and blemishes that affect the durability and strength of lumber.
04.05	Explain the effects of temperature extremes, chemical reaction and moisture content on building materials.
04.06	Explain the uses of various types of engineered lumber.
05.0	Select appropriate fasteners and hardware for specific scenarios--The student will be able to:
05.01	Identify the fasteners commonly used in cabinetmaking.
05.02	Identify the hardware commonly used in cabinetmaking.
06.0	Apply occupational safety skills--The student will be able to:
06.01	Describe "Right-to-Know" Law as recorded in (29 CFR-1910.1200)
06.02	Explain the purpose of the Occupational Safety and Health Administration (OSHA).
06.03	Identify health-related problems that may result from exposure to hazardous materials.
06.04	Describe the proper precautions for handling hazardous materials.
06.05	Explain eligibility and the procedures for obtaining worker's compensation.
06.06	Explain the importance of complying with the Americans with Disabilities Act (ADA) requirements.
07.0	Select and use hand and power tools relevant to the cabinetmaking profession--The student will be able to:
07.01	Identify the hand tools commonly used by carpenters and describe their uses.
07.02	Use hand tools in a safe and appropriate manner.
07.03	State the general safety rules for operating all power tools, regardless of type.
07.04	State the general rules for properly maintaining all power tools, regardless of type.
07.05	Identify the portable power tools commonly used by carpenters and describe their uses.
07.06	Use portable power tools in a safe and appropriate manner.

08.0	Read and design construction documents--The student will be able to:
08.01	Use an architect's scale.
08.02	Explain the types of drawings usually included in a set of plans and list the information found on each type.
08.03	Identify the different types of lines used on construction drawings.
08.04	Identify selected abbreviations commonly used on plans.
08.05	Read and interpret plans, elevations, schedules, sections and details contained in basic construction drawings.
08.06	State the purpose of written specifications.
08.07	Identify and describe the parts of a specification.
08.08	Conduct quantity takeoff for materials.
08.09	Design millwork and draw details in construction documents for a given scenario.

Course Number: BCV0235
Occupational Completion Point: B
Cabinet Finisher – 150 Hours – SOC Code 51-7011

09.0	Prepare cabinets for finish--The student will be able to:
09.01	Fill nail and screw holes.
09.02	Install wood plugs in prepared holes.
09.03	Sand a cabinet and joints for finish.
09.04	Select and apply proper filler.
09.05	Sand wood surfaces for finishing.
09.06	Stain, bleach, fill and seal wood surfaces as needed.
10.0	Apply finishes--The student will be able to:
10.01	Apply various types of finishes including lacquer-based, water-based, oil-based, enamel and polyurethane.
10.02	Apply the types of finishes that the local market demands.
10.03	Observe safety precautions when applying finishes, including wearing respirator and protective clothing approved by National Institute of Occupational Safety and Health (NIOSH).

Course Number: BCV0240
Occupational Completion Point: C
Cabinet Assembler – 300 Hours – SOC Code 51-7011

11.0 Fasten stock and joints--The student will be able to:

11.01 Identify types of glues and fasteners and describe their applications.

11.02 Fasten stock with glue and clamps.

11.03 Fasten stock and joints with appropriate fasteners such as nails, staples, screws and bolts.

11.04 Fill and finish nail and screw holes with fillers and plugs.

11.05 Glue and clamp stock using various techniques.

12.0 Install cabinets--The student will be able to:

12.01 Load and secure casework for hauling.

12.02 Check walls and floors for level and plumb.

12.03 Determine fasteners for block or walls.

12.04 Install upper and lower cabinets and other casework.

12.05 Fasten a suspended cabinet unit to ceiling.

12.06 Install countertops, including sink cutouts and back splash.

12.07 Cut and install molding and trim.

12.08 Adjust doors and drawers.

12.09 Clean work site.

13.0 Install various countertop surfaces--The student will be able to:

13.01 Install solid surface countertop.

13.02 Install wood countertop.

13.03 Install plastic laminate countertop.

14.0 Apply laminates--The student will be able to:

14.01	Lay out and cut core stock to specifications.
14.02	Lay out and cut laminate to specification.
14.03	Apply adhesive.
14.04	Apply laminate to core stock.
14.05	Trim and file plastic laminate edges.
14.06	Clean laminated surfaces.
14.07	Laminate a curved surface.
14.08	Repair laminate defects.
15.0	Install cabinets and components--The student will be able to:
15.01	Install hardware such as hinges, catches, pulls, knobs and guides on assembled cabinets.
15.02	Install fasteners.
15.03	Install drawers.
15.04	Install various types of doors including overlay, lipped and flush.
15.05	Install adjustable shelving.
15.06	Install glass panels and metal grills.
15.07	Install specialty hardware such as a lazy Susan, wire racks and "pull-outs".
15.08	Install sliding doors and track.

Course Number: BCV0243
Occupational Completion Point: D
Cabinetmaker – 450 Hours – SOC Code 51-7011

16.0	Identify and describe interior and exterior doors (wood and/or metal)--The student will be able to:
16.01	Identify the types and parts of door systems.
16.02	Identify door jamb components.
16.03	Identify door hardware.

17.0	Plan, design and layout casework--The student will be able to:
17.01	Convert measurements from English to the metric system and from the metric system to the English system.
17.02	Draw a set of plans to scale.
17.03	Make a rod layout.
17.04	Develop a plan or procedure and a cut list for a specific job.
17.05	Estimate the materials required for the job.
17.06	Estimate labor and materials cost, using computer-application programs, if available.
17.07	Select and match wood stock for compatibility of grain and color.
17.08	Design and layout cabinets, using a Computer-Assisted Design (CAD) program, if available.
18.0	Utilize power tools specific to cabinet making--The student will be able to:
18.01	Operate both portable and stationary power tools, observing safety precautions.
18.02	Maintain power tools according to the manufacturer's specifications.
19.0	Construct joints--The student will be able to:
19.01	Construct various types of joints including butt, dado, rabbeted, lap, miter, splined, tongue-and-groove and mortise-and-tenon.
19.02	Install dowels in common wood joints.
19.03	Install biscuit spline in common wood joints.
20.0	Cut casework components--The student will be able to:
20.01	Cut frame stiles and rails.
20.02	Cut end, top and bottom panels.
20.03	Cut partitions and sleepers.
20.04	Cut shelf panels.
20.05	Cut skeleton frame stiles and rails.
20.06	Cut a toe board and a back panel.

20.07	Cut a casework top or countertop and a back splash.
20.08	Cut drawer front, sides, back and bottom.
20.09	Cut wood drawer guides.
20.10	Cut solid, flexible and paneled doors.
20.11	Route or shape casework components.
21.0	Assemble casework components--The student will be able to:
21.01	Assemble face frame, panels, toe boards and skeleton frame.
21.02	Fasten a top or countertop and a back splash to casework.
21.03	Assemble drawers.
21.04	Assemble flexible and paneled doors.
21.05	Install shelving.
21.06	Attach trim, molding and edge banding.
22.0	Construct cabinet drawers--The student will be able to:
22.01	Make various types of drawers including overlay, lipped and flush.
22.02	Construct drawer guides.
23.0	Construct cabinet doors--The student will be able to:
23.01	Select appropriate tools and materials for project.
23.02	Cut and glue rails, stiles and panels.
23.03	Make solid and tambour doors.
23.04	Make a frame and panel door.
23.05	Cut and set glass in a frame.
23.06	Band edges of solid doors.
23.07	Construct wood-door tracks.

23.08	Select appropriate hinges and door pulls for installation.
24.0	Construct curved pieces--The student will be able to:
24.01	Cut a curved piece from solid stock.
24.02	Make a curved piece by saw kerfing.
24.03	Construct a curved piece, using curved segments.
24.04	Construct a curved piece by laminating thin strips.
25.0	Construct millwork details--The student will be able to:
25.01	Build shaped moldings to specifications.
25.02	Cut built-up moldings.
25.03	Cut a cornice.
26.0	Use computer applications in cabinetmaking where available and applicable--The student will be able to:
26.01	Estimate labor and materials cost using cabinetmaking design software, if available.
26.02	Set up and operate a computer numeric control (CNC) machine, if available.
27.0	Explain the importance of employability and entrepreneurship skills--The student will be able to:
27.01	Identify and demonstrate positive work behaviors needed to be employable.
27.02	Develop personal career plan that includes goals, objectives and strategies.
27.03	Examine licensing, certification and industry credentialing requirements.
27.04	Maintain a career portfolio to document knowledge, skills and experience.
27.05	Evaluate and compare employment opportunities that match career goals.
27.06	Identify and exhibit traits for retaining employment.
27.07	Identify opportunities and research requirements for career advancement.
27.08	Research the benefits of ongoing professional development.
27.09	Examine and describe entrepreneurship opportunities as a career planning option.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

MyCareerShines is an interactive resource to assist students in identifying their ideal career and to enhance preparation for employment. Teachers are encouraged to integrate this resource into the program curriculum to meet the employability goals for each student. Access MyCareerShines by visiting: www.mycareershines.org.

Career and Technical Student Organization (CTSO)

SkillsUSA is the intercurricular career and technical student organization for providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills (if applicable)

In Career Certificate Programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 9, Language 9, and Reading 9. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Additional Resources

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>