

# Math 115 - Finite Math

(3 credits)

**Class begins Thursday, May 29**

Instructor: David Grothen

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**COURSE DESCRIPTION:** This course introduces students to the uses of mathematics in business and the social and biological sciences. This will be presented through the use of matrices, systems of linear equations, linear programming using various methods, set theory, probability, and game theory.

**PREREQUISITES:** Students registering for this course need to have a working knowledge of college algebra. Completion of Math 105 is required before registering for this course.

**Who should take this course?** MTH 115 is required for all business and accounting majors. Anyone who would like to see mathematics applied to realistic applications would be welcome to take this course.

## TEXT:

Required Text: Applied Finite Mathematics, Ninth Edition

Author: S. T. Tan

Publisher: BrooksCole

ISBN#: 0495387533

Optional Text: Student Solutions Manual

Publisher: BrooksCole

ISBN#: 0495389285

Note that the Student Solutions Manual is **optional**.

\*\*\* It is strongly recommended that you bring a calculator to class that will accommodate fractions \*\*\*

## COURSE OBJECTIVES:

1. To master lines on the Cartesian Coordinate System, linear functions and mathematical models, and solving systems of equations.
2. To introduce and develop alternative methods of solving systems of equations, operations with matrices, linear programming, the Simplex Method, the mathematics of finance, and elementary probability.
3. To see mathematics at work in business applications.
4. To develop critical thinking and problem solving skills.

## Instructional Procedures

Classes will be student centered as much as possible. Instruction will be guided discovery and lecture where appropriate. Small groups will be employed to let students assist each other.

**COURSE SCHEDULE:** This class will meet twice a week until we complete 14 classes. Class sessions will be approximately three hours long.

Session #1 - Introduction of instructor and students - review of course requirements and expectations - discussion of sections 1.1, 1.2, and 1.3.

Session #2 - Discussion of sections 1.4, 2.1, and 2.2

Session #3 - Discussion of sections 2.3, 2.4 and 2.5

Session #4 - Homework help night (attendance optional)

Session #5 - Test over Chapters 1 and 2. Homework due for Chapters 1 and 2

Session #6 - Discussion of sections 3.1, 3.2, and 3.3.

Session #7 - Discussion of sections 4.1 and 4.2.

Session #8 - Discussion of sections 5.1, 5.2, and 5.3

Session #9 - Homework help night (attendance optional)

Session #10 - Test over Chapters 3,4,5. Homework due for Chapters 3,4, and 5.

Session #11 - Discussion of sections 6.1, 6.2, 6.3, and 6.4 .

Session #12 - Discussion of sections 7.1, 7.2, and 7.3.

Session #13 - Homework help night (attendance optional)

Session #14 - Test over Chapters 6 and 7. Homework due for Chapters 6 and 7

## Method of Evaluation

Grading Scale:

A+ = 95-100

A = 90-94

B+ = 85-89

B = 80-84

C+ = 75-79

C = 70-74

D+ = 65-69

D = 60-64

Your grade will be determined as follows:

40% - Homework

60% - 3 Tests

## COURSE POLICIES

It is very important that you attend all classes. In the event that you should have to miss a session, you will be responsible for getting the notes from another person in the class. You should also have completed the homework required and be ready to take a test if it is scheduled for the next class.

If an emergency should arise and you need to miss class, please phone my work number, home number, or Doane college and leave a message, then the next day call me at home to make arrangements for making up any missed work. **Missing 3 required classes will result in an automatic failing grade for the course.**

The Doane College Academic Policy will be adhered to in this class. All tests should be done without assistance from outside sources. Any violation of these policies can result in a loss of points for that particular test.