

SE '01
Pms

Chaminade University - Spring 2001
Survey of Mathematics
MA 100 70

Instructor: Torrance L. Trevorrow B.S. M.S. O.D.

Office Hours: On scheduled class days by appointment or other times as necessary

Text Book: The Nature of Mathematics, - Eighth Edition, by Karl Smith. Brooks/Cole Publishing Company, 1998. Supplemental reading suggestions will be given in class.

Class Times: This class meets Monday and Wednesday from 7:50pm to 9:55pm. First day of class is Monday, 2nd April and the last day of class is June, 11 2001. Please be sure to attend the last day of class for the final exam.

Course Description: The purpose of this class is to expose you to some of the beauty that lies within the realm of mathematical thinking and provide you with some of the tools and thought processes that can be helpful in your everyday life.

This is an introductory course that meet the Track A general education requirement in mathematics. Topics have been selected to challenge and develop your thought processes and to help create a logical approach to problem solving.

You should enjoy coming to class with an explorers mind. Topics and concepts will be introduced, discussed and then applied to mathematical problems in an interactive format. You will be required to participate in class discussions and occasionally work together in small groups on in-class projects. It is important you attend every class, read the assigned chapters in advance and come prepared to participate in class exercises.

Requirements: MA 100 is a "thinking and apply" course. Most of your learning will come from your personal effort in doing the class exercises, assignments and reading.

The lectures and demonstrations are designed to orient you into an approach of 'problem solving' and familiarity of certain mathematical concepts. If you fail to attend class or arrive late you will miss vital information.

Assignments or projects are due at the *beginning of class*. Quizzes and exams will be based on material covered in class, learning attained from the assignments, in-class exercises, and readings from the text.

Grading:

Quizzes/Assignments	25%	A= 90-100
Midterm	25%	B= 80-89
Class Participation	5%	C= 70-79

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Term Paper/Presentation	15%	D= 60-69
Final Exam	30%	F= 0-59

Late assignments, missed exams, quizzes or work will receive a grade of 0 unless accompanied by substantial medical or emergency documentation. It is the responsibility of the student to initiate proof of circumstance.

Reading the appropriate text sections in advance will help you to optimize your time during the class/lab period.

Supplies: Students will be required to have the designated text, a three ring binder with dividers, a red pen, pencil, eraser and graph paper. A calculator (other than your brain) is not required. Please label all your property to avoid confusion.

Courtesy: Please turn off, or set to silent mode - your cell phone or pager before entering the class. Any unexpected noise is disturbing to your fellow students, as well as to the instructor, who will appreciate all your considerations. Please no food, drink, "chew", or gum in the classroom.

Learning Outcome Assessment: Students will meet the course objectives by demonstrating their knowledge via quizzes, assignments, exams, and class participation. Expected work products will include but not be limited to:

- Demonstrating deductive and inductive reasoning
- Showing the order of operations
- Proper use of scientific notation
- Showing why we use the various number types (irrational, prime, etc)
- Proper use of expressional , equation types, factoring, ratios, proportions
- Reasons for various units of measurements, dimensions

Doing your own work: Mathematics should be fun! Some of the problems presented could induce non-terminal brain-strain. Appropriate relief is not to be found in copying OPW (other peoples work). Relax, take your time, use some scratch paper and treat the challenges for what they are - puzzles that you can solve. Any copying (other than in team exercises) results in an automatic "F" for the course.

Notebooks: In this modern age of complexity it is vital to be able to take good notes and organize your information in an efficient manner. Various means of structuring your class notes and studies will be discussed, while allowing for maximum individual freedom and style. A thorough and well-organized notebook will make studying easier, and aid quick reviews before exams and quizzes.

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Survey of Mathematics
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Class Schedule: The following schedule is approximate and may be modified according to class abilities and other considerations. Pop quizzes may be given - Record assignment or quiz dates under the Notes Column.

Topics Covered

<u>Date</u>	<u>Topic</u>	<u>Reading</u>	<u>Notes</u>
4/2	Orientation, Introduction, Problem Solving	1.1	
4/4	Problem Solving, Using Sets	1.2	
4/9	Inductive and Deductive Reasoning	1.3	
4/11	Above plus Scientific Notation	1.4	
4/16	Deductive Reasoning	2.1	
4/18	Truth Tables, Conditional Operators	2.2	
4/23	The Nature of Proof, Problem Solving	2.4 - 2.5	
4/25	Different Numeration Systems	3.3	
4/30	Computers and Binary Number System	3.5	
5/2	Prime Numbers	4.2	
5/7	Prime Numbers and Mid Term Review	4.2	
5/9	*** Mid Term Exam ***		MID TERM
	*** Topic for Term Paper ***		TERM PAPER TOPIC
5/14	Spreadsheets - Evaluation, Application	5.3	
5/16	Similar Triangles	7.4	
5/21	Golden Rectangles / Konigsberg Bridge	7.5 - 7.6	
5/23	Interest - types, calculations	6.1 - 6.2	
5/28	<<< Memorial Day No Class >>>		NO CLASS TODAY
5/30	Introduction to Probability	9.1	
	*** Class Presentations ***		CLASS PRESENTATION
6/4	Probability Models / Counting Formulas	9.3 - 9.4	
6/6	Descriptive Statistics / Freq. Distrib. / Review	10.1 -10.2	
6/11	*** Final Exam ***		FINAL EXAM