A r E'00

Syllabus Manager
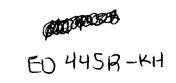# Math Methods

EO 445R -KH

Chaminade University
Education Department
808-739-4652

Hayami Miyasato
hmiyasato@chaminade.edu
Office Phone: 808-735-4701
Office Fax: 808-739-4607

Math Methods
Section 445R (400 Level Outer Island Syllabus)
October 2, 2000 through December 13, 2000

Office Hours: Tuesdays & Wednesdays 1:00-4:00pm

COURSE DESCRIPTION

Basic concepts related to math instruction and math-related learning problems of students with mild/moderate disabilities; strategies for teaching math curricula K-12; study of issues and research-based methods; alignment of math goals and curricula with national and state standards.

COURSE OBJECTIVES

From this course, the student will be able to do the following:

1. State important historical trends in math reform.

2. State the five different modes in which math concepts may be represented.

3. Explain how to use three metacognitive strategies for math problem solving.

4. Provide examples of strategies for computational estimation.

5. Discuss the strategies for mental computation.

6. Explain what strategies are appropriate for instruction in time and measurement.

7. Discuss the strategies teachers can use to help students understand equivalence and simplification of fractions.

8. Discuss the use of models to teach the relationship of fractions, percentages, and decimal concepts and operations.

9. State how the van Hiele levels of geometry might be applied in instruction.

10. State models useful in teaching operations with integers and variables.

Class Schedule: <u>Days</u>   <u>Time</u>   <u>Building</u>   <u>Room</u>
                 Monday 4:30 pm to 7:30 pm Statewide Distance Learning Sites Video Conference

Required Text: Cathcart, W.G., Pothier, Y.M., Vance, J.H., Bezuk, N.S.(2000).**Learning** mathematics in elementary and middle schools. Upper Saddle River, NJ: Prentice Hall Inc.

Rivera, D.P.(Ed.).(1998).**Mathematics** education for students with learning disabilities: Theory to **practice.**Austin, TX: Pro-Ed. (Salmon-colored handout).

Note: Assignments and Exams

Exams

12 chapter self-quizzes shall be completed from the Prentice Hall website as indicated in the schedule. You are responsible for only the Multiple Choice quizzes as indicated each week except for midterm and final week. The quizzes have a hint option and are not difficult. There are 100 questions total and they are worth 1 point each for a total of 100 points. You will need to email the results to my email address by the respective class meeting date. Quizzes cannot be made up, and are due on the day of class because they are also serving as class time credit (one hour) in order to have a total of four hours of class time each week for 10 weeks plus the week of our final.

Midterm Exam

There will be a midterm exam which will cover all readings assigned, class lecture and discussions during the first five class sessions, 10/2-10/30, with a focus on the course objectives through the fifth class session presented in this syllabus. The midterm is worth 50 points. The midterm cannot be made up.

Final Exam

Our course will end with a final exam which will cover all readings assigned, class lecture and discussions during the entire ten class sessions, 10/2-12/4, with a focus on all of the course objectives presented in this syllabus. The final is worth 100 points. The final cannot be made up.

Course **Objectives**

Students will answer each of the 10 course objectives listed in this syllabus. Each answer is worth 5 points each for a total of 50 points. The first 5 objectives are due on 11/6. The second 5 objectives are due on 12/11.

Lesson Plan

Students will plan, write, and implement a standard lesson plan which is written in narrative form(what you actually will say). Use the most recent RISE lesson plan format that is available, and state an IEP goal even if the RISE lesson plan does not require it. The lesson plan will instruct the students in a new math concept. A draft of your lesson plan must be submitted by October 16 and approved before implementation. The draft must outline the steps in the RISE lesson plan format. The lesson plan must incorporate one method and one area chosen from the following two groups (i.e., 1A):

Learning Strategies

1. cooperative learning

2. peer tutoring

3. direct instruction

4. self-management

NCTM Standards K-12 Focus Areas

A. connection/application

B. problem solving

C. student verification

D. communication

The lesson plan will include an appropriate IEP objective and a stated Hawaii Content and Performance Standard. The lesson plan must be evaluated by the student's RISE resource teacher. Based on the evaluation given and reflection by the student, the student will rewrite the necessary changes before submitting the lesson plan in final form. The student will submit the following:

1. Original draft of plan

2. Narrative lesson plan

3. RISE Resource Teacher Evaluation (signed and dated)

4. Raw Data of Student Work

GRADES

Student grades will be determined as follows:

Assignment ..... Points

Quizzes 100

Lesson Plan 50

Midterm 50

Course Objectives..50

F

TOTAL 350

Grading Score

315-350........... A

275-314........... B

245-274........... C

175-244........... D

000-174........... F

A "C" or lower is not a passing grade for ABCSE or graduate level students.

