CAMOSUN COLLEGE	***School of Arts & Science*** ***MATHEMATICS DEPARTMENT*** **MATH 113 – Sections 1 & 2** **Fundamentals of Mathematics 2** **2009W**

COURSE OUTLINE

Prerequisite: Math 112

Course Description

This course follows MATH 112. Topics include: linear equations, matrices, linear programming, calculus of polynomials, symmetry, tessellations and polyhedra. (T)

1. Instructor Information

(a)	Instructor:	Jill Britton		
(b)	Office Hours:	TBA		
(c)	Location:	E246		
(d)	Phone:	370-3471	Alternative Phone:	652-5316
(e)	Email:	jbritton@camosun.bc.ca		
(f)	Website:	http://britton.disted.camosun.bc.ca/index.html		

2. Intended Learning Outcomes

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

1. Solve linear system problems using the Gauss-Jordan Elimination Method and the Inverse Matrix Method.
2. Solve linear programming problems graphically.
3. Solve limits involving polynomial, rational, and radical functions.
4. Find derivatives and integrals of polynomial functions.
5. Sketch polynomial functions using differentiation.
6. Solve optimization problems requiring the differentiation of polynomial functions.
7. Solve area problems requiring the integration of polynomial functions.
8. Create tessellating artwork using manual techniques and by employing TesselMania! or Tessellation Exploration software.
9. Construct regular and semi-regular polyhedra by joining faces, using strut construction, and by assembling paper nets.
10. Build polyhedra by assembling folded paper units.
11. Build a 4-celled tetrahedral kite and a kaleidocycle.
12. Research math topics suitable to the elementary classroom and present results in portfolio form or as 3-D models. (Examples of such topics would be: symmetry, tessellations, and polyhedra.)

3. Required Materials

(a) Texts Finite Mathematics, 8th Edition (S.T. Tan)
(b) Other: Supplementary Material (PART 2) to Accompany Finite Mathematics, 8th Edition (Jill Britton)
(c) Materials fee for **FUN WITH PATTERNS** ($40) – materials include manual

4. Course Content and Schedule

Week of Jan 5	M	! Introduction / Appendix to Student Notes A-1 to A-3
	T	! 1.1
	W	! 1.2
	H	! 1.2
	F	! 2.1 *(omit applications)*
Week of Jan 12	M	! 2.2 *(student notes to end of p 13)*
	T	! 2.2 *(student notes to end of p 15)*
	W	! 2.2 *(student notes to end of p 18)*
	H	! 2.2 *(applications)*
	F	! 2.3
Week of Jan 19	M	! 2.4
	T	! 2.5
	W	! 2.5
	H	! 2.6
	F	! **TEST 1 [1.1 - 1.2, 2.1 - 2.3]**
Week of Jan 26	M	! 2.6
	T	! 2.6 / Cryptography
	W	! Linear Inequalities *(Appendix A-5)* / 3.1
	H	! 3.1
	F	! 3.2 / 3.3
Week of Feb 2	M	! 3.2 / 3.3 *(applications)*
	T	! 3.2 / 3.3 *(applications)* / Symmetry & Polygons Introduction
	W	! Symmetry / Polygons
	H	! Paper Polygons / Angle Measures / Tessellations
	F	! **TEST 2 [2.4 - 2.6, 3.1 - 3.3]**
Week of Feb 9	M	! More On Tessellations
	T	! Escher Film / Template
	W	! Rubber Stamp
	H	! Ink Print
	F	! Pop-Up Sponge Jigsaw Puzzle / Tessellating Art
Week of Feb 16	M	! Tessellation Software
	T	! Appendix A-4 / Intro to Calculus / Functions
	W	! Intro to Limits / Theorems on Limits
	H	! **READING BREAK (College Closed)**
	F	! **READING BREAK (College Closed)**

Week of Feb 23	M	! Limits Involving Quotients
	T	! Limits Involving Quotients
	W	! Tangent Lines
	H	! Tangent Lines
	F	! Derivative
Week of March 2	M	! Derivative
	T	! Basic Rules
	W	! Basic Rules / Higher Order Derivatives
	H	! Curve Sketching
	F	! Curve Sketching
Week of March 9	M	! **TEST 3 (to end of Basic Rules)**
	T	! Curve Sketching
	W	! Curve Sketching / Max/Min Applications
	H	! Max/Min Applications
	F	! Max/Min Applications
Week of March 16	M	! Max/Min Applications
	T	! **TEST 4 [RULES, CURVE SKETCHING, MAX/MIN #1-7]**
	W	! Antiderivatives and Indefinite Integrals
	H	! Definite Integrals / Classic Graphs *(Appendix A-6 to A-9)*
	F	! Area
Week of March 23	M	! Area
	T	! Area
	W	! Area / Final Exam Discussion
	H	! Regular Polyhedra
	F	! Euler=s Formula / Materials / Applications
Week of March 30	M	! **TEST 5 [MAX/MIN #8-11, INTEGRATION, AREA]**
	T	! Semi-Regular Polyhedra
	W	! Polyhedra Recreations
	H	! Unit Origami
	F	! Unit Origami / Bubbles / Kite Introduction
Week of April 6	M	! Tetrahedron Kite
	T	! Globes / Geodesics / Buckyball / Kaleidocycles
	W	! Workshop Orientation
	H	! SPARE
	F	! **GOOD FRIDAY (College Closed)**

5. Basis of Student Assessment (Weighting)

(a) 5 Class Tests (37.5%)

(b) Final Examination (37.5%)

(c) Portfolio and Attendance (25%)

6. Grading System

Standard Grading System (GPA)

Percentage	Grade	Description	Grade Point Equivalency
90-100	A+		9
85-89	A		8
80-84	A-		7
77-79	B+		6
73-76	B		5
70-72	B-		4
65-69	C+		3
60-64	C		2
50-59	D	Minimum level of achievement for which credit is granted; a course with a "D" grade cannot be used as a prerequisite.	1
0-49	F	Minimum level has not been achieved.	0

Temporary Grades

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy E-1.5 at **camosun.ca** for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	*Incomplete*: A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.
IP	*In progress*: A temporary grade assigned for courses that, due to design may require a further enrollment in the same course. No more than two IP grades will be assigned for the same course. *(For these courses a final grade will be assigned to either the 3rd course attempt or at the point of course completion.)*
CW	*Compulsory Withdrawal:* A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.

7. Recommended Materials or Services to Assist Students to Succeed Throughout the Course

LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning. This information is available in the College calendar, at Student Services or the College web site at camosun.ca.

STUDENT CONDUCT POLICY

There is a Student Conduct Policy **which includes plagiarism**.
It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, at Student Services and on the College web site in the Policy Section.