



**School of Arts & Science
MATHEMATICS DEPARTMENT**

**MATH 107- 003
Pre-Calculus: Business and Social Sciences
Winter 2008**

COURSE OUTLINE

The Approved Course Description is available on the web @
<http://camosun.ca/learn/calendar/current/web/math.html>

Ω Please note: this outline will be electronically stored for five (5) years only.
It is strongly recommended students keep this outline for your records.

1. Instructor Information

(a)	Instructor:	Bogdan Verjinschi		
(b)	Office Hours:	M, Tu, Tr, F 12:30-1:20 & M 3:30-4:20		
(c)	Location:	CBA 151		
(d)	Phone:	370 - 4490	Alternative Phone:	
(e)	Email:	verjinschi@camosun.bc.ca		
(f)	Website:	http://verjinschi.disted.camosun.bc.ca/		

2. Intended Learning Outcomes

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

1. Review selected algebra topics: factoring, simplifying rational expressions, and solve polynomial and rational equations.
2. Evaluate functions, find the domain of functions, compose functions.
3. Graph polynomial and rational functions using symmetry, intercepts, asymptotes and a table of signs.
4. Use the Factor and Rational Zero Theorems to factor polynomials and find their real zeros.
5. Graph exponential and logarithmic functions and their transformations.
6. Use the properties of logarithms to simplify expressions, and solve equations and applied problems.
7. Graph the sine, cosine and tangent trigonometric functions and their transformations.
8. Use the Pythagorean identities, the sum and difference formulas, and the double angle formulas to simplify expressions, solve equations and verify other identities.
9. Use trigonometric functions to model real-life problems involving cyclical patterns.
10. Evaluate limits; find derivatives using the definition, and find equations of tangent lines.
11. Read and write mathematics at a level sufficient for entry into applied calculus.

3. Required Materials

(a)	Texts	1. J.A. Beecher, J.A. Penna, M.L. Bittinger Algebra and Trigonometry, third edition, 2008 Pearson Education 2. Introduction to Calculus, Camosun College
(b)	Calculator	Sharp EL 531W calculator

4. Course Content and Schedule

Course Content: MATH 107 is an algebra and precalculus course for business, biology (those heading to UVic) and social science students. The main topics are algebra, functions, polynomial functions, rational functions, exponential and logarithmic functions, trigonometric functions and trigonometric identities & equations. A brief introduction to calculus is provided throughout the course.

Class times: Tu & TR: 3:30-5:50
Math Room: Tech 142 this is a drop-in centre where you can work on your math homework and get free help from the math tutor or classmates.

Prerequisite: The minimum recommended prerequisite is a **recent C+** in either Math 11 or MATH 073. If you have not completed Math 11 within the past 2 years or Math 12 within the last 3 years, then you probably want to take either 072/073 or just 073 (all tuition free courses) this term. Please come and see myself (or the chair of the Math department) so that we can talk about your math background and help you choose the best course this term.

Out-of-class Workload: 1 – 2 hrs/day Monday – Sunday

Exit Grade You Need: The prerequisite for Applied Calculus (Math 108) is a **C** in one of Math 107, 105 or 115 or a C+ in Math 12. Math 107 is a new course and the Camosun calendar has not been fully updated to include it in all the prerequisite lists. Even if it is not listed, Math 107 is an acceptable alternative to Math 12 or Math 105 or 115 **except** for entrance into the engineering technologies or Math 100 or 110. Please ask if you have any questions.

- Tips for Success:**
1. **Attend every class and get the most out of class time.** Don't be afraid to ask and answer questions. Don't worry about answering a question wrong. I like wrong answers – it gives me a chance to correct misconceptions. I often give you a bit of time to start or finish a question before I write up the solution on the board. Please use that time to work on the problem or to get help from, or give help to, the person beside you. Please turn off and put away your cell phone. Checking and sending messages during class is not a smart (or polite) use of class time. Copying notes for a class that you missed rather than working hard on the new material is also not the best (or polite) use of class time.
 2. **Do your homework every day.** Math is not a spectator sport; understanding what we do in class is only the first step. Work through lots of exercises and really think about the ideas; don't just try to get your homework over with! On your timetable, schedule time each day for your math homework; it is really important to establish a routine. You can't put this course on the back burner and hope to cram it in at the end – there is way too much material.
 3. **Work** at least 1-2h every day. Be sure you come prepared for the class: You know the material previously covered in class **and** all the home work done
 4. **Please ask for help before you fall behind or become frustrated.** If you can't get the correct answer, bring me your work so that I can see what you are thinking. I like to spend time explaining what is going wrong as well as nudging you towards a correct answer. Don't save up your questions until you have a long list; I find I can be more effective working with you on just one or two ideas at a time. Be a frequent user of the math help lab and my office hours.
 5. **Keep working**, stay positive and do the best you can, given all the other demands in your life.

5. Basis of Student Assessment (Weighting)

Tests: There are 3 in class tests and 4 take-homes. Take-homes are due in class at 3:30p.m. on the date shown in the course calendar (see the course webpage). All tests are based on the homework. The test dates are shown on the course calendar (see the course webpage)

Late Assignments/ Tests Assignments that are late by one day will be given a 25% penalty. After that, late assignments will not be accepted.

If you miss a test or assignment for medical or other urgent reasons, please email me as soon as possible. Bring in documentation when you return to class. Your temporary term mark will be the average of the tests/assignments that you do write. You will keep that term grade provided that you do well on the missed material on the final exam. However, if you are weak on that material on the final, I will calculate a mark for the missing work based on how you do on that material on the final exam. So, study the missed material well for the final exam!

Grade Calculation:	4 Take-home Tests	20%
	3 Tests	30%
	Final Exam	50%

- (1) If you don't do so well on one test or assignment, don't worry that you have ruined your grade. If you do well on that material on the final and you are sitting on the boundary between two grades, then I will nudge you up to the next letter grade.
- (2) **Final Exam** comprehensive, 3 hours. Occasionally it turns out that it would be to your benefit to have the final count 100%. This is possible with the condition that you need to be in the top half of a grade range to be awarded that grade.

Final exams are timetabled by registration; the exam schedule is posted on Camlink at the end of February.

Please don't book travel plans until April 23

6. Grading System

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	<i>Incomplete:</i> 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	<i>In progress:</i> 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 3 rd course attempt or at the point of course completion.)
CW	<i>Compulsory Withdrawal:</i> 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.

Help is available in the math help labs and from me (CBA 151) and your classmates. A good strategy is to go to a math room after class and to work on your homework there.

Usually the best approach is to do the current day's homework first – reinforce it while it is still fresh. Then, if you have time, go back and catch up on any outstanding homework

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.

MATH 107 Homework Winter 2008

The assigned problems for each section will be posted regularly on the course web page.