CHAMINADE UNIVERSITY: MA 100 NATURE OF MATHEMATICS

Instructor: Dr. Trevorrow

Class Times: M-F With online classes you are expected to check the web board daily for any course developments and new information.

Office Hours: Specific times can be arranged for online chat.Usually I check the web board 3-7 times per day. In addition some Saturday (live) sessions are offered, usually near Pearl Harbor (open to all).

Email: Normally via the web board. Alternative: 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. A student solutions manual may also be helpful. (Check sources)

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: To help the student improve their understanding of mathematical structures, approaches, terminology and applications to problem solving as developed from fundamental concepts.

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

Problem Solving, mathematical style and modeling

Scientific and Exponential notation, order of operations, types of reasoning (logic)

Sets, Venn / Euler diagrams, concepts and uses in problem solving

Finance and Interest, types of loans, inflation, compound interest, monetary system

Installment loans, add on interest, credit card interest, Apr.

Frequency distribution, graphs, types, advantages, disadvantages, reading

Descriptive Statistics, central tendency - measures, dispersion, applications

Probability, terms, union, intersection, (and,or), spinners, cards, die/dice

Expected Value, is something worth are time or cost, games, contests

Time permitting – types of numbers, dimensional measures and conversions.

Methodology: Most of your learning will come from class participation and activities, meticulous study of the text, and completing the assigned work. Multiple quizzes, discussions, and articles will be used to reinforce learning. Course work and direction will usually be guided through worksheets or other posted material.

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Normally each week there will be a reading assignment, mandatory discussion posts and homework, weekly quizzes and varied special assignments. E college is used as the web platform and will greatly assist in your tracking of accomplishments.

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. 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. Last minute "learning" doesn't work.

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. The instructor reserves the right to adjust a student's grade up or down if your quizzes and final do not reflect expected achievement. **Quizzes** 30% **Class Work** 20% **Final Exam** 50%

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 regardless of circumstances.

Attendance: Active, early and almost daily participation is vital to your success. Course material, web board operations and information can change daily. Your posts and quizzes will need to be met by the required deadlines.

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

Supplies: Text Book, 3 Ring Binder, Ruler, and a Calculator with exponential functions (see text). A PDA or Cell Phone or Text Device is not to be used for coursework.

Resources: The text and class materials (posted) are the primary resources for the course. Often rereading the same section of the text (several times) will help more than searching for other material. However, the Internet, library and bookstores can also be useful.

Requirements: You are required to **immediately** seek clarification on any material that you do not understand. You are expected to maintain standards of academic performance and courtesy and to comply with all CUH policies.. Please read and follow ALL online instructions.

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.

For those off-island Finals must be taken within 7 days of the scheduled time. Contact the AUP office during Week 8 to arrange for a proctor.

The final *must* be taken on the scheduled date