

**Architecture and Construction Career Cluster
Fine Furniture/Cabinetmaking I
Course Number 46.45400**

Course Description:

The purpose of this course is to introduce students to the world of woodworking to develop competencies essential to the Fine Furniture/Cabinetmaking Industry. The competencies include safety, applied math skills, woodworking materials, hand tools and machinery operations, wood joints, as well as gluing and clamping.

Course Prerequisites: None.

Course Standard 1

AC-FFCI-1

The following standard is included in all CTAE courses adopted for the Career Cluster/Pathways. Teachers should incorporate the elements of this standard into lesson plans during the course. The topics listed for each element of the standard may be addressed in differentiated instruction matching the content of each course. These elements may also be addressed with specific lessons from a variety of resources. This content is not to be treated as a unit or separate body of knowledge but rather integrated into class activities as applications of the concept.

Standard: Demonstrate employability skills required by business and industry.

The following elements should be integrated throughout the content of this course.

1.1 Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities .

Person-to-Person Etiquette	Telephone and Email Etiquette	Cell Phone and Internet Etiquette	Communicating At Work	Listening
Interacting with Your Boss	Telephone Conversations	Using Blogs	Improving Communication Skills	Reasons, Benefits, and Barriers
Interacting with Subordinates	Barriers to Phone conversations	Using Social Media	Effective Oral Communication	Listening Strategies
Interacting with Co-workers	Making and Returning Calls		Effective Written Communication	Ways We Filter What We Hear
Interacting with Suppliers	Making Cold Calls		Effective Nonverbal Skills	Developing a Listening Attitude
	Handling Conference Calls		Effective Word Use	Show You Are Listening
	Handling Unsolicited Calls		Giving and Receiving Feedback	Asking Questions
				Obtaining Feedback
				Getting Others to Listen

Nonverbal Communication	Written Communication	Speaking	Applications and Effective Résumés
Communicating Nonverbally	Writing Documents	Using Language Carefully	Completing a Job Application
Reading Body Language and mixed Messages	Constructive Criticism in Writing	One-on-One Conversations	Writing a Cover Letter
Matching Verbal and Nonverbal communication		Small Group Communication	Things to Include in a Résumé
Improving Nonverbal Indicators		Large Group Communication	Selling Yourself in a Résumé
Nonverbal Feedback		Making Speeches	Terms to Use in a Résumé

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Showing Confidence Nonverbally		Involving the Audience	Describing Your Job Strengths
Showing Assertiveness		Answering Questions	Organizing Your Résumé
		Visual and Media Aids	Writing an Electronic Résumé
		Errors in Presentation	Dressing Up Your Résumé

1.2 Demonstrate creativity by asking challenging questions and applying innovative procedures and methods.

Teamwork and Problem Solving	Meeting Etiquette
Thinking Creatively	Preparation and Participation in Meetings
Taking Risks	Conducting Two-Person or Large Group Meetings
Building Team Communication	Inviting and Introducing Speakers
	Facilitating Discussions and Closing
	Preparing Visual Aids
	Virtual Meetings

1.3 Exhibit critical thinking and problem solving skills to locate, analyze and apply information in career planning and employment situations.

Problem Solving	Customer Service	The Application Process	Interviewing Skills	Finding the Right Job
Transferable Job Skills	Gaining Trust and Interacting with Customers	Providing Information, Accuracy and Double Checking	Preparing for an Interview	Locating Jobs and Networking
Becoming a Problem Solver	Learning and Giving Customers What They Want	Online Application Process	Questions to Ask in an Interview	Job Shopping Online
Identifying a Problem	Keeping Customers Coming Back	Following Up After Submitting an Application	Things to Include in a Career Portfolio	Job Search Websites
Becoming a Critical Thinker	Seeing the Customer's Point	Effective Résumés:	Traits Employers are Seeking	Participation in Job Fairs
Managing	Selling Yourself and the Company	Matching Your Talents to a Job	Considerations Before Taking a Job	Searching the Classified Ads
	Handling Customer Complaints	When a Résumé Should be Used		Using Employment Agencies
	Strategies for Customer Service			Landing an Internship
				Staying Motivated to Search

1.4 Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity.