ADMINISTRATIVE REQUIREMENTS

1. Attendance and punctuality is required. Each student will have a "buddy" with whom he/she can assist should an emergency occur. Any unexcused absence will result in a 10-point deduction from your total score.

2. Student assignments and exams must be on time. Any late assignment will result in a 10-point deduction per day from the score of your project.

Course Credit Hours: 3
Grade Type: Whole Letter Grade (A - F)
Grade Percentage: 28% - Quizzes
                     15% - Mid-Term Exam
                     14% - Course Objectives
                     15% - Lesson Plan
                     28% - Final
                     """% - Above are approximated percentages

October 2, 2000

Assignment Name :   PRETEST

October 9, 2000

Assignment Name: HISTORY, STANDARDS, & GENERAL PRINCIPLES
Notes / Instructions :   CATHCART, CH 1 & 2
                          RIVERA, CH 6

Type	Component Name
Companion Website	Chapter 1 - Multiple Choice
Companion Website	Chapter 2 - Multiple Choice

October 16, 2000

Assignment Name: PROBLEM SOLVING
Notes I Instructions :   CATHCART, CH 3
                          RIVERA, CH 9

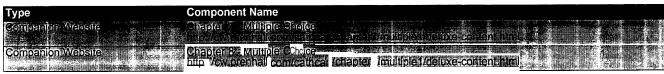   Lesson Plan outlines are due.

Type	Component Name
Companion Website	cath/chapter3/me 6 3

October 23, 2000

Assignment Name: NUMERATION
Notes I Instructions :   CATHCART, CH 6
                          RIVERA, CH 7 & 8

Type	Component Name
Companion Website	Chapter 6 - Multiple Choice

October 30, 2000

Assignment Name: OPERATIONS
Notes / Instructions :   CATHCART, CH 7 & 8

Type	Component Name
Companion Website	Chapter 7 - Multiple Choice
Companion Website	Chapter 8 - Multiple Choice

November 6, 2000

Assignment Name: MIDTERM
Notes I Instructions :   COURSE OBJECTIVES 1-5 ARE TO BE EMAILED

November 13, 2000

Assignment Name: ESTIMATION
Notes / Instructions :   CATHCART, CH 9

Lesson Plan due

Type	Component Name
Companion Website	Chapter 9 - Multiple Choice
	http://cw.prenhall.com/cathcart/chapter9/multiple1/deluxe-content.html

November 20, 2000

Assignment Name: FRACTIONS
Notes / Instructions :   CATHCART, CH 10 & 11

Type	Component Name
Companion Website	Chapter 10 - Multiple Choice
	http://cw.prenhall.com/cathcart/chapter10/multiple1/deluxe-content.html
Companion Website	Chapter 11 - Multiple Choice
	http://cw.prenhall.com/cathcart/chapter11/multiple1/deluxe-content.html

November 27, 2000

Assignment Name: DECIMALS, RATIOS & PERCENTAGES
Notes / Instructions :   CATHCART, CH 13

Type	Component Name
Companion Website	Chapter 13 - Multiple Choice
	multiple/deluxe-content

December 4, 2000

Assignment Name: GEOMETRY & MEASUREMENT
Notes / Instructions :   CATHCART, CH 14 & 15

Type	Component Name
Companion Website	Chapter 14 - Multiple Choice
	http://cw.prenhall.com/cathcart/chapter14/multiple/deluxe-content.html
Companion Website	Chapter 15 - Multiple Choice
	http://cw.prenhall.com/cathcart/chapter15/multiple/deluxe-content.html

December 11, 2000

Assignment Name: FINAL
Notes / Instructions :   Course Objectives 6-10 are to be ernailed