# College of Micronesia – FSM
**P.O. Box 159**
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# Course Outline Cover Page

**Marine resource management and financial management for small scale fishing          FT 140**
Course Title                                                                 Department and Number

**Course Description:**  This course has been designed for students who wish to work as crewmembers of fishing vessels, in fishery businesses, and field researchers and administration officers of marine resources management office.
This course is for students requiring basic knowledge of Marine resources management and Financial management skills for a small scale fishing business.

**Prepared by:** Taro KAWAMOTO                               **State:** FSM-FMI

|          | Hours per Week | No. Of Weeks | Total Hours | Semester Credits |
|----------|----------------|--------------|-------------|------------------|
| Lecture  | 16             | 2            | 32          | 2                |
| Practicum| 15             | 2            | 30          | 0.5              |
|          |                |              | Total Semester Credits: | 2.5  |

**Purpose of Course**

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

**Prerequisite Course(s):** FT 110 Basic Fishing knowledge


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


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

FT 140: Marine resources management and financial management
College of Micronesia -FSM

**General Objective:**
This course is designed to provide the learner with the basic knowledge and skills of marine resource management and financial management skills for a small scale fishing business.

**Outline of Content:**      This course contains:

1. Fisheries resources
        Marine resources and Fishery resources
        Characteristics of Fishery resources
        Fishery resources and fishing activities
        Fluctuation factors of stock biomass
        CPUE and fishing effort
        Stock estimation methods
        Growth and age estimation
        Optimum Yield
        Fishery resources management
2. Financial management of fishing
        Outline of commercial fishing
        Feasibility study
        Causes of small scale fishing failure
        Management of small scale fishing business
        Operation costs, Incomes and Profits
        Market
        Keeping logbooks

**Learning Outcomes:**      Upon successful completion of this course the student will be able to:
1. Outline the main characteristics of fisheries resources.
2. Describe fluctuation factors of stock biomass
3. Describe the meaning of CPUE
4. Outline stock biomass estimation methods.
5. Describe fish age estimation methods.
6. Describe the meaning of the Optimum yield.
7. Describe several kinds of fisheries management methods
8. Describe steps for feasibility studies in small scale fishing business.
9. Describe some causes of fishing business failure.
10. List fishing business best practice.
11. Estimate fishing cost, expected incomes and profit.
12. Describe outline of fish market.
13. Describe importance of keeping fishing logbooks.

**Assessment Criteria:**

| Learning outcome | Assessment Criteria |
|---|---|
| 1. Outline the main characteristics of fisheries resources. | • Three major characteristics of fisheries resources are described |
| 2. Describe fluctuation factors of stock biomass | • Russell's formula and its factors are described |
| 3. Describe the meaning of CPUE | • Examples of CPUE are listed<br>• The value of CPUE are calculated |
| 4. Outline stock biomass estimation methods. | • De Lury method, Petersen method, Spawning study and Acoustic survey are described<br>• Some case studies of stock biomass estimation methods are calculated |
| 5. Describe fish age estimation methods. | • Fish body measurement surveys are carried out.<br>• Several kinds of Age characters are described<br>• Growth estimation curve is described |
| 6. Describe the meaning of the Optimum yield. | • Logistic model of reproduction is described<br>• MSY, MEY and OY are described<br>• Over fishing is described |
| 7. Describe several kinds of fisheries management methods | • Several kinds of input control and output control methods are listed.<br>• Suitable fishing control methods are selected in case study. |
| 8. Describe steps for feasibility studies in small scale fishing business. | • Required resources for starting fishing business are listed up<br>• Technical feasibility study, Market feasibility study and Overall viability study are described |
| 9. Describe some causes of fishing business failure. | • Some causes of small scale fishing business failure are described in case study. |
| 10. List fishing business best practices. | • Points of operation management, financial management are listed |
| 11. Estimate fishing cost, expected incomes and profit. | • Variable cost and fixed cost and depreciation are described<br>• Expected incomes of fishing business are calculated<br>• Point increase profits are listed |
| 12. Describe outline of fish market. | • Local market and overseas market characteristics are described |
| 13. Describe the importance of keeping logbooks. | • Information required to keep in logbook are listed<br>• SPC logbooks are introduced in case study |
|  | As specified in the Assessment Strategy listed at the end of this outline and by a combination of:<br>·Written assessment<br>·Oral assessment |

| | ·Observation during practical sessions. |
|---|---|

## Delivery strategy

The course provides for delivery by on or off-the-job training and assessment utilizing practical demonstration that simulate conditions found on commercial fishing vessels.

Some areas of content may be common to more than one learning outcome, and therefore integration of training and assessment may be appropriate.

Methods of instruction should include:
1. Classroom instruction;
2. Instructor demonstrations;
3. Participation in practical exercises;
4. Group work and
5. Field survey

## Resource requirements

Delivery of the training will require:
- Classroom
- Overhead projector
- Video and monitor
- Learners guides
- Fish sampling gear
- Microscope
- Weigh scale and tape measure for fish
- Calculator
- Access to fish market

## Assessment Strategy

Assessment Method

Learning outcomes may not be assessed separately. A holistic assessment strategy is proposed that attempts to ensure as much as possible that the assessment replicate conditions that learners may encounter in their workplace.

Practical assessment will be undertaken by observing the ability of learners to correctly apply the techniques taught in the course.

Condition of Assessment

Assessment may take place on or off-the-job. Where assessment is conducted off-the-job, the environment, where possible will simulate the real work place situation.

**Evaluation:**

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

| | |
|---|---|
| 96% - 100% | A – Superior |
| 90% - 95% | B – Above Average |
| 80% - 89% | C – Average |
| 69% - 79% | D – Below Average |
| 0 % - 69% | F – Failure |

**Attendance:**

The COM-FSM attendance policy will apply.