Workplace Ethics	Personal Characteristics	Employer Expectations	Business Etiquette	Communicating at Work
Demonstrating Good Work Ethic	Demonstrating a Good Attitude	Behaviors Employers Expect	Language and Behavior	Handling Anger
Behaving Appropriately	Gaining and Showing Respect	Objectionable Behaviors	Keeping Information Confidential	Dealing with Difficult Coworkers
Maintaining Honesty	Demonstrating Responsibility	Establishing Credibility	Avoiding Gossip	Dealing with a Difficult Boss
Playing Fair	Showing Dependability	Demonstrating Your Skills	Appropriate Work Email	Dealing with Difficult Customers
Using Ethical Language	Being Courteous	Building Work Relationships	Cell Phone Etiquette	Dealing with Conflict

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Showing Responsibility	Gaining Coworkers' Trust		Appropriate Work Texting	
Reducing Harassment	Persevering		Understanding Copyright	
Respecting Diversity	Handling Criticism		Social Networking	
Making Truthfulness a Habit	Showing Professionalism			
Leaving a Job Ethically				

1.5 Apply the appropriate skill sets to be productive in a changing, technological, diverse workplace to be able to work independently and apply team work skills.

Expected Work Traits	Teamwork	Time Management
Demonstrating Responsibility	Teamwork Skills	Managing Time
Dealing with Information Overload	Reasons Companies Use Teams	Putting First Things First
Transferable Job Skills	Decisions Teams Make	Juggling Many Priorities
Managing Change	Team Responsibilities	Overcoming Procrastination
Adopting a New Technology	Problems That Affect Teams	Organizing Workspace and Tasks
	Expressing Yourself on a Team	Staying Organized
	Giving and Receiving Constructive Criticism	Finding More Time
		Managing Projects
		Prioritizing Personal and Work Life

1.6 Present a professional image through appearance, behavior and language.

On-the-Job Etiquette	Person-to-Person Etiquette	Communication Etiquette	Presenting Yourself
Using Professional Manners	Meeting Business Acquaintances	Creating a Good Impression	Looking Professional
Introducing People	Meeting People for the First Time	Keeping Phone Calls Professional	Dressing for Success
Appropriate Dress	Showing Politeness	Proper Use of Work Email	Showing a Professional Attitude
Business Meal Functions		Proper Use of Cell Phone	Using Good Posture
Behavior at Work Parties		Proper Use in Texting	Presenting Yourself to Associates
Behavior at Conventions			Accepting Criticism
International Etiquette			Demonstrating Leadership
Cross-Cultural Etiquette			
Working in a Cubicle			

Support of CTAE Foundation Course Standards and Georgia Standards of Excellence L9-10RST 1-10 and L9-10WHST 1-10:

Georgia Standards of Excellence ELA/Literacy standards have been written specifically for technical subjects and have been adopted as part of the official standards for all CTAE courses.

Course Standard 2

AC-FFCI-2

Demonstrate knowledge and application of fine furniture/cabinetmaking terminology.

- 2.1 Recognize and identify basic terms used in the fine furniture/cabinetmaking industry.
- 2.2 Recognize and describe basic drawing terms, components, and symbols.
- 2.3 Interpret and describe different wood joint names.

- 2.4 Interpret and describe the parts of a board.
- 2.5 Identify and explain the different types of warps.
- 2.6 Identify and be able to explain the classifications of trees.

Course Standard 3

AC-FFCI-3

Identify and describe the types of hardwoods and softwoods and other materials used in the fine furniture and cabinetmaking profession

- 3.1 Identify and explain the variety of softwoods and hardwoods, plywood and other materials used in the fine furniture and cabinetmaking profession.
- 3.2 Identify different types of resistors and explain how the resistance values are determined for the following:
 - A. Solid hardwoods
 - 1. Cherry
 - 2. Black Walnut
 - 3. Red Oak
 - 4. Mahogany
 - 5. Poplar
 - 6. Basswood
 - 7. Maple
 - 8. Poplar
 - B. Plywood
 - 1. Soft wood plywood
 - 2. Hardwood plywood
 - C. Particle board and medium-density fiberboard (MDF)
 - D. Lauan

Course Standard 4

AC-FFCI-4

Demonstrate mathematic knowledge and skills relevant to the fine furniture/cabinetmaking field.

- 4.1 Demonstrate reading a ruler to solve problems related to the fine furniture/cabinetmaking field.
- 4.2 Apply general math, geometry, and algebra skills to solve problems related to the fine furniture/cabinetmaking with and without a calculator.
- 4.3 Demonstrate and apply math skills to make and fill out a bill of materials sheet.
- 4.4 Interpret and use drawing dimensions and scales.
- 4.5 Calculate board feet in order to solve problems related to the fine furniture/cabinetmaking field.

Course Standard 5

AC-FFCI-5

Identify and utilize general shop safety rules.

