MA100 SURVEY OF MATHEMATICS

Semester : **Fall 2013** - **Schofield Education Center**

Class : Thursday (10 Weeks) 10/07/2013 to 12/19/2013 . 5.30pm - 9.40pm
Text : Thinking Mathematically , 5th edition, Blitzer, Prentice Hall (various Isbn)
Instructor : Dr. Torrance L. Trevorrow
Office Hours : Before or After Class (optional live Saturday sessions may be offered)
Email : torrance.trevorrow@adjunct.chaminade.edu

Course Description :(3 credits) (from the catalog) Mathematical thought is studied through interactions between the foundations of knowledge and the study of the nature of mathematics Topics include the basis of sets and logic, numbers and operations, algebra, geometry, measurement, financial management, probability and statistics, graphs and functions. 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.

Course Topics : Problem Solving, Numeration Systems, Number Theory, Algebraic Expressions, Graphing Equations, Percents, Finance, Measurements, Optimization, Probability Theory, Statistics.

Course Objectives are based on the Chapter/Section Contents from the text and evaluated based on problem solving, definitions, concepts and applications. In Brief:

- Comprehend different problems solving models as they apply to mathematics
- Relate the scientific method to inductive reasoning and its limitations
- Application of tables and patterns to solving complex problems
- Explore different numeration systems and quantitative symbolic history
- Appreciate numerical properties and their applications
- Uniqueness of prime numbers in solving unusual problems
- Use of algebraic symbols to solve word problems
- Nature of functions, expressions, evaluations, vertical line test
- How to read, interpret, label and create graphs based on data or simple equations
- Apply concepts of percents, simple and compound interest to consumer applications
- Properly define commonly used nomenclature for financial formulae, ordinary vs exact interest
- Tax system; credits vs deduction, graduated vs flat, calculations
- Understand the origins, development and problems with our “money” system
- Be able to convert various measurement units, understand their advantages, disadvantages
- Dimensional Analysis, Optimize shape, Unit vs Measurement,
- Make predictions based on theoretical or empirical probability and apply to dice, cards, events
- Form basic statistical calculations, numerical and graphical interpretation
- Understand some requirements for valid survey, Sample Size, Randomness,
- Create different graph types, determine which might be most appropriate for given data `
- Know how graphs may be structured to modify perceptions and affect conclusions

Depth of coverage will vary according to class interests, abilities and time

Required Materials : Notebook, Text, Multi Line Calculator, Graph Paper, Ruler, other materials as discussed.

Attendance : Each week is the equivalent of 4 regular day classes. Missing class, arriving late or leaving early can significantly affect your learning and grade. All students will be required to sign an educational agreement.

Deficiency Report: May be issued for students who are officially registered but not attending class or doing satisfactory work.

Homework : HW will usually be the odd numbered questions at the end of each section covered. Failure to properly complete the homework will make it difficult to do well with the weekly quizzes.

Quizzes :A quiz will be given and collected each week. Usually 12minutes, 3 questions, show all working, open text. Use normal size paper, no paper tears, write neatly, with your name, date, and questions properly identified. Box final answer. Minimal Working, Poor Structure = zero. Time is not extended for those that arrive late or leave early. (no text sharing)

Grading : (from the university catalog) Letter grades are given in all courses except those taken on a credit/no credit basis. Grades are calculated from the student's daily work, class participation, quizzes, tests, term papers, reports, and the final examination. They are interpreted as follows:

A Outstanding scholarship and an unusual degree of intellectual initiative. 1800 pts +
B Superior work done in a consistent and intellectual manner. 1600 pts +
C Average grade indicating a competent grasp of subject matter. 1400 pts +
D Inferior work of the lowest passing grade. 1200 pts +
F Failed to grasp the minimum subject matter; no credit given. Less than 1200 pts.

Weekly Quizzes	(weeks 2 - 9)	800 pts	100 pts/wk
Attendance	(weeks 1-9)	200 pts	5pts/hr
Notebook or Presentation	(see below)	200pts	
Final Exam	(end of week 10)	800 pts	Written

Notebook: Taking clear well organized notes can aid greatly in your learning and study. Notebooks will be collected at least twice for grading or you may choose a mathematical investigation, class presentation option. Grading criteria will be provided in class.

Final Exam : 2 hrs, comprehensive, end of Week 10 . You must take the final when scheduled.

Course Schedule : In general we will cover 2 - 4 text sections per week. Each section may require 1 - 3 hrs for reading and study and additional time for completing the HW. A detailed weekly schedule will be provided in class (subject to change).

Academic Integrity : All material submitted in fulfillment of course requirements must be done by the registered student. Copying, having someone else do your work or sharing exam information, constitutes plagiarism and may result in failure for the course.

Technology : As much as practicable students are encouraged not to rely on calculators, however they may be helpful in evaluating large exponents, exploring number theory and for checking your work. Computers, Tablets, cell phones etc should be off and not used during class time.

Deportment: A disruptive behavior or action that interfere with the learning of other students may result in a grade reduction and or being asked to leave.

Food and Drink: Please follow the base commanders directions in this regard.

ADA Accommodations : Students with special needs that meet the requirements of the Americans with Disabilities Act (ADA) should inform the Chaminade Counseling Center by the end of Week 2 for a determination of possible accommodations. Contact: Dr. Yashuara, 808 - 735 - 4845

Assistance : Help is available before or after class, by email and live sessions may be offered near Pearl Harbor by arrangement. Tutoring may also be available via Student Services at the main campus.

Notes / Study Partner / Weekly Grade Record