

90
MA100 SURVEY OF MATHEMATICS - ONLINE**Course Description**

This is an introductory course that meets the Track A general education requirement in mathematics. Topics have been selected to be challenging and to help create an organized approach to problem solving. As a terminal course MA100 is not designed to prepare you for other courses such as MA102, 103, and 210.

With your effort you should discover some of the beauty that lies within the realm of mathematical thinking and acquire some of the tools and thought processes that may be help in your everyday life.

Text Book

Smith, Karl H., THE NATURE OF MATHEMATICS (8th Edition), 1998, Brooks/Cole Publishing Co.

Class Format and Activities

This course is offered online using e-mail and other Internet technologies. Consequently, students are required to have access to an Internet connected computer. Students are also expected to be familiar with basic Internet technology including sending and receiving e-mail and attachments, bulletin board postings, navigating the World Wide Web, performing searches, and downloading files.

Regular weekly communication with the instructor and the submission of all required assignments and collaborative electronic communication between classmates concerning course content is **mandatory**.

Specific weekly course assignments are transmitted to each class member by the beginning of each academic week (Sunday). Weekly coursework will include required reading, assignments, and discussion group questions - to be completed and submitted to the instructor or group as specified. Students are encouraged to contact the instructor with any questions, or for clarification of assigned tasks prior to the due date. Last minute inquiries may not leave you sufficient time to complete the work.

Each student will be required to research and present a topic in the mathematical field. All papers must represent original insight, with the topic to be approved in advance. Further information will be provided as the course progresses. This research will be shared with the class.

Coursework should show full comprehensive steps for the solution and not just a 'correct' answer. An all-inclusive final will be given covering the most important concepts and require detailed steps to each solution.



Grading

Satisfactory performance entails the successful completion of:

1. Written responses to weekly assignments and weekly discussion questions.
2. Submission of one written course paper of 5-8 pages in length
3. One comprehensive final

Weekly assignments and discussion questions are evaluated on a pass/fail basis. The course paper and comprehensive final examination provide an opportunity to demonstrate proficiency in some mathematical concepts and skills. Anyone who fails the final cannot receive a grade higher than 'D'.

Weekly Assignments	15% pass/fail	Grade Scale		
Discussion Group Postings	15% pass/fail	90-100	A	
Course Research Paper	30%	80-89	B	
Comprehensive Exam	<u>40%</u>	70-79	C	
Total	100%	60-69	D	0-59 F

Expectations

There will be no extensions given on any assignments or exams (except for documented emergencies - subject to instructor approval). Students who fail to submit assignments or comply with other requirements are advised to withdraw from the course in order to avoid a final course grade of "F". Grades of Incomplete will only be given in cases of documented extraordinary circumstances beyond the student's control, and in accordance with Chaminade University of Honolulu policies. Attendance in this class is represented by the instructor's receipt of weekly e-mail responses to assignments and regular web board postings. Students are expected to observe the regulations concerning academic honesty published by Chaminade University in the General Catalog. The following schedule may be modified according to class abilities and other considerations.

Class Schedule

Date	Topic	Reading	Notes
7/7	Orientation, Introduction, Problem Solving 1.1		
	Problem Solving using Sets	1.2	
7/14	Inductive and Deductive Reasoning	1.3	
	Above plus Scientific Notation	1.4	
7/21	Deductive Reasoning	2.1	
	Truth Tables, Conditional Operators	2.2	
7/28	Topic for term paper due \nearrow		
	The Nature of Proof, Problem Solving	2.4-2.5	
8/4	Different Numeration Systems	3.3	
	Computers and Binary Number Systems	3.5	
8/11	Prime Numbers	4.2	
	Spreadsheets - Evaluation and Applications	5.3	
8/18	Similar Triangles Golden Rectangles	7.4	
	Konigsberg Bridge	7.5-7.6	
8/25	Term paper due Υ		
	Loan Interest / Types, Calculations	6.1-6.2	
	Introduction to Probability	9.1	
9/1	Probability Models, Counting Formulas	9.3-9.4	
	Descriptive Statistics / Review	10.1-10.2	
9/8	Final Exam - Good Luck! \clubsuit		