



## CBM210 Shop Procedures II Syllabus

### Course Information

Credits	6
Campus	Washburn Institute of Technology
Address	5724 SW Huntoon
City/State/Zip	Topeka, Kansas 66604
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### Instructor Contact Information

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### Description

This course introduces the learner to the operation of traditional woodworking equipment. Students perform numerous exercises to gain familiarity with portable power tools and industrial woodworking machinery while building their skills and familiarity with wood. Units include layout, sawing, surfacing, boring, and sanding.

### Textbooks

No text required

### Student Learning Outcomes:

- A. Communicate effectively
- B. Integrate technology
- C. Learn effectively
- D. Demonstrate cooperative teamwork skills
- E. Apply safety in the workplace
- F. Think critically and creatively
- G. Demonstrate responsible work ethics

### Competencies

1. Use layout and measuring tools common to woodworking.
2. Recognize and operate hand tools normally used in cabinetmaking.
3. Recognize and operate machine tools normally used in cabinetmaking.

4. Select and correctly use adhesives, abrasives, fasteners, and joinery appropriate to cabinetmaking.

### **Unit 1—Layout**

- Correctly identifies marking tools: scratch awl, marking knife, marking gauge.
- Correctly identifies measuring tools: rules, tape measures, framing square, try square, combination and centering squares, dial, digital, and vernier calipers.
- Correctly identifies the following layout tools: T-Bevel, calipers, compasses, dividers, trammel points.
- Tests squares for accuracy.
- Demonstrates proper care and handling requirements for measuring, marking, and layout tools.
- Properly lubricates and waxes tools to prevent rust.
- Properly sharpens the points of awls and marking tools for accurate layout.

### **Unit 2—Sawing**

- Follows proper safety procedures for using portable power saws.
- Identifies three portable saw types.
- Completes class exercise for portable power saws satisfactorily.
- Operates a European-style plunge saw.
- Follows proper safety procedures for using power miter saws.
- Differentiates between fixed head, compound, and sliding compound power miter box saws.
- Cuts miters, bevels, and compound angles using a power miter box.
- Completes class exercise satisfactorily.
- Follows proper safety procedures for using table saws.
- Identifies parts, adjustments, and tooling associated with the table saw.
- Identifies the properties of rip, crosscut, combination, triple chip, and dado blades.
- Performs groove, bevel, miter, dado, taper, and chamfer operations using a table saw.
- Completes class exercise satisfactorily.
- Follows proper safety procedures for using a band saw.
- Identifies parts, adjustments, and tooling associated with the band saw.
- Changes a band saw blade and adjusts the blade guides properly.
- Resaws wood using a band saw.
- Completes class exercise satisfactorily.

### **Unit 3—Surfacing**

- Follows proper safety procedures for jointing.
- Identifies parts, adjustments, and tooling for a jointer.
- Adjusts infeed/outfeed beds correctly.
- Performs jointer operations by completing class exercise.
- Follows proper safety procedures for planing.
- Identifies parts, adjustments, and tooling for a planer.
- Follows proper procedure to surface thin stock.
- Identifies cutting quality by counting KMPI of four different samples run at different speeds.
- Adjusts feed rate to achieve a surface finish of at least 20 KPI (knife marks/inch) per AWI standards.
- Performs planing operations by completing class exercise.

#### **Unit 4—Boring**

- Follows proper safety procedures for boring.
- Identifies parts, adjustments, and tooling associated with portable hand drills.
- Identifies parts, adjustments, and tooling associated with drill presses.
- Adjusts the speed of a drill press by changing pulleys.
- Follows procedure for holding and boring small pieces.
- Follows proper safety procedures for holding and boring round sections.
- Performs boring operations by completing class exercise.

#### **Unit 5—Sanding**

- Follows the procedure for making a hand sanding block.
- Explains the procedure for making contoured sanding blocks.
- Follows the procedure for folding a sheet of sandpaper for hand use.
- Follows proper safety procedures for operating portable power sanding tools.
- Identifies parts, adjustments, and uses for orbital, random orbit, and portable belt sanders.
- Installs abrasive media correctly.
- Uses materials and methods to extend the useful life of abrasives.
- Follows proper safety procedures for operating disk and edge sanders.
- Identifies parts, adjustments, and abrasive media for disk and edge sanders.
- Installs abrasive media correctly.
- Completes class exercise.

### **Guidelines for Success**

#### **Assessment Plan**

Assessment is an integral part of the educational process at Washburn Tech and accurate feedback is an important tool in continuously improving the institution's technical programs. Students can expect to participate in assessment activities prior to entry into programs, within specific courses and following program completion for specific fields of study.

#### **Grading Rationale and Grading Scale**

100% - 90% = A

89% - 80% = B

79% - 70% = C

69% - 0% = class must be retaken for credit towards certificate

25% - Attendance, Safety, Quality/Productivity, Team Work, Initiative & Energy, Problem Solving

75% - Daily Quizzes & Assignments, Performance Assessments (Individual Evaluations and Projects), NCCER Certification Exams, Mid-terms and Final Exams

It is possible to pass this course without gaining the NCCER certification. NCCER requires a pass/fail on all performance profiles and a minimum of 70% to pass exam for certification.

## Attendance

Your course instructor recognizes the correlation between attendance and both student retention and achievement. Students must be enrolled before they can attend class. Students are expected to attend all class sessions and activities for which they are registered. Any class session or activity missed, regardless of cause, reduces the opportunity of learning and may adversely affect a student's achievement in the course. A student who has to be absent because of jury duty or court-mandated appearance needs to contact the instructor in advance of the absence in order that a plan for making up work missed can be made. When observance of religious holidays of students' own faith interferes with attendance in class, class activities, examinations and official ceremonies; and with class work assignments, students are required to notify the instructor or other appropriate personnel within the department in advance of such absences. Students are held responsible for material covered during their absences, with reasonable time provided to complete make-up assignments. The Instructor will devise a plan for making up work missed. When practical, major class assignments, major examinations and official ceremonies shall be scheduled on other than major religious holidays. Students who believe they have been unreasonably denied educational benefits due to their religious beliefs or practices may seek redress through the student appeal procedures.

## Disability

The Americans with Disabilities Act (ADA) Office is responsible for assisting in arranging accommodations and for identifying resources at Washburn Institute of Technology for persons with disabilities. Qualified students with disabilities MUST self-identify by completing an application. In addition students must provide appropriate medical documentation to the ADA coordinator to be eligible for accommodations. New requests for accommodations should be submitted at least two months or more prior to the date the accommodations are needed. However, please contact the ADA office as soon as a need may arise. Depending on the accommodation request, four to eight weeks lead time may be needed for timely and effective provision of accommodations.

The ADA Office coordinates and assists in arranging accommodations it deems appropriate for eligible students on a case-by-case basis. If you are a student with a disability that may substantially limit your ability to participate in any of our classes and you believe that you will need accommodations, it is your responsibility to contact: ADA Coordinator, Phone: 785.670.3365, Email: [gloria.christian@washburn.edu](mailto:gloria.christian@washburn.edu).

Washburn University prohibits discrimination on the basis of race, color, religion, age, national origin, ancestry, disability, sex, sexual orientation, gender identity, genetic information, veteran status, or marital or parental status. The following person has been designated to handle inquiries regarding the non-discrimination policies: Dr. Pamela Foster, Equal Opportunity Director/Title IX Coordinator, Washburn University, 1700 SW College Ave, Topeka, Kansas 66621, 785.670.1509, [eodirector@washburn.edu](mailto:eodirector@washburn.edu)