

**College of Micronesia – FSM**  
**P.O. Box 159**  
**Kolonia, Pohnpei**

**Course Outline Cover Page**

**Commercial Construction**

Course Title

**VCF 114**

Department and Number

**Course Description:**

This course is designed to teach the students basic construction techniques when producing more than one cabinet or piece of furniture (multiple items). It will demonstrate the use of setting up machinery, making patterns and jigs used to mass produce items of furniture.

**Prepared by:** Jeff Steel**State:** Pohnpei Campus

	Hours per Week	No. Of Weeks	Total Hours	Semester Credits
Lecture	3/6	16/8	48	3

Total Semester Credits: 3

**Purpose of Course**

Degree Requirement \_\_\_\_\_

Degree Elective \_\_\_\_\_

Advanced Certificate \_\_\_\_\_

Certificate \_\_\_\_\_

XX

Apprenticeship \_\_\_\_\_

XX

Other (Workshop) \_\_\_\_\_

**Prerequisite Course(s):** VCF 104 Intro to Cabinetmaking/Furniture Making.\_\_\_\_\_  
**Signature, Chairman, Curriculum Committee**\_\_\_\_\_  
**Date Approved by Committee**\_\_\_\_\_  
**Signature, President, COM-FSM**\_\_\_\_\_  
**Date Approved by the President**

**General Objective:**

**This course is designed to enable students to develop the skills and knowledge required to produce patterns and templates as used in the Furniture Industry.**

**Learning Outcomes:**

Upon successful completion of this course the student will be able to:

- 1. Describe and identify the use of patterns and templates and compare the various materials used to produce them.**
- 2. Prepare a full size drawing of a project containing shaped parts and Draw patterns and templates off given full size and scale drawings**
- 3. Cut shapes out of various materials using hand and power tools.**
- 4. Identify holding devices used in the production of timber components.**
- 5. Identify quality control procedures**

***STUDENTS SHOULD BE MADE AWARE OF OCCUPATIONAL HEALTH AND SAFETY ISSUES IN ALL SITUATIONS AND BE EXPECTED TO DEMONSTRATE SAFE WORKING PRACTICES AT ALL TIMES.***

**Outline of Content:**

This course contains:

- 1. Patterns and Templates**
  - Materials
  - Marking out
  - Machine Guides

2. Drawing Patterns

- Identify drawings for use in templates and Patterns
- Describe methods of transferring shapes from drawing
- Transfer Shaped Components from Drawings

3. Produce Templates

- From patterns and or setout, produce a number of templates from various materials

4. Holding Devices

- Identify Holding Devices and Jigs
- Advantages of Holding Devices and Jigs
- Sketch a holding device

5. Quality Control

- Aims of Quality Control
- Effects of poor quality control
- Stages for checking components

<b>Learning Outcomes:</b>	On completion of this course the learner will be able to:
<b>Learning Outcome 1</b>	<b>Describe and identify the use of patterns and templates and compare the various materials used to produce them.</b>
Assessment Criteria	<ol style="list-style-type: none"><li>Describe the difference between a pattern and a Template.</li><li>Describe the use of patterns and templates.<ul style="list-style-type: none"><li>Furniture Production</li><li>Cabinet Construction</li></ul></li><li>Identify five (5) different materials for templates.</li></ol>
Conditions	<ul style="list-style-type: none"><li>Workplace or simulated workplace conditions</li><li>Range of materials / components</li><li>Sample drawings or completed project</li></ul>
Assessment Method	Multiple choice questions Short answer questions
<b>Learning Outcome 2</b>	<b>Prepare a full size drawing of a project containing shaped parts and draw patterns and templates off given full size and scale drawings.</b>
Assessment Criteria	<ol style="list-style-type: none"><li>Identify drawings for use in templates and patterns.</li><li>Describe two different methods of transferring shapes from drawing.</li><li>Transfer shaped components from drawings.</li></ol>

## Conditions

- Workplace or simulated workplace conditions
- Drawing Equipment and drawing boards
- Samples of completed project

## Assessment Method

Short answer questions  
Practical  
Completion of each practical task

**Learning Outcome 3**

**Cut shapes out of various materials using hand and power tools.**

## Assessment Criteria

- a. From patterns or setouts, produce a number of templates from various materials including:
1. Ply
  2. Hardboard
  3. Plastic Laminate
  4. MDF or Particle board
  5. Cardboard

## Conditions

- Workplace or simulated workplace conditions
- Range of materials / components
- Range of hand & power tools

## Assessment Method

Practical exercises  
Assignments

**Learning Outcome 4****Identify holding devices used in the production of timber components.**

## Assessment Criteria

- a. Identify holding devices and jigs that assist in the production of timber components.
- b. Explain the advantages of holding devices and jigs in the machining and assembly process.
- c. Sketch a holding device that allows timber components to be produced economically and safely.

## Conditions

- Workplace or simulated conditions
- Samples of jigs
- Appropriate holding devices
- Drawing equipment

## Assessment Method

Completed Sketches  
Short answer questions  
Practical exercises/tests

**Learning Outcome 5****Identify Quality Control Procedures.**

## Assessment Criteria

- a. List the main aims of quality control in the production process.
- b. Identify poor quality control in the workplace.
- c. List the stages at which the components should be checked.

## Conditions

- Workplace or simulated workplace conditions
- Student notes
- Samples of quality procedures and guidelines

## Assessment Method

Multiple choice questions  
Short answer questions

**Required Course Materials:****1. Instructor:**

- a. Material, supplies and tools of the trade.
- b. Text, Teacher's Resource Guide, workbook
- c. Overhead projector, transparencies
- d. Examples of patterns, templates and jigs.

**2. Student:**

- a. Text(s), handouts provided by instructor
- b. Ring binder
- c. College ruled note sheet, pencil or pen
- d. Scientific calculator

**Reference Materials:**

- **Wheels of Learning (NCCER)**
- **The Encyclopedia of Woodworking, Mark Ramuz, Editor, 2001. Chartwell Books Inc.**
- Student handouts.
- On-site models.
- Manufacturers ' brochures and specifications.
- Sample Drawings
- Videos

**Method of Instruction:**

1. Classroom Instruction
2. Practical/Experimentation

**Evaluation:**

Final Grade for this course will be based on meeting the course requirements at the following percentage rates:

90% - 100%	A – Superior
80% - 89%	B – Above Average
70% - 79%	C – Average
60% - 69%	D – Below Average
0 % - 59%	F – Failure

**Attendance:**

The COM-FSM vocational educational attendance policy will apply.