MA100 Survey Of Mathematics (Online) - Chaminade University

Instructor: Dr. Torrance L. Trevorrow

Class Times: Wednesday 5:30-9:40pm Schofield Education Center

Class Dates: April 07, 2009 for 10 Weeks.

Office Hours: Before or after class by arrangement.

Email: torrance.trevorrow@adjunct.chaminade.edu.

Text Book: <u>The Nature of Mathematics,</u> 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). For a quick review of mathematics basics: <u>Mathematics Made Simple</u> by Doubleday Made Simple Books (optional resource).

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 in a variety of topics. The overall goal will be to encourage a structured, logical approach to mathematical problem solving, analysis and knowledge.

Course Objectives: At the completion of this course the student should be able to 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: A significant amount of your learning will come from class participation, activities, a <u>meticulous study</u> of the text, and completing the assigned work. Multiple quizzes, discussions, and articles will be used to reinforce learning.

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. <u>A three credit course would require about 12 hours per week</u> for: study, research, reading, and assignments.

Grading: The contributions of various course components are indicated as percentages. Changes may be made to the course and grading at the instructor's discretion. <u>Quizzes 40%   Class Work 10%,   Final Exam 50%.</u>

The final **must** be taken on the last day of class. Missing the final for any reason will result in an F for the course. Per the CUH catalog, letter grades are determined as follows.

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 and early participation is <u>vital</u> to your success. Each student is accountable for <u>all</u> the information presented in class including handouts.

Guidelines from the undergraduate catalog indicate that if you miss more than a week of classes you 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.

<u>Should an illness or personal reasons necessitate continued absence the student should officially withdraw</u>.

Academic Integrity: All material submitted in fulfillment of course requirements must be done by the registered student. Cut and paste research, copying, substitute work, "wandering eyes", 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 functions (TI or Casio, dual line preferred - read your manual). A PDA or Cell Phone or Text Device is <u>not to be used for class work or exams</u>.

Resources: The text and class materials are the primary resources for the course. Often <u>re-reading</u> 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.

Requirements: You are required to **immediately** seek clarification on any material that you do not understand. You are expected to maintain high standards of academic performance and courtesy and to comply with all CUH policies. Any inappropriate behavior or violations will result in possible withdrawal from course).

Course Schedule: Attached. Additional material and topics may be combined depending on class progress.

Finals: Specific information will be provided towards the end of the semester.

COURSE SCHEDULE – MAY BE MODIFIED

Date	Text	Main Topics	Sample Text Questions
	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
	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	1,2,3,4,5,9,13,15,19,21,23,24,25,26,27,28,37,3 9,42,45,46,47,48,53,54,57
	11.1	Simple, Compound Interest, Inflation	1,2,3,4,5,7,11,13,15,21,27,31,35,37,41,43,47,4 9,51,57
	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	1,2,3,4,5,7,9,11,13,14,15,18,21,60
	14.2	Statistics Central Tendency Dispersion	1,2,3,4,9,10,11,13,17,21,22,25,30,34,37,43,45, 58

	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
	13.2	Expected Value Games, Contests (FINALS)	1,2,3,4,5,6,7,9,10,12,13,15,16,19,31,33,35,39,50,53,55

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