

Chaminade University of Honolulu
ED446 - Advanced Math and Geometry
Instructor - Joe Monaco, 395-9261 (h)

Fall 2000
Tues., 2:00-5:00 p.m.
Office Hours - Tues. 5:00-5:30

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Rationale

The National Council of Teachers of Mathematics (NCTM) states that "knowing math is doing math." This applies to all levels of instruction, K-12. In this spirit, this course focuses on math concepts presented in grades 4-8 and how to teach them using concrete models. As we know that students need to talk about how they think about math, emphasis is on student involvement in their own learning through communication and cooperative learning activities.

Outcomes

1. Students will model cooperative learning strategies in order to better facilitate communication and mathematical reasoning.
2. Students will use concrete models in order to improve their capacity to teach/learn mathematical concepts.
3. Students will learn how to teach mathematics in a developmentally appropriate way.

Course Requirements and Evaluation

Manual of lesson plans	50%
Attendance and participation	40%
Presentation of lesson	10%

- Manuals should be in lesson plan format (including a table of contents). Lesson plans should include the following information:
 - Objective(s), Materials, Procedure, Assessment (immediate and/or future), and any appropriate pictures, drawings, or diagrams
- This class involves many hands-on activities in addition to lectures and readings from the textbook. Attendance and participation in class is a necessity.

Textbook

Van de Walle, John A. Elementary School Mathematics: Teaching, Developmentally, 1998.

Chaminade University of Honolulu
ED446 - Advanced Math and Geometry
Instructor - Joe Monaco, 395-9261 (h)

Fall 2000
Tues., 5:45-8:45 p.m.
Office Hours - Tues. 5:00-5:30

Rationale

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ED446 - SYLLABUS AND SCHEDULE

August 29 Course Introductions, Math-phobia, Meanings of Operations
Problem Solving

Assignment: Do problem solving lesson plans
Read chapter 12

Sept. 5 Fraction Concepts

Assignment: Do fraction concept lesson plans
Read chapter 13

Sept. 12 Fraction Operations
Video - "Math in the Middle Grades" - part 1

Assignment: Do fraction operation lesson plans
Read chapter 15

Sept. 19 Ratio and Proportion

Assignment: Do ratio and proportion lesson plans
~~Read chapter~~ 19

Sept. 26 Probability and Statistics

Assignment: Do probability and statistics lesson plans
Read chapter 20

Oct. 3 Number Theory
Video - "Math in the Middle Grades" - part 2

Assignment: Do number theory lesson plans
Read chapters 22 & 23

Oct. 10 Integers

Assignment: Do integer lesson plans

Oct. 17 Algebra

Assignment: Do algebra lesson plans

Oct. 24 Algebra
Video - "Math in the Middle Grades" - part 3

Assignment: Do algebra lesson plans

Oct. 31 Algebra

Assignment: Do algebra lesson plans
Read chapter 17

Nov. 7 Geometry

Assignment: Do geometry lesson plans

Nov. 14 Geometry

Assignment: Do geometry lesson plans

Nov. 21 Measurement

Assignment: Read chapter 24

Nov. 28 Geometry

Assignment: Complete all lesson plans for final manual
Prepare for lesson presentation

Dec. 5 Student Presentations of Lessons
(xerox a lesson plan for each member of the class)

Note: Schedule is subject to change to meet the needs of the class.