

Appendix C
College of Micronesia-FSM

COURSE OUTLINE COVER PAGE

Cultural Mathematics for Understanding-Application in Yap State Schools-ED -234

Course Title

Department and Number

Course Description: This course incorporates a review of the counting, measurement, and classification systems (Yapese, Ulithian, Woleaian, and Satawalese) used within Yap State multilingual cultural populations. Individualized focusing will be on each students first language system using student-centered approaches to teaching. This focusing will bring an exposure and initial competency relating to approaches, specific methods, materials, and the teaching skills necessary for introduction of these systems.

Course Prepared by: Dr.Caldwell & Yap DOE

State Yap

Hours per Week	No of Week	Total Hours	Semester Credits
Lecture <u> 2 </u>	x <u> 16 </u>	= <u> 32 </u>	= <u> 2 </u>
Laboratory <u> </u>	x <u> </u>	= <u> </u>	= <u> </u>
Workshop <u> </u>	x <u> </u>	= <u> </u>	= <u> </u>
Total Semester Credits			<u> 2 </u>

Purpose of Course: Degree Requirement
 Degree Elective
 Certificate
 Other

Prerequisite Course(s): None

6/10/98

Date Approved of Committee

Signature, President, COM-FSM

6/11/98

Date Approved by President

College of Micronesia- FSM
Course Outline

Course Title: Cultural Mathematics for Understanding and Application in Yap State Schools

1. Course Objectives:

A. General

This course incorporates a review of the counting, measurement, and classification systems (Yapsse, Utithian, Woleaiin and Satavvalse) used within Yap State multilingual cultural populations. Individualized focusing will **be on each** students first language system using student-centered approaches to teaching. This focusing will bring an exposure and initial competency relating to approaches, specific methods, materials, and the teaching skills necessary for introduction of these systems. Presentations and activities will relate to the appropriate language and cultural context. The focus is on math for understanding in the use of these systems. The course content reflects mathematics grounded in problem solving higher-order thinking and relationships between mathematical concepts and the local environments.

B. Specific *By the end of this course, students will have:*
developed knowledge and understandings of.

- Local counting systems
- Local measurement systems
- Local classification systems
- Number sense: (number meaning, number relationships, magnitudes of numbers, **and effects of operations**)
- **The set up of the Yap State Mathematics Framework developed teaching skills to**
 - Incorporate local manipulative,
 - Use concrete materials to illustrate basic math concepts
 - Incorporate higher order thinking skills in questioning and tasks
 - Set up and manage cooperative learning experiences for students
 - Adapt or use a variety in assessment strategies for assessing student learning in mathematics
 - Build instructional lessons/units using the local language and context
 - Teach math using a variety of techniques aimed at the different learning styles of children

II. Course Content

A. Yap State Counting Systems (Ulithian, Woleaian, Satawalese, Yapese)

B. Strategies to teach the counting systems using local materials and context of understanding

C. Forms of local measurement and classification systems in Yap State

D. Number skills and operations, measurement

E. Problem solving-steps in solving problems In a local context

F. Essentials of effective lesson plans and building lesson plans incorporating a variety of teaching methods

G. Creating hands-on manipulative from materials found in local environment

H. Teaching to the different teaming styles of children

I. Exploring forms of assessment' paper-pencil, oral strategies and performance assessment tied to specific Warner outcome.

III. Textbooks: No Course Textbook

IV. Required Course Materials

Yap State Local Language Readers
Yap State Mathematics Curriculum Framework
Local Language Dictionaries/Concept Lists

V: Reference materials:

Multiple Intelligences Handbook; Pacific Standards of Excellence in Mathematics

VI. Instructional Cost: No Additional Costs

VII. Methods of Instruction

The teaching of the course will model the **variety** of strategies we aim for the participants to develop over the course sessions. These strategies include lecture, cooperative group work, demonstrations, and group discussions. Students will be developing actual math teaching units bed to an appropriate cultural context and building local language development. Participants will be required to present these teaching units to the class. Each student will be required to keep a reflection journal that contains application notations.

Student performance will be assessed through a variety of techniques including journal entries on relevant applications, content/skill tests tied to the course objectives, participation and lesson/unit plan development

VII. Evaluation

None: No credit by examination

IX Attendance Policy:

The attendance policy for this course will be in accordance of the CCJM-FSM Attendance Policy as detailed in the CQM Handbook.