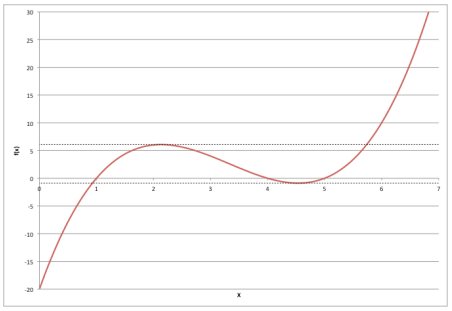

Course Outline: MATH 103 001 Winter 2012
Calculus for the Social and Management Sciences

Tuesdays and Thursdays, 10:00-11:15 am CL112
Final Exam April 23rd 7-10pm Location TBA

Instructor

Peter Douglas, CW 307.24
585-4346 (w), 525-8368 (h)
douglas@uregina.ca (w)
lmurphy@accesscomm.ca (h)

Office Hours

Tuesdays and Thursday 2:30-4:00 pm
Mondays 9-11 am
Other times by appointment
(Note that I am generally available on Mondays and off campus on Wednesdays and most Fridays)

Text: ***Applied Calculus For Business, Economics, and the Social and Life Sciences*** by Lawrence D. Hoffman and Gerald L. Bradley.

Other Resources: A class website will be maintained URCourses. This will contain electronic copies of assignments, solution sets and other items of interest. There will be no paper handouts provided in class.

Supplemental instruction (SI) offers free out-of-class study groups to help you succeed in this class. There will be three one-hour weekly sessions and you may choose to go to one, two, or all three sessions. Students who regularly attend SI will save time studying, better master the course content, and likely earn a better grade. SI sessions for Math courses are held in CW-308. Further information can be obtained from the Faculty of Science web site (http://www.uregina.ca/science).

Overview

Math103 covers the following topics:

1) Understanding limits, especially in the context of tangents, asymptotes and area calculations.
2) Calculation, and algebraic simplification of derivatives of functions. Differentiation rules.
3) Equation of a tangent line, linear approximation, local convexity.
4) Graphing.
5) Discussion of the polynomial functions up to degree 3 and the functions 1/x, 1/x2, ax + b + c/x, sqrt(x).
6) Calculus and algebra of exponential and logarithmic functions.
7) Indefinite and definite integral. Simple examples of integration by substitution.
8) Application of Calculus to economic and demographic problems. Compound interest and investment, population growth.
9) Optimization as applied to revenue, profit, and inventory.

Course Requirements

1) An awareness of the U of R General Calendar.

2) Students are assumed to have a working knowledge of the algebra topics from Math B30.

3) Completion of class assignments (approximately 8-10). These should be legible, on 8.5×11" paper and stapled together. Please ensure that you clearly identify your assignments with your name and student number. Assignments are due at the start of class on the assigned date (generally on Tuesdays). No credit will be granted for late papers.

4) It is expected and understood that students will work in groups on assignments. However, students should note that the assignments are a teaching tool, and placing too much reliance on others' work will leave them poorly prepared for the midterms and final exam.

5) Two midterm exams to be written in class time. The first midterm (covering Chapters 1-2) is tentatively scheduled for February 14th and the second midterm (covering Chapters 3-4) is tentatively scheduled for March 27th.

6) One 3-hour final exam scheduled for Monday April 23, 7-10 pm (location to be announced).

7) A tentative class schedule has been posted on the class website. This will be updated during the term.

8) Alternate arrangements for midterm and final exams may be made at the discretion of the instructor for students who provide prior notice and adequate documentation. However, the instructor reserves the right to deny such arrangements for students who have not completed the course assignments to date.

9) For the midterm and final exams, students are required to bring photo ID and a non-programmable pocket calculator**.** Students should note that the instructor will not provide calculators for the midterms or final exam.

Grading

Final grades will be based on

1. Assignments 10%
2. Midterms 40% (i.e. 20% each)
3. Final Exam 50%

The instructor reserves the right to

a) Fail a student who does not pass the final exam

b) Refuse to allow a deferred final to a student who has not completed the requirements of the course, or who does not receive a passing average for the two midterms.