Instructor: Dr. Trevorrow

Class Dates: April 9th – June 11th 2010
Class Times: Fridays 5.30-9.40pm, Schofield Education Center
Office Hours: Usually 3-5pm before class at Popeyes - Foote Gate, or after class in the classroom. Optional study sessions are offered on some Saturdays, near Pearl Harbor.

Email: torrance.trevorrow@adjunct.chaminade.edu or arithmetic.math@gmail.com.

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). If you are interested in other (supplemental) texts on mathematics let me know.

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 requirement for any other course in mathematics

Prerequisites: The student should already be competent with basic arithmetic, fractions, percents, and very elementary algebra, and have the time to devote to reading, studying and homework. To achieve competency, a common estimate is 8-12 hrs per week.

Course Goals: To increase the student's mathematical knowledge, skills and abilities. Mathematical style and perspectives are developed and analyzed from the text, problem solving, posts and critiques. A variety of mathematical topics are chosen to expose the student to different types of mathematical thinking and approaches to numerical problem solving.

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

- Problem Solving, mathematical style and modeling
- Inductive and Deductive Reasoning, Scientific Method
- Scientific and Exponential notation, order of operations, reasons, applications
- Sets, Venn / Euler diagrams, concepts and uses in problem solving
- Set Operations, rules, applications, a way to solve some types of problems
- Geometry - perimeter, area, volume, conversions, efficiency of shape
- Measurements, Precision, Accuracy, Conversions, Metric System
- Finance and Interest, types of loans, inflation, compound interest
- 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, time value, extended warranties, games, contests

Methodology: Most of your learning will come from class participation, activities, meticulous study of the text, and completing the assigned work. Multiple quizzes, discussions, and articles will be used to reinforce learning.

Special Projects: Students (group or individual) will design an educational game incorporating as many relevant mathematical principles as possible and present this to the class along with a typed paper for grading. Details provided in class.

Term Paper: Using statistical principles students will critically analyze a media article. A typed report will be graded according to the criteria provided.

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. Missing one class (4hrs) is the equivalent of missing 4 day classes which will make it very difficult to catch up or obtain a high grade.

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. Midterm 30% Term Paper 10%, Group Project 10%, 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 <60% Unsatisfactory understanding and class work

Homework: Questions will be assigned in class according to the sections covered. Representative questions are on the last page of the syllabus.

Late Work: Not accepted or graded. No exceptions Start early, avoid problems. You have a full week to meet requirements, schedule accordingly. Any collected work is due at the start of class; late arrival = late work.

Missed Classes: Active and early participation is vital to your success. Each student is accountable for all the information presented in class and to present work by the due dates at beginning of class. If you miss a class **coordinate with a classmate for missed material and information**. The instructor does not bring past handouts or student work to the next class. Missing 1 week, is the equivalenet of missing 4 classes!

Guidelines from the undergraduate catalog indicate that if you miss more than a week of classes you are are subject to a grade reduction; missing two weeks of classes will result in notification to the Associate Provost and Records office, and possible withdrawal. Should an illness or personal reasons necessitate continued absence the student should officially withdraw.

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

Supplies: Text Book, Notebook, Dice, Ruler, Graph Paper, Calculator with exponential functions. Other items may be required.

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

Supplemental: Additional information and handouts may be provided online at: http://www.chaminade.ecollege.com/ You will need your Chaminade login id.

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. Appropriate language and compliance with base commander's food and drink policy is required. Cell phones are not permitted in the classroom. Any requests from the instructor require a prompt response. Should you decide to withdraw from the course please let me know.

Finals:Specific information will be provided towards the end of the semester. Usually the final is written, closed book, no notes, calculator permitted. Formulas may be provided. The final must be taken when scheduled, and is not a matter of personal convenience. There are no make-ups.

Personal Notes:
Classmates make great -->

--> STUDY BUDDIES: ***Name*** ***Phone*** ***Email***

Course Schedule* - Questions are Respresentative

Text Chapter.Section	Main Topics	Homework Questions
1.1	Problem Solving, Models, Polya, Pascal's Triangle, Presenting Mathematical Solutions	4,7,9,13,20,21,24,26,31,35,44,48,51, 53,54,55,56
9.1	Perimeter, Rounding, Precision, Estimation	1,2,3,4,5,9,10,11,22,31,32,43,44,55, 56,59,60
9.2	Area, Regular, Irregular Shapes, Boxing	1,2,4,7,9,13,17,18,27,38,32,40,50,58, 59,60
9.3	Volume, Capacity, Efficiency	1,2,3,4,5,6,15,16,17,22,23,24,25,42, 45,52,55,59,60
9.5	US – Metric Conversions, MLT, Temperature, Basis	1,2,3,4,5,8,14,
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
2.1	Sets, Venn / Euler Diagrams	2,3,4,5,6,7,9,13,19,20,25,35,37,39, 53,60
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, 45,46,47,48,53,54,56,57
MIDTERM	Midterm Exam Comprehensive Class Continues After	2hrs (20-40 questions)
11.1	Simple, Add-On, Compound, Interest, Inflation	1,2,3,4,5,7,11,13,15,21,27,31,35,37, 41,43,47,49
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
14.1	Graph Types, Reading, Frequency Distribution	1,2,3,4,5,7,9,11,13,14,15,18,21,41,60
14.2	Statistics, Central Tendency, Dispersion	1,2,3,4,9,10,11,13,17,21,22,25,30,34, 37,43,45,58
Term Paper	Statistical Analysis of Media Article (formal)	
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, 59
13.2	Expected Value, Games, Contests, Extended Warranty	1,2,3,4,5,6,7,9,10,12,13,15,16,19,31, 33,35,39,50,53, 55,57
Special Project	Group Presentations	Fun Time !
FINALS	Final Exam Comprehensive 2 hrs (No Cell Phones)	5.30-5.45pm Preparation, Assigned Seats, 5.45 -7.45pm Final Exam

Course material is subject to change by the instructor