



*School of Access*  
*Mathematics Department*  
**MATH 073 Advanced Mathematics 2**  
**COURSE OUTLINE**

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### 1. Instructor Information

Instructor: James Stevenson

Phone: 370-3111

E-mail: [jstevenson@camosun.bc.ca](mailto:jstevenson@camosun.bc.ca)

Office: Ewing 270

Office Hours 12:00 – 2:30 T & Th

### 2. Class Times: Tues & Thurs 1:30 - 3:50

### 3. Math Lab: Ewing 342 plus Ewing 224

This is a drop-in centre where you can work on your math homework by yourself or with your classmates and get free help from a tutor. Math lab hours will be posted on the math lab door..

### 4. Required Materials:

(a) textbook: *Intermediate Algebra*, 11<sup>th</sup> edition, Marvin Bittinger

(b) module: *Trigonometry* (2005) Beecher/Penna/Bittinger

(c) scientific calculator

[Note: Sharp EL 531W model will be the only calculator allowed for most fall/05 math courses]

#### Supplementary Materials

(d) *Student's Solutions Manual*, Judith Penna (for sale at the bookstore)

(e) *Instructor's Solutions Manual*, Judith Penna (can be viewed in math lab)

### 5. Prerequisites:

Prerequisite for Math 073: C+ (65%) in Math 062/072 or a C in Math 11 or assessment

Prerequisite for Math 115 (Math 12): Recent B+(80%) in Math 063/073. Aim for at least 85% on your tests in Math 073 to allow for some slippage on the final exam.

### 6. Workload/Tips for Success

**Out-of-class Workload:** 10- 20 hours each week.

1. Please do your homework every day. If you fall behind, it will be difficult to catch up. This is not a course that you can put on the “back burner”.
2. Attend and participate in every class.
3. If you don't understand something seek help right away. Help is available from friends, your instructor, or the tutor in the math room.
4. Work thoughtfully through the material; don't just try to get it done.

### 7. Course Objectives:

The four very ambitious objectives of the course are:

1. use Mathematics at an ABE Advanced level with competence
2. use skills in foundational algebra and triangle trigonometry to solve problems
3. use knowledge of algebra and triangle trigonometry as a basis for further study in pre-calculus, the sciences and other fields
4. build on your ability to read, write and talk about the mathematics that you are learning.

### 8 Course Content

**073 Text:** *Intermediate Algebra*, 10<sup>th</sup> edition, Marvin Bittinger

**Trig module** for Unit 5: *Trigonometry* (2005) Beecher/Penna/Bittinger

**\*\*Odd-numbered questions only\*\***

073 text	MATH 073 course content	video
	<b><i>Unit 1 – Polynomials and Polynomial Functions</i></b>	
4.1	Introduction to polynomials and polynomial functions	9
4.2	Multiplication of polynomials	
4.3	Introduction to factoring	9
4.4	Factoring trinomials: $x^2 + bx + c$	9
4.5	Factoring trinomials: $ax^2 + bx + c, a \neq 1$	9
4.6	Special factoring	10
4.7	Factoring: a general strategy	10
4.8	Applications of polynomial equations and functions	10
	Summary and review, Chapter Test	
	Unit 1 Test	
	<b><i>Unit 2–Rational Expressions, Equations, &amp; Functions</i></b>	
5.1	Rational expressions and functions: multiplying, dividing, and simplifying	11
5.2	LCMs, LCDs, addition, and subtraction	11
5.3	Division of polynomials	11
5.4	Complex rational expressions	11
5.5	Solving rational equations	12
5.6	Applications and proportions (omit section b)	12
5.7	Formulas and applications	12
5.8	Variation and applications	12
	Summary and review, Chapter Test	
	Unit 2 Test	
	<b><i>Unit 3–Radical Expressions, Equations, &amp; Functions</i></b>	
6.1	Radical expressions and functions	13
6.2	Rational numbers as exponents	13
6.3	Simplifying radical expressions	13
6.4	Addition, subtraction, and more multiplication	13
6.5	More on division of radical expressions	14
6.6	Solving radical equations	14
6.7	Applications involving powers and roots	14
6.8	The complex numbers	14
	Summary and review, Chapter Test	
	Unit 3 Test	
	<b><i>Unit 4 – Quadratic Equations and Functions</i></b>	
7.1	The basics of solving quadratic equations	15
7.2	The quadratic formula	15
7.3	Applications involving quadratic equations	15
7.4	More on quadratic equations	15
7.5	Graphing $f(x) = a(x - h)^2 + k$	16
7.6	Graphing $f(x) = ax^2 + bx + c$	16
7.7a	Mathematical modeling with quadratic functions	16
	Summary and review, Chapter Test	
	Unit 4 Test	
	<b><i>Unit 5 – Trigonometry (from the Trig module)</i></b>	
5.1	Trigonometric functions of acute angles	
5.2	Applications of right triangles	
5.3	Trigonometric functions of any angle	
7.1	The law of sines	
7.2	The law of cosines	
	Trig Practice Test	

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**Withdrawal Dates:**

**JAN 20** – re-imbusement of fees

**MAR 10** – last day to withdraw to avoid an F on your transcript.

If you decide not to continue in the course, please go to registration before **MAR 10** to avoid getting an F on your transcript. In addition, please come and see me to discuss options.

### Grade Scale:

(You must score at least 50% on the final exam and have an overall average of 60% to receive a grade of C or higher in the course.)

A+ 90 - 100	B+ 77 - 79	C+ 65 - 69	F < 50
A 85 - 89	B 73 - 76	C 60 - 64	
A- 80 - 84	B- 70 - 72	D 50 - 59	

### EXAM

The final exam is based on the entire course and will count for 50% or 100%, \*whichever is to your advantage.

**AN “IP” WILL BE GIVEN FOR INCOMPLETE WORK PROVIDING: THERE IS A 50% COMPLETION OF MATERIAL OR 75% ATTENDANCE OTHERWISE THERE WILL BE AN “F”**

#### **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, Registrar's Office or the College web site at <http://www.camosun.bc.ca>

#### **ACADEMIC CONDUCT POLICY**

There is an Academic Conduct Policy. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, Registration, and on the College web site in the Policy Section.

[www.camosun.bc.ca/divisions/pres/policy/2-education/2-5.html](http://www.camosun.bc.ca/divisions/pres/policy/2-education/2-5.html) **Tentative**

#### **Pacing Schedule**

### **10 Course Content and Homework Assignments**

- Do all the odd-numbered questions in the sections listed below. Check your answers in the back of the text.
- To prepare for the final test for each unit, do the odd-numbered Summary and Review(S/R) exercises and do all the questions in the Chapter Test (CT) at the end of each chapter. Check your answers in the back of the text.

**\*\*Odd-numbered questions only\*\***