- 5.1 Identify and describe general shop safety rules.
- 5.2 Demonstrate how to act and work safely around other people in a shop area.
- 5.3 Demonstrate maintaining a clean, orderly, and safe working area.
- 5.4 Demonstrate the use and care of personal protective equipment (PPE).
- 5.5 Identify and operate different types of fire extinguishers.
- 5.6 Identify and describe general shop safety hazards.
- 5.7 Demonstrate safely transporting, handling, and storing of materials.

Course Standard 6

AC-FFCI-6

Demonstrate the use of hand and portable power tools relevant to the fine furniture/cabinetmaking profession.

- 6.1 Demonstrate reading and use of measuring instruments.
- 6.2 Identify and describe various hand and portable power tools.
- 6.3 Demonstrate selecting the correct tools for specific jobs.
- 6.4 Demonstrate cleaning and maintenance of hand and portable power tools.
- 6.5 Demonstrate proficiency in the safe use of hand and portable power tools.
- 6.6 State and explain the application of all hand and portable power tool safety rules.

Course Standard 7

AC-FFCI-7

Demonstrate and utilize equipment/machines relevant to the fine furniture/cabinetmaking profession.

- 7.1 Identify and be able to describe the various types of machines and related parts relevant to the fine furniture/cabinetmaking profession.
- 7.2 State and apply the safety rules for operating all machines, regardless of type in the fine furniture/cabinetmaking profession.
- 7.3 Demonstrate the special operation and procedures required for each piece of equipment/machine.
- 7.4 Identify and describe different types of wood joints and which machine or machines are used to make each joint.

Course Standard 8

AC-FFCI-8

Demonstrate the making and assembling of basic wood joints used in the fine furniture/cabinetmaking profession.

- 8.1 Recognize and identify the basic wood joint used in the fine furniture/cabinetmaking industry.
- 8.2 Demonstrate how to cut and assemble the various types of wood joints.
- 8.3 Demonstrate gluing, clamping and fastening the different types of wood joints.
- 8.4 Identify and describe common wood joints, such as the following:
 - a. Dado
 - b. Blind Dado
 - c. Groove
 - d. Edge rabbet
 - e. Pocket
 - f. Dovetail
 - g. Butt joints: Edge to Edge; Face to Face; and Edge to Face

Course Standard 9

AC-FFCI-9

Identify and demonstrate how to fasten stock and wood joints.

- 9.1 Identify and describe types of glue and fasteners.
- 9.2 Demonstrate fastening stock with glue and clamps.
- 9.3 Demonstrate gluing and clamping stock using various techniques.
- 9.4 Demonstrate fastening stock and wood joints with appropriate fasteners, such as:
 - a. Nails

- b. Staples
- c. Screws
- d. Bolts

Course Standard 10

AC-FFCI-10

Demonstrate selecting and using appropriate woods, fasteners, and hardware to construct a single piece of fine furniture or cabinet in a small group setting.

- 10.1 Demonstrate working together in small groups (3 or 4 persons) to construct a single piece of fine furniture or cabinet.
- 10.2 Demonstrate constructing a simple project (approved by the teacher).
- 10.3 Demonstrate making (3 view) drawings of project using pencil and paper.
- 10.4 Create a bill of materials sheet.
- 10.5 Demonstrate determining and selecting the type of wood joints and fasteners to be used in a project.

Course Standard 11

AC-FFCI-11

Prepare fine furniture, cabinets for finish.

- 11.1 Demonstrate sanding all wood surfaces for finishing.
- 11.2 Demonstrate selecting and applying proper wood fillers.
- 11.3 Identify and demonstrate the use of different types of sand paper.
- 11.4 Demonstrate how to sand and select the proper grits to be used on the project.
- 11.5 Identify wood defects and describe how to repair properly.
- 11.6 Observe and describe safety precautions when sanding wood.

Course Standard 12

AC-FFCI-12

Apply stains and finishing.

- 12.1 Demonstrate selecting and applying stain to the surface, as necessary.
- 12.2 Demonstrate and describe the use of retarders before staining.
- 12.3 Demonstrate knowledge of ventilation systems when using finishes and stains.
- 12.4 Demonstrate the proper procedure for disposing of oil rags.
- 12.5 Identify and describe the types of wood finishes, such as the following:
 - a. Oil based
 - b. Lacquer based
 - c. Water based
 - d. Polyurethane
 - e. Enamels

Course Standard 13

AC-FFCI-13

Create a student portfolio.

- 13.1 Demonstrate maintaining a student portfolio.
- 13.2 Demonstrate taking proper notes in class.
- 13.3 Demonstrate writing and keeping all handouts and machine pictures for future use.
- 13.4 Demonstrate keeping all hand tool and machine-safety notes for future use.
- 13.5 Demonstrate making a portfolio cover sheet with required data displayed.