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

Course Outline Cover Page

Engine Dismantling, Inspection & Assembly — Course Title
VSM 103 — Department and Number

Course Description: This course deals with the basics of how engine speed is governed, preliminary checks prior to engine dismantling, carrying out failure analysis, engine disassembly and inspection, teardown steps and engine repair and replacement.

Students will learn how to make preliminary examination and checks to engines prior to making the big decision of dismantling and performing a major overhaul. This course gives more emphasis to the "hands-on" approach in engine dismantling and assembly.

Prepared by: Pablo H. Lamsis, Jr. **State:** Pohnpei Campus

	Hours per Week	No. Of Weeks	Total Hours	Semester Credits
Lecture	3	16	48	3
Laboratory	3	16	48	1
			Total Semester Credits:	4

Purpose of Course

Degree Requirement	_____
Degree Elective	_____
Advanced Certificate	_____
Certificate	_____XX_____
Remedial	_____
Other (Workshop)	_____

Prerequisite Course(s): VSM 101 & VSM 102

_____ _____
Signature, Chairman, Curriculum Committee **Date Approved by Committee**

_____ _____
Signature, President, COM-FSM **Date Approved by the President**

I. LEARNING OUTCOMES:

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

1. Explain the purpose and function of the governor system in a small engine.
2. Demonstrate how to carry out engine failure analysis.
3. Perform engine disassembly and inspection following teardown procedures.
4. Prepare engine parts and carry out assembly operations.

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

Learning Outcome 1: Explain the purpose and function of the governor system in a small engine.

Assessment Criteria:
a. Explain how the governor protects the engine.
b. Enumerate governor types.
c. Explain governor construction and connection.

Assessment Method: Multiple choice questions
Short answer questions
Practical exercises/tests

Learning Outcome 2: Demonstrate how to carry out engine failure analysis.

Assessment Criteria:
a. Demonstrate how to carry out preliminary engine examination.
b. Demonstrate how to perform engine disassembly to carry out checks.
c. Perform engine failure analysis.

Assessment Method: Multiple choice questions
Short answer questions
Practical exercises/tests

Learning Outcome 3: Perform engine disassembly and inspection following teardown procedures.

Assessment Criteria:
a. Carry out preliminary steps prior to disassembly.
b. Dismantle the engine following teardown steps as instructed.
c. Clean engine parts and inspect them for wear.

Assessment Method: Multiple choice questions
Short answer questions
Practical exercises/tests

Learning Outcome 4: Prepare engine parts and carry out assembly operations.

Assessment Criteria: a. Carry out engine preparation
b. Recondition or replace defective parts.
c. Perform engine assembly operations following instructions.

Assessment Method: Multiple choice questions
Short answer questions
Practical exercises/tests

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

II. COURSE CONTENTS:

A. Governor systems
- Engine protection
- Types of governors and operation
- Governor construction, connection and adjustment.

B. Failure analysis
- Preliminary examination
- Disassembly to check engine parts
- Failure analysis

C. Engine disassembly, inspection and assembly.
- Preliminaries
- Teardown steps
- Engine repair, replacement and assembly.

III. TEXTBOOK:

Small Engine Technology, (Workbook) by William Schuster ISBN: 0-8273-7701-0

IV. REQUIRED COURSE MATERIALS:

1. Instructor:

a. Classroom with whiteboard
b. Laboratory equipment with tools of the trade
c. Text, Teacher's Resource Guide, workbook
d. Computer, Overhead projector, transparencies

2. Student:

a. Text(s), handouts provided when deemed necessary by the Instructor
b. Ring binder
c. College ruled note sheet, pencil or pen

V. REFERENCE MATERIALS:

Small Engine Technology by William Schuster (ISBN: 0-8273-7700-2)
Small Engine Technology by William Schuster (0827377789)

Small Engine Care & Repair by Briggs & Stratton
Small Engines Fundamentals and Service, Eugene W. Stagner, 1998
How Stuff Works, www.howstuffworks.com
Manufacturer's Service Manuals
Selected Films and Charts from Various Sources

VI. METHODS OF INSTRUCTION:

1. Computer Aided Instruction
2. Practical/Experimentation
3. Lecture/Demonstration

VII. EVALUATION:

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

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

Credit by Examination is allowed

VIII. ATTENDANCE POLICY:

The COM-FSM attendance policy will apply.

IX. ACADEMIC HONESTY POLICY:

The COM-FSM academic honesty policy will apply.