Course Title: Finite Mathematics  
Instructor: Jose J Diaz  
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Office Hours: Mon Wed 1:00pm – 2:00 pm, DM 413B (by appointment only)

Course Description and Objectives  
The course covers concepts and applications involving finite mathematical processes. Topics include symbolic formal logic, sets, combinatorial techniques, discrete probability, statistics, algebra of linear equations, matrices and linear programming. Students will be introduced to applications of these topics to business, social sciences and biology. Problem solving will be emphasized in lectures and tests.

Grading  
There will be 4 midterm exams and a comprehensive final exam. Homework and quizzes will be assigned online through MathXL and will contribute 20% to the overall score.

Grading scale:  
A 94, A- 90, B+ 87, B 83, B- 80, C+ 75, C 70, C- 67, D+ 64, D 60, D- 57, F <57

Exams are closed book, no formula sheets or graphing calculators are allowed. No make-up tests will be conducted. For any exam that you do not take in class at the scheduled time, your score will be recorded as a zero. At the end of the semester, the single lowest score among the midterm exams will be replaced by the score that you earn on the final exam (provided it is better than the lowest midterm result, of course). If you miss an exam, then the zero is the lowest score and it will be replaced by the final exam score.

Attendance  
Students are expected to attend all classes and to be on time. If you miss a class you are responsible for any information given in that class and any work assigned on that day.
Topics to be covered (Suggested exercises from the FIU textbook)

Section 8.1: Statements (excluding quantifiers) (1-22,39-53)
Section 8.2: Truth Tables (1-27,37-60,61-70)
Section 8.3: The Conditional (1-10,21-52,55-65,79-84)
Section 8.4: More on the conditional (1-14)
Section 8.6: Using truth tables to analyze arguments (1-24,27-34)

Exam 1

Section 9.1: Sets (7,9,11,23,27,29,35,37,43,51)
Section 9.2: Applications of Venn Diagrams (problems 17 - 24)
Section 9.3: Probability (3,5,7,11,13,15,17,19,23,29,37)
Section 9.4: Basic concepts of probability (3,5,8,9,11,13,15,17,19,21,23)
Section 9.5: Conditional Probability (3,5,19,21,23,25,27,29,31,33,41,43,45)
Section 9.6: Bayes’ Formula (1-18)

Exam 2

Section 10.1 Probability Distributions. Expected Value (3,5,7,9,17,19,23,25,27,29,31)
Section 10.2 Multiplication Principle. Permutations. Combinations (3,5,9,11,13,15,17,19,21,23,25,27,29,31,33,41,43,45)
Section 10.3 Applications of Counting (7,9,11,23,27,29,31,35,37)
Section 10.4 Binomial Probability (3,5,7,9,17,19,25,29,31,33,39)

Section 11.1 Frequency Distributions. Mean, Median, Mode (3,5,7,9,11,13,15,19,27,39)
Section 11.2 Measures of Variation (3,5,7,9,11,13,15,19,21,25)
Section 11.3 Normal Distributions (3,5,9,11,14,17,21,25,27,29,31)
Section 11.4 Binomial Distributions (3,5,7,9,11,13,15,17,19,21,29)

Exam 3

Section 1.6 First Degree Equations (exclude problems 15-26 and 39-48)
Section 2.1 Graphs (3,5,11,13,15,21,23,27,35,37)
Section 2.2 Slope. Equations of a line. (3,5,9,15,21,25,33,43,55,65)
Section 2.3 Applications of Linear Equations. (1-18)
Section 2.5 Linear inequalities (2-26 and 57-62)
Section 6.1 Systems of Linear Equations (3,5,7,9,11,12,16,17,18,19)
Sections 6.3 & 6.4 Basic Matrix Operations

Exam 4

Section 7.1 Graphing Linear Inequalities (3,7,13,25,31,35,39,43,44,45)
Section 7.2 Linear Programming (3,5,7,9,13,15,17)
Section 7.3 Applications of Linear Programming (3,4,5,7,8,9,11,13,15)

Final Exam
To register at www.MathXL.com you need:

1. an email address

2. course ID

3. a Visa/Mastercard or paypal account to pay for the service ($48)

   OR

   pay separately for an access code at the book store (more expensive)