

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

Course Outline Cover Page

**Maintenance and Safe Use of Static Machines,
Power Tools and Equipment**

Course Title

VCF 124
Department and Number

Course Description:

This course is designed to teach students the correct and safe methods of using both power tools and static machines when making cabinets and furniture. Students will learn general maintenance, service and care of power tools and static machinery used in the manufacturing process of both domestic and commercial cabinet/furniture making.

Prepared by: Jeff Steel

State: Pohnpei Campus

| | Hours per Week | No. Of Weeks | Total Hours | Semester Credits |
|-------------------------|----------------|--------------|-------------|------------------|
| Lecture | 4/8 | 16/8 | 64 | 4 |
| Total Semester Credits: | | | | 4 |

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

COURSE TITLE **MAINTENANCE AND SAFE USE OF STATIC MACHINES,
POWER TOOLS AND EQUIPMENT**

Nominal Duration **64 Hours/4 Credits**

Course Code **VCF 124**

General Objective **To assist students develop fundamental skills and knowledge in the safe use of basic static machines, power tools and equipment. Make students aware of safety aspects while operating machinery and provide the students with the underpinning knowledge and skills to maintain, service and care for static machines, power tools and equipment.**

Prerequisites

- VCF 104 Intro to Cabinetmaking/Furniture Making. Before or concurrently

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

1. Identify machines, equipment and their parts.
2. State the function of machines and equipment.
3. Perform basic setup and safely use machines and equipment.
4. Identify daily maintenance requirements of machines and equipment.
5. Demonstrate the safe operation and routine maintenance of specified portable powered tools.

Delivery Delivery methods must provide for the demonstration of competence in skills specified in all learning outcomes.

Assessment More than one learning outcome may be assessed at once, by observing the learners ability to apply both specified skills and knowledge.

LEARNING OUTCOME 1

Machines, Equipment and their Parts

VCF 124.1

Identify machines equipment and their parts.

Assessment Criteria

124.1.1

Identify the following machines, equipment and their parts.

Table saw

- Table
- Rise & fall
- Fence
- Blade
- Guard
- Switches
- Riving knife

Radial Arm Saw

- Table
- Rise & fall
- Fence
- Blade
- Guard
- Switches
- Sliding carriage
- Angle adjustments

Drop Saw

- Table
- Adjustments
- Blade
- Fence
- Guard
- Switch

Bandsaw

- Table
- Blade
- Guide Assemblies
- Guards
- Fence
- Top & Bot Wheels
- Switches
- Tracking Adjustment
- Brake
- Tension Adjustment

Surface Planer

- Tables
- Cutters
- Guards
- Fence
- Switches

Panel Planer

- Table
- Chipbreaker
- Anti-friction rollers
- Cutters
- Guards
- Infeed rollers
- Switches
- Outfeed rollers
- Pressure bar
- Rise & Fall adjustments
- Feed selection device

Vertical Drill Press

- Table
- Table height adjustment
- Drill speed adjustment
- Depth setting
- Switches

All work practices must ensure that safe practices are adopted.

Conditions

Students will be working under close supervision with:

- Resources
- Verbal presentation to the group of learners
- Workplace or simulated workplace conditions.

Assessment Method

Assessment may involve any of the following methods

- Oral questioning
- Written tests
- Computer managed testing
- Individual written assignments
- Active participation in group activity
- Practical Exercisers

LEARNING OUTCOME 2

Function of machines and Equipment.

VCF 124.2

State the function of machines and equipment.

Assessment Criteria

124.2.1 State the function of the machines equipment listed.

- Table saw
- Surface Planer
- Panel Planer
- Radial Arm Saw
- Drop Saw
- Band Saw
- Vertical Drill Press

All work practices must ensure that safe practices are adopted.

Conditions

The learner will be provided with:

Verbal presentation to the group of learners

Resource material

Learning guide/workbook

Assessment Method

Assessment may involve any of the following:

- **Oral questioning**
- **Written testing**
- **Computer managed testing**
- **Individual and group written assignments**
- **Active participation in group activity**

LEARNING OUTCOME 3

Setup and Safe Use

VCF 124.3

Perform basic setup and safely use machines and equipment.

Assessment Criteria

124.3.1

Perform basic setup and safely use the Machines and equipment listed.

- Table Saw**
- Surface Planer**
- Panel Planer**
- Radial Arm Saw**
- Drop Saw**
- Band Saw**
- Vertical Drill Press**

All work practices must ensure that safe practices are adopted.

Conditions

Working individually, under close supervision, given:

- **Resources**
- **Tools, materials and equipment**
- **Verbal presentation to the group of learners.**
- **Resource material**
- **Learning guide/workbook**

Assessment Method

Assessment methods may involve any of the following methods:

- **Oral questioning**
- **Written tests**
- **Computer managed testing**
- **Individual written assignments.**
- **Active participation in group activity.**

LEARNING OUTCOME 4

Daily Maintenance

VCF 124. 4

Identify daily maintenance requirements of machines and equipment.

Assessment Criteria

124.4.1 Identify daily maintenance requirements of the machines and equipment listed.

- Table saw
- Surface Planer
- Panel Planer
- Radial Arm Saw
- Drop Saw
- Band Saw
- Vertical Drill Press

All work practices must ensure that safe practices are adopted.

Conditions

Working individually, under close supervision, given:

- Resources**
- Tools, materials and equipment**

Assessment Methods

Assessment may involve any of the following:

- Correct and accurate completion of each practical task performed to the standard/tolerance as specified in the assessment criteria.**
- Completion of practical tasks**
- Oral questioning**
- Written assignment/test**
- Computer managed testing**

LEARNING OUTCOME 5

Application and Use of Portable Power Tools

VCF 124.5

Demonstrate the safe operation and routine maintenance of specified portable power tools.

Assessment Criteria

124.5.1 Demonstrate the correct application of the Following Portable power tools:

- Circular saw
- Jig saw
- Belt Sander
- Biscuit Cutter
- Electric Drill
- Router
- Planer
- Orbital Sander
- Site Compressor

All work practices must ensure that safe practices are adopted.

Conditions

- **Workplace or simulated workplace conditions**
- **The learner will be provided with:**

Resource material

Learning guide

Tools and equipment

Assessment Method

- **Correct and accurate completion of each practical task performed to the standard/tolerance as specified in the assessment criteria.**

SUGGESTED REFERENCE MATERIALS

- **Hardware and manufacturers manuals**
- **Wheels of learning Level One Carpentry (NCCER)**
- **Carpentry and Building Construction, Fifth Edition. (Glencoe, McGraw-Hill)**
- **Library Resources**

RESOURCES

- **Workshop Facilities**
- **Tools of Trade**
- **Demonstration Units**

GRADES

Final Grades for this course will be assessed based on COM-FSM policy and 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 attendance policy will apply.