CAMOSUN COLLEGE
School of Arts & Science
Department of Mathematics & Statistics

MATH-142-001
Numbers & Algebra for Ed.
Fall 2019

COURSE OUTLINE

The course description is online @ http://camosun.ca/learn/calendar/current/web/math.html

Ω *Please note: This outline will not be kept indefinitely. It is recommended students keep this outline for their records, especially to assist in transfer credit to post-secondary institutions.*

1. Instructor Information

(a)	**Instructor**	Stephen Benecke	
(b)	**Office hours**	MTuWTh 10:30 – 12:20	
(c)	**Location**	E254	
(d)	**Phone**	250-370-3493	**Alternative:**
(e)	**E-mail**	Stephen.benecke@gmail.com	
(f)	**Website**	http://www.mathcatz.com/math/	

2. Intended Learning Outcomes

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

1. Give examples of the role quantities play in our lives and how quantities are expressed.
2. Explain how to add, subtract and convert values in different bases.
3. Explain children's ways of adding, subtracting, multiplying and dividing.
4. Perform mental computation and computational estimation in a variety of ways.
5. Interpret the meaning of fraction symbol, and compute with fractions.
6. Define and recognize rational numbers, irrational numbers, real numbers, and operations with them.
7. Use ratios, proportions, and percentages to solve a variety of problems.
8. Find prime numbers less than a given number, find the prime factorization of a number, and use divisibility tests to determine whether a number is prime.
9. Find greatest common factor and least common multiples of sets of numbers.
10. Solve problems involving basic algebra, arithmetic and geometric sequences.
11. Explain mathematical concepts at an elementary school level.

3. Required Materials

(a) *Elementary Mathematics Volume One* by Stephen Benecke and Jill Britton, Math 142 card purchased through bookstore

4. Course Content and Schedule

1. Logical reasoning
2. Logical puzzles
3. General problem solving
4. History of numbers
5. Roman numerals
6. Babylonian numbers
7. Base value systems
8. The binary system
9. Prime numbers
10. Common factors and multiples
11. Models for integer arithmetic
12. Modular arithmetic
13. Fractions
14. Percentages
15. Algebraic thinking

5. Basis of Student Assessment (Weighting)

(a) Assignments 10%

(b)   Quizzes 40%

(c)   Exams 50%

6. Grading System

| x | Standard Grading System (GPA) |

| | Competency Based Grading System |

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

8. College Supports, Services and Policies

Immediate, Urgent, or Emergency Support
If you or someone you know requires immediate, urgent, or emergency support (e.g. illness, injury, thoughts of suicide, sexual assault, etc.), **SEEK HELP**. Resource contacts @ http://camosun.ca/about/mental-health/emergency.html or http://camosun.ca/services/sexual-violence/get-support.html#urgent

College Services
Camosun offers a variety of health and academic support services, including counselling, dental, disability resource centre, help centre, learning skills, sexual violence support & education, library, and writing centre. For more information on each of these services, visit the **STUDENT SERVICES** link on the College website at http://camosun.ca/

College Policies

Camosun strives to provide clear, transparent, and easily accessible policies that exemplify the college's commitment to life-changing learning. It is the student's responsibility to become familiar with the content of College policies. Policies are available on the College website at http://camosun.ca/about/policies/. Education and academic policies include, but are not limited to, Academic Progress, Admission, Course Withdrawals, Standards for Awarding Credentials, Involuntary Health and Safety Leave of Absence, Prior Learning Assessment, Medical/Compassionate Withdrawal, Sexual Violence and Misconduct, Student Ancillary Fees, Student Appeals, Student Conduct, and Student Penalties and Fines.

A. GRADING SYSTEMS *http://camosun.ca/about/policies/index.html*

The following two grading systems are used at Camosun College:

1. 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		1
0-49	F	Minimum level has not been achieved.	0

2. Competency Based Grading System (Non GPA)

This grading system is based on satisfactory acquisition of defined skills or successful completion of the course learning outcomes

Grade	Description
COM	The student has met the goals, criteria, or competencies established for this course, practicum or field placement.
DST	The student has met and exceeded, above and beyond expectation, the goals, criteria, or competencies established for this course, practicum or field placement.
NC	The student has not met the goals, criteria or competencies established for this course, practicum or field placement.

B. 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 at http://camosun.ca/about/policies/index.html 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 are designed to have an anticipated enrollment that extends beyond one term. No more than two IP grades will be assigned for the same course.
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.