

**Chaminade University of Honolulu**  
**Fall Session 1999**  
**October 4 – December 16**  
**Schofield Barracks – Bldg. 560**

**COURSE:** Mathematics MA10010 Survey of Mathematics

**TIME:** Mon. – Thurs. 1140 – 1240

**INSTRUCTOR:** Peter M. Anzalone, M.P.H.

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**TEXTBOOK:** Smith, Karl J. 1998, **The Nature of Mathematics - Eighth Edition**, Pacific Grove, CA: Brooks/Cole Publishing Company.

**Recommended Reading:** Pappas, Theoni 1989, **The Joy of Mathematics**, San Carlos, CA: Wide World Publishing.

**INTRODUCTION AND COURSE DESCRIPTION:**

The purpose of this class is to create a positive attitude towards mathematics. It is not designed to present the technical details of complicated theorems, proofs and calculations, but rather to give insight into many important concepts of mathematics and how they can improve our thinking processes. It is my personal goal that this course will leave you with the feeling that mathematics can be a useful and practical tool in your daily lives.

This class is an introductory course that will fulfill the Track A general education requirement in mathematics. Certain topics have been selected to acquaint you with a wide variety of topics in mathematics with an emphasis on mathematical reasoning. A major focus of this class will be using this reasoning process to create a logical approach to the solution of mathematical problems.

This class will not be presented exclusively in a lecture format. The topics and concepts will be introduced and then discussed and applied to the solution of mathematical problems in an interactive format. As a student of this class, you are required to come to class with an open mind about mathematics. You will be required to participate in class discussions and to occasionally work together in small groups on in-class projects. It is important that you attend every class, read the assigned chapters and come to class well prepared to participate in class exercises.

Your grade for this class will be based on in-class quizzes, homework assignments, one mid-term exam, one final exam, class participation and attendance, and a term paper/project. The term paper/project will be related to a topic being covered in this course. The detailed requirements for the term paper/project will be discussed in class.

**CLASS OBJECTIVES:**

- ✓ To introduce a wide variety of topics in mathematics.
- ✓ To create a logical approach to the solution of mathematical problems.
- ✓ To create a positive attitude toward mathematics.
- ✓ To foster an appreciation of the power of mathematics.

## GRADING:

The grading will be based on the following criteria:

- Quizzes/Homework assignments 25%
- Mid-term Exam 25%
- Final Exam 30%
- Term paper/project 15%
- Class participation and attendance 5%

A= 90-100
B= 80-89
C= 70-79
D= 60-69
F= 59 & below

## CLASS SCHEDULE:

<u>DATE</u>	<u>TOPIC</u>	<u>ASSIGNED READING</u>
<b>October</b>		
4	Orientation and Introduction	
5	Problem Solving	1.1
6	Problem Solving, <b>Quiz #1</b>	1.1
7	Problem Solving with Sets	1.2
<b>11</b>	<b>No class – Discoverer’s Day</b>	
12	Problem Solving with Sets, <b>Quiz #2</b>	1.2
13	Inductive and Deductive Reasoning	1.3
14	Scientific Notation	1.4
18	Deductive Reasoning, <b>Quiz #3</b>	2.1
19	Deductive Reasoning	2.1
20	Truth Tables and the Conditional	2.2
21	Operators of Laws of Logic	2.3
25	The Nature of Proof, <b>Quiz #4</b>	2.4
26	Problem Solving Using Logic	2.5
27	Different Numeration Systems	3.3
28	Different Numeration Systems	3.3
<b>November</b>		
1	Computers and the Binary Numeration System, <b>Quiz #5</b>	3.5
2	Computers and the Binary Numeration System	3.5
3	Prime Numbers	4.2
4	Prime Numbers & Mid-Term Review	4.2
<b>8</b>	<b>Mid-Term Exam</b>	
9	Evaluation, Applications, and Spreadsheets	5.3
10	Evaluation, Applications, and Spreadsheets	5.3
11	<b>No Class, Veteran’s Day</b>	
15	Similar Triangles, <b>Quiz #6</b>	7.4
16	Similar Triangles	7.4
17	Golden Rectangles	7.5
18	Konigsberg Bridge Problem	7.6
22	Interest, <b>Quiz #7</b>	6.1
23	Installment Buying	6.2
24	Introduction to Probability	9.1
25	<b>No Class, Thanksgiving Day</b>	

**November (cont.)**

29	Introduction to Probability, <b>Quiz #8</b>	9.1
30	Mathematical Expectations	9.2

**December**

1	Probability Models	9.3
2	Counting Formulas	9.4

6	Calculated Probabilities, <b>Quiz #9</b>	9.5
7	Frequency Distributions and Graphs	10.1
8	Descriptive Statistics	10.2
9	Descriptive Statistics	10.2
	<b>Term Paper Due</b>	

13	The Normal Curve, <b>Quiz # 10</b>	10.3
14	Class Presentations	
15	Class Presentations & Overview of Topics	
16	<b>Final Exam</b>	