



Course Outline

MATHEMATICS 140-Finite Mathematics University Credit

Campus:	Terrace
Term:	Fall
Instructor:	Mathew Mathew
Office:	
Phone:	
E-mail:	mmathew@telus.net
Times:	Mon & Wed 5:00p.m. to 6:30p.m.
Credits:	3

Course Description

This is a bridge to University level Math taking the students through systems of equations, linear programming, matrix algebra, mathematics of finance, probability, and statistics.

Course Delivery Format

Lecture

Course Prerequisites

Applications of Math 12 or Math 0501/0502 or C+ in Principles of Math 11 or Math 111 or Math 0401/0402

Course Co-requisites

None

Transfer Credits

3

Recommended Follow-up Courses

Math 101/102, Differential Calculus, or Math 131, Statistics

Learning Outcomes

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

- Graph linear equations and systems of linear equations
- solve systems of linear equations in 2 and 3 variables
- Perform operations on matrices
- Find the determinant and inverse of matrices
- Use the Gauss-Jordan elimination to solve equations
- Solve equations using the inverse of matrices
- Solve linear inequalities and systems of linear inequalities
- Do linear programming problems
- Solve maximization and minimization problems using Simplex Method
- Use sets and Venn Diagrams to solve problems
- Apply multiplication principle, permutation, combination to solve problems
- Assign and calculate simple probability
- Calculate conditional probability
- Use tree diagrams to work out probability
- Set up frequency distribution tables and use them to calculate probability
- Calculate probability of binomial trials
- Calculate mean, variance, standard deviation for sets of data
- Calculate simple and compound interests
- Work on annuities, mortgage, amortization schedules

Required Materials/Texts

Finite Mathematics & It's Applications by Goldstein, Siegel

Evaluation Profile: Assignments 15%, small assignments 5%, test 1 15%, test 2 15%, test 3 15%, final exam 35%

A⁺ = 96-100	B⁺ = 81-85	C⁺ = 66-69	P = 50-54
A = 86-95	B = 73-80	C = 61-65	F = 0-49
	B⁻ = 70-72	C⁻ = 55-60	
CR = Credit	NC = No Credit	I = Incomplete	UW = Unofficial Withdrawal

Course Schedule

Week #	Topic/Assignments	Text Reading
Week 1	Coordinate systems, Graphs Linear Functions, systems	1.1 1.3, 1.4
Week 2	Systems of linear equations Matrix operations	2.1, 2.2 2.3, 2.4

Week 3	Gauss-Jordan Method for matrix inverses Test: Ch. 1&2	2.5
Week 4	Linear Inequalities, Linear Programming Linear Programming	1.2, 3.1 3.2, 3.3
Week 5	Simplex Tableau, Maximization Simplex method and Minimization	4.1, 4.2 4.3
Week 6	Marginal Analysis The Dual Problem, Review	4.4 4.5
Week 7	Test: Ch. 3&4 Sets, Venn Diagrams	5.1, 5.2, 5.3
Week 8	Methods of Counting More Methods of Counting	5.4, 5.5 5.6, 5.7
Week 9	Probability Conditional Probability	6.1, 6.2, 6.3 6.4, 6.5
Week 10	Tree Diagrams, Review Test: Ch. 5 & 6	6.6
Week 11	Probability Distribution, Binomial trials Mean, Variance, Standard Deviation	7.1, 7.2 7.3, 7.4
Week 12	Normal Distribution Interest	7.5, 7.6 10.1
Week 13	Annuities Amortization	10.2 10.3
Week 14	Review Review	
Week 15	Final Examination	

Assignments

Large assignments are worth 15%: small class assignments are worth 5%.

Recommended Readings/Resources

None

Operational Details

College Policies

Northwest Community College has policies on Academic Appeals (including appeal of final grades), Student Conduct, Cheating and Plagiarism, Academic Probation and other educational issues. Copies of these and other policies are available in the College Calendar and in the Library.

Attendance Attendance will be taken and may count towards assignment marks.

Missed Exams Missed exams are only rescheduled in extreme emergencies. Valid documentation, such as a signed medical note from a hospital, must be provided

Late Assignments All assignments must be submitted in order to receive a course grade. Late assignments will be penalized. The only exceptions to be considered are documented family or personal emergencies outlined in a letter with documentation submitted to the instructor

Incomplete Grades The college Calendar outlines the policies for incomplete grades. These are granted only in exceptional circumstances

Cheating/Plagiarism

Plagiarism is the presentation of another person's words, ideas, interpretations, insights, or order of points as your own. All work submitted must be your own words and content, and not written by a tutor or friend. Whenever you use sources for an essay, or assignment, you must avoid plagiarism by documenting them. The College calendar establishes procedures for plagiarised assignments.

Computer Course Requirements/Policies

Any student found either making copies of our diskettes or network files, or using an unauthorized copy of our programs will be required to withdraw from this course. A second offence in any course may result in an automatic expulsion from the program.

***Note: statement required only for courses using computers ***