

# School of Arts & Science MATHEMATICS DEPARTMENT

MATH 108-02 Applied Calculus 2006F

# COURSE OUTLINE

### The Approved Course Description is available on the web @

 $\Omega$  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:	Chris Odgers	
(b)	Office Hours:	9:30-10:00 and 12:30-1:00 every day	
(c)	Location:	Ewing 262	
(d)	Phone:	370-3500 (24 hour machine)	Alternative Phone:
(e)	Email:		
(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. Find the limit of elementary functions as the independent variable approaches some finite value or approaches infinity.
- 2. Find the derivative of simple functions using the definition of the derivative.
- 3. Find the derivative of functions (polynomial, trigonometric, logarithmic and exponential functions) using the product, quotient and chain rule.
- 4. Find the derivative using implicit differentiation.
- 5. Solve problems involving rates of change.
- 6. Find relative and absolute extrema of functions.
- 7. Sketch graphs of functions identifying such features as relative extrema, intervals where the function is increasing and decreasing, points of inflection, intervals where the function is concave up and concave down, and asymptotes.
- 8. Solve problems that involve maximizing or minimizing some variable associated with the problem.
- 9. Find the approximate area under a curve using the area of a set of approximating rectangles.
- Evaluate a definite and an indefinite integral of polynomial, trigonometric, logarithmic and exponential functions using the Fundamental theorem of Calculus.
- 11. Evaluate integrals using the method of substitution.
- 12. Use integration to find the area between two curves.
- 13. Evaluate a definite and indefinite integral by the method of integration by parts.

- 14. Solve elementary differential equations using the method of separation of variables.
- 15. Solve problems using differential and integral calculus that involve applications from business and/or biological sciences.

#### 3. Required Materials

(a)	Texts	Calculus with Applications, 8 <sup>th</sup> edition, Lial, Greenwell & Ritchie.
(b)	Other	

### 4. Course Content and Schedule

(Can include: class hours, lab hours, out of class requirements and/or dates for quizzes, exams, lectures, labs, seminars, practicums, etc.)

Course Content: Chapters 1 - 7, 8.1, 10.1, 12

HAVING TROUBLE? NEED HELP? Office hours are 9:30-10:00 and 12:30-1:00 every day. Also, free tutoring is available in Ewing 224, the hours are posted on the door.

If a quiz is short (for instance, if 20% of the class is finished after 40 minutes) bonus questions are usually available on request from me. Anyone can ask for them, if it's not too late. They are usually slightly harder than regular test questions. There is no penalty for not doing them, or for getting them wrong. Additional marks can be earned on an assignment or quiz by doing unusually thorough or original work. If you want to use methods other than those used in class, please ask first.

Assignments due on a given day are, unless otherwise noted, due anytime that day. They can be submitted to me or at my office. Late assignments are usually not accepted without a good reason and prior agreement. Students who miss class are responsible for making up the missed material on their own time.

# Missed Quiz/Rewrite Policy

Students are expected to make every reasonable effort to write the quiz at the scheduled time. **A missed quiz usually counts as a 0,** so if for any reason it appears that you may miss a quiz:

- **Before the quiz**, talk with the instructor about missing the quiz, unless an unforeseen emergency makes this impossible, in which case leave a comprehensive message. Please do this as soon as possible.

Assuming that you qualify for a deferred quiz (for instance, medical or compassionate leave), you will be expected to write the quiz before the next class; the quiz is usually left for the student in the math lab. If this isn't possible, make alternate arrangements with the instructor well before the next class after the quiz, unless an unforeseen emergency makes this impossible too. In that case, leave a comprehensive message.

Please inquire if you have any questions or concerns about your particular situation.

## 5. Basis of Student Assessment (Weighting)

(Should be linked directly to learning outcomes.)

4 quizzes, assignments	50%
Final Exam	50%

or

If your term work **is complete** and **satisfactory**, and your mark on the final is higher, the final will count for 100% of your grade. This policy is prorated.

Note: No electronic devices of any sort (e.g. cell phones, discmen, translators) other than the Sharp EL531 W are allowed on tests. Quizzes are on Sept. 15, Oct. 6, Oct. 27, Nov. 17, and Dec.6. Your final could be as late as Dec. 19, 2006.

If you are going to miss a quiz, please familiarize yourself with the missed quiz policy below.

### 6. Grading System

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

# Standard Grading System (GPA)

Percentage Grade		Description	Grade Point Equivalency
95-100	A+		9
90-94	Α		8
85-89	A-		7
80-84	B+		6
75-79	В		5
70-74	B-		4
65-69	C+		3
60-64	С		2
50-59	D		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 at **camosun.ca** or 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.

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.

# 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 <a href="mailto:camosun.ca">camosun.ca</a>.

#### 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.

ADDITIONAL COMMENTS AS APPROPRIATE OR AS REQUIRED