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.

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

<table>
<thead>
<tr>
<th>Nonverbal Communication</th>
<th>Written Communication</th>
<th>Speaking</th>
<th>Applications and Effective Résumés</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communicating Nonverbally</td>
<td>Writing Documents</td>
<td>Using Language Carefully</td>
<td>Completing a Job Application</td>
</tr>
<tr>
<td>Reading Body Language and mixed Messages</td>
<td>Constructive Criticism in Writing</td>
<td>One-on-One Conversations</td>
<td>Writing a Cover Letter</td>
</tr>
<tr>
<td>Matching Verbal and Nonverbal communication</td>
<td>Small Group Communication</td>
<td>Things to Include in a Résumé</td>
<td></td>
</tr>
<tr>
<td>Improving Nonverbal Indicators</td>
<td>Large Group Communication</td>
<td>Selling Yourself in a Résumé</td>
<td></td>
</tr>
<tr>
<td>Nonverbal Feedback</td>
<td>Making Speeches</td>
<td>Terms to Use in a Résumé</td>
<td></td>
</tr>
</tbody>
</table>
1.2 Demonstrate creativity by asking challenging questions and applying innovative procedures and methods.

<table>
<thead>
<tr>
<th>Teamwork and Problem Solving</th>
<th>Meeting Etiquette</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thinking Creatively</td>
<td>Preparation and Participation in Meetings</td>
</tr>
<tr>
<td>Taking Risks</td>
<td>Conducting Two-Person or Large Group Meetings</td>
</tr>
<tr>
<td>Building Team Communication</td>
<td>Inviting and Introducing Speakers</td>
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<td></td>
<td>Facilitating Discussions and Closing</td>
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<td></td>
<td>Preparing Visual Aids</td>
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<td></td>
<td>Virtual Meetings</td>
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</tbody>
</table>

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

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

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

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

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

### Course Standard 2

**AC-FFCI-2**

**Demonstrate knowledge and application of fine furniture/cabinetmaking terminology.**

1. Recognize and identify basic terms used in the fine furniture/cabinetmaking industry.
2. Recognize and describe basic drawing terms, components, and symbols.
3. Interpret and describe different wood joint names.

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**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.
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.