

MAT 172 Finite Mathematics 31032 Online

Credit Hours: (3) Various analytic methods employed in business, social and life sciences with an emphasis on applications. Topics include algebra review, linear programming, matrix operations, linear systems of equations, set theory, counting, probability and statistics.

Prerequisite/Corequisite: MAT 152 or satisfactory score on mathematics skills assessment. (RC/E). Three lecture.

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Office Hours: MW 10:00 -11:00AM, 12:15-2:00PM, TTh 10:00-11:45AM

Course Compass Course ID: graser18895

COURSE CONTENT:

1. Linear functions and their graphs
2. Matrices
3. Linear systems of equations
4. Linear programming
5. Set theory
6. Counting techniques
7. Probability theory
8. Statistics
9. Finance problems

LEARNING OUTCOMES:

Upon successful completion of this course, the learner will be able to:

1. Perform elementary matrix operations including addition, subtraction, multiplication and inversion. (2)
2. Solve n-by-m linear systems of equations using elementary row operations. (3)
3. Solve linear programming problems by graphical and algebraic techniques. (4)
4. Perform the basic operations of union, intersection and complement on sets. (5)
5. Use Venn diagrams, combinations and permutations in applications involving counting. (5)
6. Evaluate probabilities of simple, compound, independent and dependent events. (7)
7. Compute measures of central tendency and dispersion for a collection of statistical data. (8)
8. Apply the theory of normal and binomial probability distributions to statistics problems. (8)
9. Compute the present value of an annuity, interest on mortgages, and cash flow. (9)

Course Format: *Section 31032* is an online section. The content for this section is delivered through the course website. You will complete homework problems to help you learn the material and then take a quiz to demonstrate that you have learned the course content. You have the opportunity to ask questions via email or through the courses Discussion Board. You are also required to complete projects and technology assignments.

All the materials for the course are available at <http://www.coursecompass.com> .The textbook for the course is “Finite Mathematics and Calculus with Applications” by Lial, Greenwell, Ritchey (8th edition 2008). This book is available in the Yavapai College bookstore and is bundled with a special student access code. The textbook is also available online via a student access code that you can purchase online from within the class website (or use the one bundled with your textbook).