

Cabinet and Furniture Making

COURSE OUTLINE

1. Course Title: Cabinet and Furniture Making

2. CBEDS Title: Furniture Making

3. CBEDS Number: 5514

4. Job Titles:

Woodworker

Cabinet Installers

Carpenters

Painting and Coating Workers

Shop Assistant

Sheet Metal Workers

5. Course Description:

Cabinet and Furniture making is a practical, activity oriented, laboratory-based program for all high school students whom have prior experience in the use of powered woodworking equipment. It is an integrated curriculum encompassing academics in an applied manner. It provides experiences that uncover, develop, and realize individual potential. This advanced course of study offers a wide variety of experiences in the study of materials, tools and processes utilized in related wood product industries. Students will gain knowledge and apply woodworking principles in units addressing measurement, planning and design, basic processes, hand tools, powered machinery, assembly and finishing, etc. Projects will consist of student selected cabinet designs or furniture.

Student Outcomes and Objectives:

Students will:

1. Describe the basic design and construction elements in cabinet and furniture making.
2. Demonstrate proper woodshop safety.
3. Demonstrate proper operation of woodshop hand and power tools.
4. Identify and use effectively various methods of joining wood and using fasteners.
5. Demonstrate accurate and proper assembly of cabinet and furniture projects.
6. Demonstrate adequate surface preparation and finishing.
7. Research current industry trends in cabinet and furniture making including mass production.

Integrated throughout the course are career preparation standards, which include basic academic skills, communication, interpersonal skills, problem solving, workplace safety, technology, and employment literacy.

Pathway

Recommended Sequence	Courses
Introductory	Applied Technology or Construction Foundations
Skill Building	Construction Technology
Advanced Skill	Cabinet and Furniture Making or Advanced construction Technology or Construction Coop

6. Hours: *Students receive up to 180 hours of classroom instruction.*

7. Prerequisites: Construction Technology

8. Date (of creation/revision): July 2011

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Upon successful completion of this course, students will be able to demonstrate the following skills necessary for entry-level employment.				
Instructional Units and Competencies	Course Hours	Model Curr. Standards	CA Academic Content Standards	CAHSEE
<p>I. CAREER PREPARATION</p> <p>A. Career Planning and Management.</p> <ol style="list-style-type: none"> 1. Know the personal qualifications, interests, aptitudes, knowledge, and skills necessary to succeed in careers. <ol style="list-style-type: none"> a. Students will identify skills needed for job success b. Students will identify the education and experience required for moving along a career ladder. 2. Understand the scope of career opportunities and know the requirements for education, training, and licensure. <ol style="list-style-type: none"> a. Students will describe how to find a job. b. Students will select two jobs in the field and map out a timeline for completing education and/or licensing requirements. 3. Know the main strategies for self-promotion in the hiring process, such as completing job applications, resume writing, interviewing skills, and preparing a portfolio. <ol style="list-style-type: none"> a. Students will write and use word processing software to create a resume, cover letters, thank you letters, and job applications. b. Students will participate in mock job interviews. 4. <i>Develop a career plan that is designed to reflect career interests, pathways, and postsecondary options.</i> <ol style="list-style-type: none"> a. <i>Students will conduct a self—assessment and explain how professional qualifications affect career choices.</i> 5. <i>Understand the role and function of professional organizations, industry associations, and organized labor in a productive society.</i> <ol style="list-style-type: none"> a. <i>Contact two professional organization and identify the steps to become a member.</i> 6. <i>Understand the past, present and future trends that affect careers, such as technological developments and societal trends, and the resulting need for lifelong learning.</i> <ol style="list-style-type: none"> a. <i>Students will describe careers in the business industry sector.</i> b. <i>Students will identify work-related cultural differences to prepare for a global workplace.</i> <p>B. Technology.</p> <ol style="list-style-type: none"> 1. Understand past, present and future technological advances as they relate to a chosen pathway and on selected segments of the economy. 2. Understand the use of technological resources to gain access to, manipulate, and produce information, products and services. 3. Use appropriate technology in the chosen career pathway. <p>C. Problem solving and Critical Thinking.</p> <ol style="list-style-type: none"> 1. Understand the systematic problem-solving models that incorporate input, process, outcome and feedback components, and apply appropriate problem-solving strategies and critical thinking to work-related issues and tasks. 	<p>10</p> <p>Additional hours are integrated throughout the course.</p>	<p>Transportation Industry Sector, Model Curriculum Standards</p> <p>3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0</p>	<p><u>Language Arts</u> (8) R 1.3, 2.6 W1.3, 2.5. LC 1.4,1.5 1.6 LS1.2, 1.3, (9/10) R2.1,2.3,2 W2.5 LC1.4 LS 1.1, 2.3 (11/12) R2.3 W2.5 LC1.2 <u>Math</u> (7) NS1.2, 1.7 MR 1.1,1.3 2.7,2.8, 3.1</p>	<p>Lang. Arts R 8.2.1 (9/10) R 2.1, 2.3 W2.5 Math (7) NS 1.2, 1.3, 1.7 MR 1.1, 2.1, 3.1</p>

