UNIVERSITY OF CALGARY

FACULTY OF SCIENCE – MATHEMATICS & STATISTICS - MS 476

Ph: (403) 220-5203; E-mail: undergrad@math.ucalgary.ca

COURSE OUTLINE

WINTER 2011

1. **Course ID and number, Course Title**: Mathematics 249 – Introductory Calculus (non-WeBWorK)
   Lecture/Time: L02 MWF 10:00-10:50; W 12:00-12:50
   Instructor/Office/Phone/Email: V. Stastna MS 450 403-220-3345 vstastna@math.ucalgary.ca
   Office Hours: MWF 1-3pm or by appointment
   Course Website or Blackboard course name: http://math.ucalgary.ca/courses

2. **Prerequisites**: A grade of 70 per cent or higher in Pure Mathematics 30..
   (see Section 3.5C of Faculty of Science www.ucalgary.ca/pubs/calendar/current/sc-3-5.html
   and Course Descriptions: www.ucalgary.ca/pubs/calendar/current/course-desc-main.html)

3. **Grading:** The University policy on grading and related matters is described in sections F.1 and F.2 of the online University Calendar. In determining the overall grade in the course, the following weights will be used:

Quizzes	[best 4 of 5]	30 %
Midterm Test	[1]	20 % (March 9, 2011)
Final Exam		50 % (To be scheduled by the Registrar)

   The various components above will be assigned a percentage score and will be combined with the indicated weights to produce an overall percentage in the course. The conversion table between course percentage and letter grade will be provided at least one week before the withdrawal deadline.

   A passing grade in the Final Examination is essential for an overall grade of C- or better.

4. **Missed Components of Term Work.** The regulations of the Faculty of Science pertaining to this matter are found in the Faculty of Science area of the Calendar in section 3.6: **www.ucalgary.ca/pubs/calendar/current/sc-3-6.htm.** It is the student's responsibility to be familiar with these regulations. See also www.ucalgary.ca/pubs/calendar/current/e-3.html.

5. **REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME ACTIVITY**. If you have a conflict with any out of class time activity, please inform your instructor at least one week in advance of the activity so that other arrangements may be made for you.

6. **TEXTBOOK**: Single Variable Calculus or A Complete Course (any edition) by Adams.

7. **EXAMINATION POLICY**: Calculators ARE permitted at quizzes, mid-term test, and the final exam. Students should also read the Calendar, Section G, on Examinations: **www.ucalgary.ca/pubs/calendar/current/g.html**

8. **OTHER IMPORTANT INFORMATION FOR STUDENTS:**

(a) **ACADEMIC MISCONDUCT** (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the University Calendar under K. Student Misconduct (http://www.ucalgary.ca/pubs/calendar/current/k.html) to inform yourself of definitions, processes and penalties

(b) **ASSEMBLY POINTS in case of emergency during class time. Be sure to FAMILIARIZE YOURSELF with the information at http://www.ucalgary.ca/emergencyplan/assemblypoints**.

(c) **ACADEMIC ACCOMMODATION POLICY.** Students with documentable disabilities are referred to the following links:
Calendar entry on students with disabilities: **http://www.ucalgary.ca/pubs/calendar/current/b-1.html**
Disability Resource Centre: **http://www.ucalgary.ca/drc/**

(d) **SAFEWALK:** Campus Security will escort individuals day or night (**http://www.ucalgary.ca/security/safewalk/**). Call **220-5333** for assistance. Use any campus phone, emergency phone or the yellow phones located at most parking lot pay booths.

(e) FREEDOM OF INFORMATION AND PRIVACY: This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). As one consequence**, students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page**. For more information see also **http://www.ucalgary.ca/secretariat/privacy.**

(f) STUDENT UNION INFORMATION: VP Academic **Phone**: 220-3911 **Email**: suvpaca@ucagary.ca.
SU Faculty Rep. **Phone:** 220-3913 **Email:** sciencerep@su.ucalgary.ca **Website www.su.ucalgary.ca/home/contact.html**.
Student Ombudsman: **http://www.su.ucalgary.ca/services/student-services/student-rights.html**

(g) INTERNET and ELECTRONIC COMMUNICATION DEVICE Information. You can assume that in all classes that you attend, **your cell phone should be turned off**. Also, communication with other individuals, via laptop computers, Blackberries or other devices connectable to the Internet is not allowed in class time unless specifically permitted by the instructor. If you violate this policy you may be asked to leave the classroom. Repeated abuse may result in a charge of misconduct.

9. In addition to the instruction provided by their lecturer and tutorial instructor, there is a continuous tutorial available where students may obtain individual help with questions about the course material and exercise problems. Faculty members and graduate students will be available in the continuous tutorial room to answer questions in a one-to-one fashion. The location and hours of operation of the continuous tutorial will be announced by the lecturer and posted to the course website: http://math.ucalgary.ca/courses

10. SCUM

The Society for Calgary Undergraduate Mathematics is located in MS337A. They sell exam packages, run final reviews, and can often assist with problems. Please see their website for drop-in hours and events. They look forward to meeting you! http://math.ucalgary.ca/~scum/ .

11. UCAS

University of Calgary Actuarial Society is a great way for actuarial students to meet each other as well as potential employers. They hold events throughout the year with local actuarial companies that are great for networking. UCAS is also a great source of knowledge on the actuarial field and on information about SOA and CAS exams, which courses are best to take and what companies offer summer work programs. UCAS is located in MS 522. Please see their website for office hours and more information. www.ucalgary.ca/~actuary

12. CALCULUS CONNECTIONS

Calculus Connections is a companion course to this one offered by Y. Elsabrouty. There are no prerequisites and there is no cost to the student. The Monday/Wednesday sessions will review the relevant high school material, while the Tuesday/Thursday sessions will integrate the background material with the calculus topics and explain the main concepts, give examples and strategies. Added to this are midterm and final examination reviews. The schedule is available on the course website listed above.

13. QUIZ AND TEST SCHEDULE

QUIZZES: in the Lab during the weeks starting:	**Jan 17, 31**
	Feb 14
	Mar 21
	Apr 04
MIDTERM: in the lecture (class)	**Mar 09**

TENTATIVE CALENDAR:

Section references are from the 7th edition of *Single Variable Calculus* by Adams.

Week	Sections					Topics
1	P_1	P_2	P_3	P_4	P_5	Inequalities, lines, circles
2	P_6	1.2	1.3			Functions, limits
3	1.3	1.4	2.1			Continuity, tangent lines
4	2.2	2.3	P_7			Derivative, rules, trigonometry
5	2.4	2.5	2.6			Derivative of trigs, Chain Rule
6	2.7	2.8				Higher derivative
7	2.9	2.10	(3.1)			Implicit differentiation, antiderivative
8	M	3.2	3.3			Exponential and logarithmic functions, growth, decay
9	3.4	4.2	4.3			Extreme values, increasing/decreasing functions
10	X	4.3	4.4			Concave up/down, graphing
11	4.5	4.7	4.9			Applied max/min problems, linear approximation
12	5.2	5.3	5.4			L'Hopital Rule, definite integral
13	5.5	5.6	Review			Fundamental Theorem; substitution method