CHAMINADE UNIVERSITY: MA 100 NATURE OF MATHEMATICS

Instructor: Dr. Trevorrow

Class Times: As Scheduled.

Office Hours: By appointment, also before or after scheduled class times. In addition some Saturday sessions are offered, usually near Pearl Harbor. For the online class I usually check the webct 3x a day; however there may be exceptions.

Email: All course related email: torrance.trevorrow@adjunct.chaminade.edu.

Text Book: The Nature of Mathematics, Eleventh Edition by Karl Smith. Brooks/Cole Publishing Company, ISBN 0-495-01272-6. If ordered online make sure to pay for priority shipping.

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 very 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. Content may vary according to class abilities and interests.

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, mathematical style and modeling
2. Scientific and exponential notation, order of operations, reasons, applications
3. Sets, Venn/Euler diagrams, concepts and uses in problem solving
4. Set Operations, rules, applications, a way to solve some types of problems
5. Finance and interest, types of loans, inflation, compound interest
6. Installment loans, add on interest, credit card interest, Apr.
7. Frequency distribution, graphs, types, advantages, disadvantages, reading
8. Descriptive statistics, central tendency - measures, dispersion, applications
9. Probability, terms, union, intersection, (and,or), spinners, cards, die/dice
10. Expected value, is something worth are time or cost, games, contests

Methodology: Most of your learning will come from meticulous study of the text, completing the provided worksheet. Multiple quizzes, discussions, and articles will be used to reinforce learning. By carefully reading all posts you will gain additional insight into problem solving and mathematical reasoning. You will 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.

Class Contributions	10%	(may add to total score)
Quizzes	40%	(weekly, multiple choice)
Final Exam	60%	(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 class work

Late Work: Not accepted or graded. No exceptions. Start early, avoid problems. By making significant class contributions/posts you may compensate for unavoidable circumstances.

Attendance: Active and early participation is vital to your success. Each student is accountable for all the information presented in class or on the web board. If you miss work from the live class, please find a study-budy for class notes and handouts.

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, and a Calculator with exponential function(s) (see text). A PDA or Cell Phone or Text Device is not to be used for exams. A graphing type calculator can augment your learning but is not essential.

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

Resources: The Internet also offers an amazing variety of math sites; Wikipedia, Msn Encarta, and glossary can provide very useful background information. A tutorial cd is included with the text as well as some suggestions for other educational math sites.

Requirements: You are required to **immediately** seek clarification on any material that you do not understand. All submitted work is to show FULL WORKING for credit. Keep a paper copy of all assigned homework solutions. Answers only ALWAYS = ZERO. You are expected to maintain standards of academic performance and comply with all CUH policies.

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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PLANNED COURSE SCHEDULE

Date	Week	Text	Main Topics	Text Questions
	1	1.1	Problem Solving, Pascal's Triangle Presenting Mathematical Solutions	4,7,9,13,20,21,24,26,31,35,44,48,51,53,54,55
	2	1.3	Scientific & Exponential Notation, Order of Operations	1,2,3,5,7,10,13,23,25,26,27,28,30,31,33,34,36,37,44,49,53,54,59
	3	2.1	Sets, Venn / Euler Diagrams	2,3,4,5,6,7,9,13,19,20,25,35,37,39,53,60
	4	2.2	Set Operations Union, Intersection	1,2,3,4,5,9,13,15,19,21,23,24,25,26,27,28,37,39,42,45,46,47,48,53,54,57
	5	11.1	Simple, Compound Interest, Inflation	1,2,3,4,5,7,11,13,15,21,27,31,35,37,41,43,47,49,51,57
	6	11.2	Installment Loans Add On interest Credit Card Loans, Apr.	1,2,3,45,5,6,7,9,13,17,19,21,23,27,29,39,41,43,45,47,49
	7	14.1	Graph Types, Reading Frequency Distribution	1,2,3,4,5,7,9,11,13,14,15,18,21,60
	8	14.2	Statistics Central Tendency Dispersion	1,2,3,4,9,10,11,13,17,21,22,25,30,34,37,43,45,58
	9	13.1	Probability And & Or Spinners, Dice, Cards	1,2,3,5,8,9,11,12,23,27,29,31,41,47,48,49,52,55,56
	10	13.2	Expected Value Games, Contests	1,2,3,4,5,6,7,9,10,12,13,15,16,19,31,33,35,39,50,53,55