<p>2. Use and apply critical thinking and decision making skills to make informed decisions, solve problems, and achieve balance in the multiple roles of personal, home, work and community life.</p> <p>D. Health and Safety.</p> <ol style="list-style-type: none"> 1. Know policies, procedures, and regulations regarding health and safety in the workplace, including employers' and employees' responsibilities. 2. Understand critical elements of health and safety practices related to a variety of business environments. <p>E. Responsibility & Flexibility.</p> <ol style="list-style-type: none"> 1. Understand the qualities and behaviors that constitute a positive and professional work demeanor. 2. Understand the importance of accountability and responsibility in fulfilling personal, community, and workplace roles and how individual actions can affect the larger community. 3. Understand the need to adapt to varied roles and responsibilities. <p>F. Ethics and Legal Responsibilities</p> <ol style="list-style-type: none"> 1. Know the major local, district, state, and federal regulatory agencies and entities that affect the industry and how they enforce laws and regulations. 2. Understand the concept and application of ethical and legal behavior consistent with workplace standards. <ol style="list-style-type: none"> a. <i>Contact a business and obtain a copy of their rules for employment.</i> b. <i>Role play difference ethical scenarios.</i> 3. Understand the role of personal integrity and ethical behavior in the workplace. <p>G. Leadership and Teamwork.</p> <ol style="list-style-type: none"> 1. Understand the characteristics and benefits of teamwork, leadership, citizenship in the school, community, and workplace settings for effective performance and attainment of goals. 2. Understand the ways in which professional associations, such as Skills USA, CITEA and competitive career contribute to promote employability. 3. Know multiple approaches to personal conflict resolution and understand how to interact with others in ways that demonstrate respect for individual and cultural differences and for the attitudes and feelings of others. 				
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Instructional Units and Competencies	Hours	Industry Standards	CA Academic Standards.	CAHSEE
I. Design A. Human factors affecting design B. Materials selection and functional criteria for design C. Working drawings D. Scale models	10	Cabinet & Wood Products Pathway A1.0, 1.1	ELA 9-10; W; 2.6 ELA 9-10; LS; 1.1	ELA 9-10; WO; 1.1, 1.2, 1.3 M. 7; MG; 1.2, 2.4 M. 7; NS; 1.3
II. Fundamentals of Cabinet and Furniture making A. Standard cabinet & furniture elements B. Generating cabinet & furniture element drawings with dimensions C. Assembly & fastening methods according to function D. Finishes and finishing methods in accordance with use	30	Cabinet & Wood Products Pathway A5.1	M. 7; AF; 4.1 M. 8-12; Geo; 5.0, 11.0, 12.0, 16.0, 19.0 S. 9-12; Physics; 3a	ELA 9-10; WO; 1.1, 1.2, 1.3 M. 7; MG; 1.2, 2.4 M. 7; NS; 1.3
III. Basic woodshop techniques & safety A. Measurement, layout and rough-out skills B. Safe use of hand tools	30	Cabinet & Wood Products Pathway A2.0, 2.1, 2.2	S. 9-12; Chem. 6c	
IV. Basic Power tool use & safety A. Power planers and related jigs and fixtures B. Power saws and related jigs and fixtures C. Power drills and related jigs and fixtures D. Power sanders and related jigs and fixtures E. Power shapers and related jigs and fixtures F. Power lathes, duplicating attachments, as well as tool selection and tool sharpening techniques	25	Cabinet & Wood Products Pathway A3.0, 3.1, 3.3		
V. Joinery A. Wood joinery methods and proper application B. Selecting the proper joints for various applications C. Selecting the proper fasteners for various applications	25	Cabinet & Wood Products Pathway A4.1		
VI. Assembly A. Adhesives and their respective applications B. Clamping systems and their appropriate applications for various furniture components	10	Cabinet & Wood Products Pathway A3.2		
VII. Surface Preparation A. Surface preparation methods B. Scraping tools and their correct use C. Abrasives and their proper application D. Wood-filling materials and their proper application	15	Cabinet & Wood Products Pathway A4.1		

Instructional Units and Competencies	Hours	Industry Standards	CA Academic Standards.	CAHSEE
<p>VIII. Finishes and Finishing</p> <p>A. Categories of finishing products</p> <p>B. Selecting proper finish according to intended use.</p> <p>C. Application methods including spraying & brushing</p> <p>D. Maintenance of finishing equipment</p>	15	Cabinet & Wood Products Pathway A7.5	S. 9-12; Chem. 6c ELA 9-10; R; 2.6; W; 1.7, 1.8, 2.6; WO; 1.4; LS; 1.3, 1.4, 1.6-1.9, 2.2;	M. 7; MG; 2.2 & 2.3 ELA 9-10; R; 2.1, 2.2, 2.3, 2.5; W; 1.1-1.6, 1.9, 2.3; WO; 1.1, 1.2, 1.3, 1.5
<p>IX. Industry Trends</p> <p>A. Research current trends in the cabinet & furniture making industry and predict future impacts on the past and future of the industry.</p> <ol style="list-style-type: none"> 1 Use of green/sustainable materials. 2 Reducing construction waste. 3 Low/no VOC paints and/or water based wood finishes. 4 Alternative paint finishes and adhesives. 5 FSC (Forest Stewardship Council) certified materials for interior finishes. 6 Readily available and cost efficient green materials. <p>B. <i>Mass production techniques</i></p> <ol style="list-style-type: none"> 1 <i>CNC operation & safety</i> <p>C. Environmental regulations and their impact on the cabinetry & furniture making industry.</p> <p>D. The historical development of construction processes and their impact on the cabinetry & furniture making industry.</p> <p>E. OSHA regulations and other safety developments.</p>	10	Cabinet & Wood Products Pathway A8.1, 8.2	HSS 12; 12.2.1-12.2.8, 12.3.1, 12.3.2, 12.4.2-12.4.4.	
<p>X. Construction Technology</p> <p>A. Plumbing basics</p> <p>B. Electrical basics</p>	10	Residential & Com. Constr. Pathway D4.4		

10. Additional recommended/optional items

a. Articulation: None.

b. Academic credit: None

c. Instructional strategies:

Lecture Discussion

Internet Research

Laboratory

Projects

d. Instructional materials: Modern Cabinet Making, William D. Umstatt

e. Certificates: None