	School of Arts & Science MATHEMATICS DEPARTMENT MATH 101- 002 Calculus 2 2013W

COURSE OUTLINE

The Approved Course Description is available on the web @ _____

✤ *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:	Stan Toporowski	
(b)	Office Hours:	Winter 2013	
(c)	Location:	E254	
(d)	Phone:	370-3493	Alternative Phone:
(e)	Email:	toporowski@camosun.bc.ca	
(f)	Website:	http://toporowski.disted.camosun.bc.ca	

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. Differentiate and integrate inverse trigonometric, hyperbolic and inverse hyperbolic functions.
2. Use integration to find area, volume, arc length, surface area of revolution, work, moments and centroids.
3. Integrate using parts, trigonometric integrals, trigonometric substitution, partial fractions and tables.
4. Evaluate limits, which have indeterminate forms, and calculate improper integrals.
5. Test a sequence for convergence and explain the difference between convergence of a sequence and convergence of a series.
6. Test series for convergence using the integral test, p-test, comparison tests, alternating series test and ratio test and explain the difference between convergence and absolute convergence.
7. Estimate the error in approximating a series using improper integrals and the alternating series remainder.
8. Calculate Taylor polynomials, power series, Taylor series, and MacLaurin series and estimate the error in an approximation using Taylor's Theorem.
9. Determine the interval of convergence of a power series.
10. Graph and analyze parametric curves and find arc length and surface area in parametric form.
11. Graph and analyze curves given in polar coordinates and determine area and arc length in polar form.

3. Required Materials

(a)	Texts	<u>Calculus of a Single Variable, 9th edition</u> by Larson, Hostetler and Edwards, available in the College Bookstore. It is also acceptable to use the 6th or 7th editions of this text book as they are all virtually identical. Homework questions will be given for all three editions of the textbook. Also <u>Math 101 Supplemental Materials</u>
(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.)

Content: This course is a continuation of Math 100 and covers most of the material in Chapters 5 to 9 in the textbook. Topics will include inverse trig and hyperbolic functions, applications of integration, integration techniques, L'Hopital's rule, improper integrals, infinite series, Taylor series, parametric equations and polar coordinates.

Class: 13:30 – 14:20 Monday to Friday in Young 227.

5. Basis of Student Assessment (Weighting)
(Should be linked directly to learning outcomes.)

(a)	Assignments	
(b)	Quizzes	

		Your final grade will be determined on the basis of Term Work worth 50% and a comprehensive Final Exam worth 50%. The final exam is 3 hours long and will be written during the week following the end of classes, the time and place will be scheduled by the College. Your final percentage grade will be converted to a letter grade using the following scale:
(c)	Exams	

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

Term work : The term work will consist of four in class tests and four hand in assignments. The class tests will count for 40% of your final mark, the assignments 10%. Dates for the tests will be announced in class at least a week in advance and dates will also be posted on the news page. Your final exam mark can count for 100% of your grade **provided that your term work has been satisfactorily completed.** Current term grades will be posted online and updated as new work is completed.

(d)	Other (eg, Attendance, Project, Group Work)	**Attendance:** While attendance in classes is not mandatory, it is very difficult to be successful if you miss many classes. If you must miss classes due to illness or other reasons, let me know and I can give you an idea of what work was covered. If you must miss a test due to illness, it is very important that you contact me so that we can make appropriate accommodations.

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	A		8
85-89	A-		7
80-84	B+		6
75-79	B		5
70-74	B-		4
65-69	C+		3
60-64	C		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**

   Resources : Math Lab (Ewing 224). This is a drop-in center where you can get help with your math homework. The hours will be posted on the door. I will post regular office hours, check my door for the times. **Set up a regular study schedule !!** You will probably have to do between 5 and 10 hours of homework a week to keep up.

   Online Resources : If you have purchased a new textbook you will receive a password which will give you access to free online tutoring on the internet. There are also relevant course materials including algebra

review questions, some useful animations and practice tests available to all students on the internet.

Recommended Homework: These study guides are a list of homework questions, which you should do to get a full understanding of the course material.

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.

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.

Calculator Policy: The <u>**only**</u> calculator allowed for use on tests and the final exam for **all Math courses** is the Sharp EL-531W, available at the College Bookstore.

Prerequisites and Expectations: You must have a minimum grade of **C** in Math 100 or **A-** in Math 108 in order to take Math 101. If you have the minimum requirement, you should be prepared to make an extra effort in order to maintain your standing as this course is quite demanding. If you feel that you might not have the necessary background please see me in the first week of classes and we will talk about your situation. A grade of **D** in this course is considered as a pass, however if you intend to use this course as a prerequisite for Math 220 you will need a grade of at least **C**.

Transferring to UVIC : If you intend to use this course as a prerequisite for Math 200 at UVIC, you may do so with a grade of **D**. However, be aware that the entry standard into the second year at UVIC can vary for different programs and any D grades will have a significant effect on your GPA.