



**School of Arts & Science  
MATHEMATICS DEPARTMENT**

**MATH 107- 002**  
**Pre-Calculus: Business and Soc Sci**  
**Fall 2007**

**COURSE OUTLINE**

The Approved Course Description is available on the web @ \_\_\_\_\_

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:	Peggy Tilley		
(b)	Office Hours:	Mon – Fri 10:00 – 10:45 and 2:00 – 2:30		
(c)	Location:	Ewing 244		
(d)	Phone:	370 - 3502	Alternative Phone:	
(e)	Email:	tilley@camosun.bc.ca		
(f)	Website:			

**2. Intended Learning Outcomes**

*(No changes are to be made to this section, unless the Approved Course Description has been forwarded through EDCO for approval.)*

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	Math 105 & 107 Exercise Sets
(b)	Calcuator	Sharp EL 531W calculator

References: No outside reading is required. However, if you would like a reference for a particular topic, we have an assortment of precalculus textbooks in the math room and in the library. As well, math videos and DVD's in the Lansdowne Library Viewing Room are available on 3 day loan.

### 4. Course Content and Schedule

Comparison of Math 105 and 107 Math 107 is a lighter version of Math 105. If you need a UT Math 12 equivalent course for a BA degree or are heading for applied calculus for biology, business or social sciences, then probably Math 107 is the course for you. If you want to keep all your options open, then Math 105 is the right choice. Please come and see me or the chair of the mathematics department and we can talk about your particular situation.

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: Section 1: Mon – Fri 8:30 – 9:20 in Y219  
Section 2: Mon – Fri 12:30 – 1:20 in Y219  
Feel free to mix and match (except on test days)

**Math Rooms:** Ewing 224 and Ewing 342  
These are drop-in centres 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 – 1.5 hrs/day Mon – Fri (not 7 hours on Sunday!)

Tests: There are 3 in class tests and 4 take-homes. All tests are based on the homework in the Math 105 & 107 Exercise Sets. The test dates are shown on the course calendar attached to this outline. Late take-homes are not accepted and there are no rewrites for missed tests. If you are too sick to hand in a take-home or write a term test (doctor's note required), then I will calculate a mark for the missed work based on how you do on that material on the final exam.

**Tips for Success:** 1. Attend every class and work hard in class. Please ask questions if you don't understand something. Please turn off and put away cell

phones, Ipods, etc. If you want to multi-task during class, feel free to work on your homework.

2. Do your homework every day. Unfortunately, math is not a spectator sport. It requires a lot of hard work and practice. Please work through the questions thoughtfully; 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.
3. Work with one or more classmates some of the time. It can keep you motivated and explaining concepts to others is a great way to check your understanding.
4. Please ask for help before you fall behind or get frustrated. If you can't get the correct answer, please bring me all 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.

## 5. Basis of Student Assessment (Weighting)

Grade Calculation: Please read carefully.

**(1)** To obtain a grade of **C+ or higher** in this course, you need to achieve an overall grade of at least 65% AND you must obtain at least 50% on both your term work and the final exam.

The reason that we require a passing term grade is that math that is learned slowly over a period of time is usually retained for longer; information that is crammed in just before a final exam may be quickly forgotten. We also require a passing grade on the final exam since it is a cumulative test that puts all the bits and pieces together.

**(2)** To obtain a grade of **B+ or higher** in this course, you need to achieve an overall grade of at least 77% AND at least 70% on both your term work and the final exam.

**(3)** To obtain a grade of **A** in this course, you need to achieve an overall grade of at least 85% AND at least 78% on both your term work and the final exam.

**(4)** To obtain a grade of **A+** in this course, you need to achieve at least 90% on your term work AND at least 90% on the final exam.

**Subject to the conditions (1) – (4) above**, up to 100% of your grade can be placed on the final exam. I compare each test mark and each take-home mark with your final exam mark. If the final exam mark is higher, then the final exam mark is used for that % of your grade. You'll have a chance to do some sample calculations on the first take-home to check that you understand how this grading system works.

4 Take-homes	20%
3 Tests	30%
Final Exam	50% – 100% subject to (1) – (4) above
Total	100%

## 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](http://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. ( <i>For these courses a final grade will be assigned to either the 3<sup>d</sup> course attempt or at the point of course completion.</i> )
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](http://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.

Good luck and please come for help before you fall behind.