Math 1A03 Calculus for Physical Science I Course Information Sheet
Term 1 Autumn 2011–2012

Instructors Dr. L. Barto, HH 409 ext 27031, lbarto@math.mcmaster.ca
office hours: MWR 17:30–18:30 or by appointment

Dr. M. Bays, HH 407 ext 26079, mbays@math.mcmaster.ca
office hours: TWF 16:00–17:00 or by appointment

Dr. D. Haskell (coordinator), HH 316 ext 27244, haskell@math.mcmaster.ca
office hours: MR 10:30–11:30, T 11:30–12:30 or by appointment

Teaching Assistant Chris Cappodocia, cappadcm@math.mcmaster.ca
office hours: in the Math Help Centre

Math Help Centre HH104 M–R 2:30–8:30, F 2:30–6:30 (opens the week of September 19) http://www.math.mcmaster.ca/∼mcleac3/Site/HelpCentre.html

Website http://www.math.mcmaster.ca/∼haskell/math1a_11-12/math1a-webpage.html

Text:

1) *Calculus: early transcendentals, 7th edition*, James Stewart, Thomson Brooks/Cole. Students may use other editions, but this will not be supported by the instructors. That is, students are responsible for comparing the editions, and being aware of discrepancies. All references to the text, including recommended problems, will be to the seventh edition.

2) *WebAssign*, http://www.webassign.net Web Assign is not required, but is highly recommended. It will provide immediate feedback on problems, as well as hints on how to proceed if you get stuck. When you register for Web Assign, use your McMaster userid as your username, and include your student ID number. You will need the following class key in order to register for the correct course. Please use the key for the section in which you are registered.

section 1: mcmaster 0738 2783
section 2: mcmaster 7144 6789
section 3: mcmaster 9043 8751

Course objective To learn about the differential and integral calculus for functions of one variable. We begin with a very short review of Grade 12 Calculus via a discussion of some important theorems on continuous functions. This leads naturally into a review of differentiation. Then we will introduce the integral from a theoretical point of view and learn how to evaluate integrals through a study of increasingly sophisticated techniques. We will finish with applications of both the differential and integral calculus. We will cover most of Chapters 3 through 7 in the text, as well as a little of Chapters 2 and 8.

Weekly schedule See the website for a more detailed outline of the course material.

Lectures and Tutorials There will be three lectures and one tutorial per week. The lectures will be used to present new material. The tutorial is an opportunity for students to solidify their grasp of concepts, as well as working through examples and reviewing for midterms. You are required to attend all lectures and tutorials.

Assessment Your final grade in the course is based on different components of work. The continuous assessment portion consists of weekly homework assignments, which are graded with the online system Web Assign, and three written homeworks. You may choose

not to buy WebAssign access, in which case this portion of the grade will be reassigned as described below. The examined portion of the grade comes from two midterms and one final exam. You do not need to choose between the following grading schemes — you will automatically receive the better score.

Grading Scheme I	**Grading Scheme II**
Diagnostic Test — 2%	
Online homework — 10%	
Written homework — 3%	Written homework — 5%
Midterm I — 20%	Midterm I — 20%
Midterm II — 20%	Midterm II — 20%
Final — 45%	Final — 55%

The currently scheduled dates (provisional, but unlikely to change) for midterms are Midterm I: Thursday, 13 October and Midterm II: Thursday, 17 November. **There are no make-up exams.** If you miss a midterm, with an excused absence (reported through the MSAF), the associated 20% will be redistributed to the other components of the course. You must bring your student ID to the midterms and the final exam. Only the McMaster standard calculator Casio fx-991 will be allowed in the midterms and final exam.

Web Assign The course page on WebAssign has Homeworks, Recommended Problems, and Tutorials assigned by week or chapter, as well as the Diagnostic test. The diagnostic is for your benefit: it covers prerequisite material which you should know. Take it right away, and use it as a guide for what you need to review at the beginning of the semester. Doing this work at the beginning of the course will really help you through the semester, which is why we have made it worth 2% of the overall marks. The homeworks are required. These are fairly short assignments, based on the material covered in class that week. The due dates (on Tuesdays) are posted on the web, and indicated with each homework. The goal of the homework is to keep you up-to-date with the material. No excuses will be accepted for missed homework, but the homework score will be based on your best 10 out of 12 marks. For students who choose not to use WebAssign, the homework problems are posted on the Problems page of the website.

Recommended problems are an essential part of the course. Working through these problems will help you understand the material of the course. It cannot be stressed too much that to understand mathematics you must DO it. Recommended problems are given on the website and on WebAssign. When you submit solutions online, WebAssign will mark your solutions, and give hints. You can also submit solutions to the TA to look over, and discuss problems with the TAs in the Math Help Centre. **The recommended problems as well as the homework problems are the minimum work you should be doing per week in order to keep up with the material of the course.** Problems in the Tutorials will walk you through examples.

Written homework Three tutorials during the semester will be dedicated to discussing what a complete homework (or exam) solution should look like. Based on the work of this tutorial, you will hand in some homework problems to be marked. Dates are posted on the website. These assignments can be done in groups of up to three people.

Exams The exams will involve both theory and examples. You will be required to do problems that involve both proofs and calculations. At least one problem on each exam will be chosen from the list of recommended problems on the course website. The three-hour final exam will be administered by the registrar's office and will cover all course material.

MSAF If you are absent from the university for a minor medical reason, lasting fewer than 5 days, you may, once per term, report your absence without documentation, using the McMaster Student Absence Form. Absences for a longer duration or for other reasons must be reported to your Faculty/Program office, with documentation, and relief from term work may not necessarily be granted. When using the MSAF, report your absence to haskell@math.mcmaster.ca. If you have missed a midterm, your excused absence will be recorded, and the weight of the midterm will be redistributed to other components of the course. If you have a missed a homework deadline, **there will be no alternative deadline**. So make sure to plan ahead and get your homework finished early. You may contact Dr Haskell at haskell@math.mcmaster.ca to confirm that the MSAF has been received. Please note that the MSAF may not be used for term work worth 30% or more, nor can it be used for the final examination.

A final word on cheating All work submitted must be **your own**. At the same time, you are encouraged to discuss problems and general ideas with each other. Mathematics need not be an isolating activity. What you may not do is to copy someone else's work.

To be explicit: You **may** print out a WebAssign assignment and ask your instructor, TA, or another student for help on how to do the problems. You **may not** have another student work the problem for you, and then input the solution.

You **may** discuss the solution to a homework assignment with other students. You **may not** copy another student's solution.

Final Policy Notes:

(i) It seems unfortunate but necessary to reproduce the words of the dean on cheating: *Academic dishonesty consists of misrepresentation by deception or by other fraudulent means and can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university.*

It is your responsibility to understand what constitutes academic dishonesty. For information on the various kinds of academic dishonesty please refer to the Academic Integrity Policy located at

http://www.mcmaster.ca/univsec/policy/AcademicIntegrity.pdf

The following illustrates only three forms of academic dishonesty:

Plagiarism, e.g. the submission of work that is not one's own or for which other credit has been obtained.

Improper collaboration in group work.

Copying or using unauthorized aids tests and examinations.

(ii) The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable

notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites weekly during the term and to note any changes.