CHAMINADE UNIVERSITY: MA 100 NATURE OF MATHEMATICS

Instructor: Dr. Trevorrow

Class Times: Pearl Harbor Mondays 17:30-21:40. April 2nd – June 11th 2007

Office Hours: Help is available in person before or after class, by appointment, or online by email or live chat. In addition I usually schedule 2-4 Saturday study sessions during the semester, near Pearl Harbor. (Oahu)

Email: All email should be via torrance.trevorrow@adjunct.chaminade.edu or if the server is down by numeroprime@yahoo.com.

Text Book: The Nature of Mathematics, Tenth Edition by Karl Smith. Brooks/Cole Publishing Company, ISBN 0-534-40023-X. This is a very popular text used by major universities. Earlier editions may be used with discernment. If ordered online make sure to pay for priority shipping.

Supplemental: For those with interest and time, the following books are also excellent for basic review: Thinking Mathematically by Robert Blitzer (earlier editions for lower cost). The "Dummies, Idiots, or Demystified: series are also useful for some concepts.

Course Description: (from the catalog) 3 Credits. Mathematical thought is studied through interactions between the foundations of knowledge and the study of the nature of both algebra and geometry. Issues of mathematical thought are addressed through selected studies of the nature of sets, logic, numbers and operations, algebra, geometry, measurement, financial management, probability, statistics, graphs and functions and mathematical systems. This course fulfills the Track A general education requirement in mathematics. The course is intended as a terminal course and is not a prerequisite for any other course in mathematics

Prerequisites: The student should already be competent with basic arithmetic, fractions, percents, and elementary algebra.

Course Goals: This course will place an emphasis on increasing the student's mathematical skills and knowledge using a variety of conceptual approaches.

Course Objectives: At the completion of this course the student should be familiar and demonstrate competency with the following concepts and topics.

1. Problem Solving
2. Deductive / Inductive Reasoning
3. Scientific Notation and Estimation
4. Set Theory, Number Lines
5. Measurement, Accuracy, Precision
6. Financial Management, Interest, Loans
7. Probability, Expectation
8. Statistics

Methodology: Most of your learning will come from meticulous study of the text, completing the homework and assignments and involvment with class exercises. Multiple quizzes, discussions, and articles will be used to reinforce learning. have the opportunity to demonstrate your proficiency through careful presentation of assigned work.

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Success: All courses require a high degree of personal responsibility and time management skills. Grades tend to be proportional to the personal effort that is taken for the learning process and seeking immediate clarification for enigmatic areas. Universities often recommend 2-3 hours of study time for each hour of class time. A three credit course would require about 12 hours per week for study, research, reading, and assignments.

Grading:The contributions of various components of the course are indicated as percentages. Changes may be made to the course and grading at the instructor's discretion.

Notebook Grade	10% (evaluated in class)
Quizzes/Assignments	40% (weekly, multiple choice)
Final Exam (proctored)	50% (proctored, written)

A	90% +	Outstanding Scholarship and excellent initiative with course
B	80% +	Superior Quality done in a consistent intellectual manner
C	70% +	Satisfactory showing competent understanding of course
D	60% +	Lowest passing grade, inadequate for prerequisites
F	0-59%	Unsatisfactory understanding and coursework

Attendance: Active and early participation is vital to your success. Each student is accountable for all the information presented on the web board. Missed quizzes or late work is not graded, supplemental assignments may be offered at reduced grading.

Academic Integrity: All material submitted in fulfillment of course requirements must be done by the registered student. Cut and paste research, copying, substitute work, or sharing exams will result in a grade of zero and possible failure for the course.

Supplies: Text Book, 3 Ring Binder, Ruler, Graph paper, Red Pen, and a Calculator with exponential functions (see text). A calculator should not be used to solve the problem (finance excepted) but for checking your work, and exploring the relationships between numbers. A PDA or Cell Phone is not to be used for exams.

A three ring binder is an excellent way of organizing information. Commonly used folder dividers include: Course information, Study Notes, Homework, Assignments, Articles, Quizzes, Questions to ask.

Resources: The internet also offers an amazing variety of math sites; Wikipedia and MSN Encarta can provide very useful background information.

Requirements: You are required to **immediately** seek clarification on any material that you do not understand. Polya's model is to be used for all problem solving unless otherwise indicated. You are expected to maintain standards of academic performance and comply with all CUH policies. You must email the instructor to receive some class materials.

Finals:Specific information will be provided towards the end of the semester. Usually the final is written, closed book, no notes, calculator permitted. Formulas are normally provided.

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COURSE SCHEDULE

Week	Section	Topic	Focus Questions	Posts to Be Specified
1	1.1	Problem Solving Pascal's Triangle	[1.1] 4-10 17 24-28 33 34 37 40 41 42 48 49 53 54	
2	1.2	Order Operations Inductive Deductive Reasoning	[1.2] 1 3 4 5 13 17 24-26 39 45 47-53 55 58	
3	1.3	Scientific & Exponential Notation, Estimation Approximation	[1.3] 1-3 7 11 15 24 25 27 30 31 33 35 37 39 41 47 48 50 59	
4	5.5 10.1	Inequalities Graphing Sets, Venn Diagrams	[5.5]1 2 11 25 31 45 51 55 57 59 60 [10.1] 1-3 5 9 23 25 27 31 55 57 59	
5	7.1 7.2 7.3	Perimeter Area Volume Capacity	[7.1] 1-5 13 25 31-33 41 43 45 56 57 59 60 [7.2] 1-5 9 15 18 25 31 35 39 40 48 49 51 53 5759 60 [7.3] 1-6 11 13 29 33 35 37 39 41 47 53 55 57 59 60	
6	11.1	Probability, Experiments	[11.1] 1-5 8-12 23 25 27 29 39 41 43 47 48 49 53 54 55 56 58	
7	11.2	Mathematical Expectation	[11.2] 1-5 7 9 10 13 15 17 19 20 21 23 24 30 45 47 49 53	
8	9.1	Interest Borrowing Investing	[9.1] 1-5 9 11 13 21 25 27 31 33 35 43 48 50 53 54 55	
9	9.2	Installment Loans	[9.2] 1-4 5 7 13 18 19 23 27 37 41 45 47 49 53 58 60	
10		REVIEW AND FINAL		

* Statistics and assigned questions will be presented throughout the semester

Notes: