

MATH 1X03: CALCULUS
FALL 2017

Instructor: Patrick Speissegger, HH 409A, ext 23430
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Time and place: TuWeFr 9:30–10:20, in MDCL/1105

Office hours: We 10:30–11:20, or by appointment. TA office hours to be announced

Website: https://ms.mcmaster.ca/~speisseg/blog/?page_id=3981

All information regarding lectures, assignments, and tests will be posted on this webpage. This course will NOT be on Avenue To Learn. If you have specific questions, please see me after lecture, in office hours, or by my email. WebAssign also has a message feature, but bear in mind that I only use WebAssign once a week, and may not reply to WebAssign messages in a timely manner.

Course materials:

- **Book.** Calculus: Early transcendentals, 8th edition, by James Stewart, Thomson Brooks/Cole. The course will cover material selected from chapters 2-7.
- **WebAssign.** Students are required to have a WebAssign account in order to complete on-line assignments. An access code for WebAssign is provided with the bundled purchase of a new textbook at Titles. If you purchased a used textbook (or an unbundled new book elsewhere,) you must purchase a WebAssign subscription. When purchasing WebAssign, choose the Lifetime of Edition, as you may also use WebAssign in Math 1XX3 next term, and Math 2X03 next year, at no extra cost.

Our **Class Key** is **mcmaster 1765 0701**.

- **Caution!** The bookstore has various bundles for different versions of Calculus: make sure you have the one for Math 1X03, with WebAssign (and not some other software.) The bookstore will NOT allow you to exchange bundles once you have opened the package!!

Course objective: To learn and apply the ideas and techniques of differential and integral calculus to solve problems. Some stress will be placed on the underlying ideas and theoretical framework of the subject to prepare students for more advanced courses in mathematics and statistics.

Topics: This is intended to give an idea of the scope of the topics and approximate timing. The material covered (with relevant sections in Stewart's text) can be found on the course web page. (We will not cover every section in the given chapters.)

- I. **Limits, continuity, derivatives.** (2-3 weeks) Chapters 2 & 3. Much of this material was covered in high school; we will concentrate on subjects

and approaches which were omitted in the Ontario curriculum, and move quickly through topics already covered. You should not consider this unit as a "review".

- II. **Using the derivative.** (2 weeks) Chapter 4. As with the above topics, we will skip around to emphasize topics not covered in high school calculus, such as the Mean Value Theorem and Newton's Method.
- III. **The (definite) integral.** (2-3 weeks) Chapter 5. This should be new to almost all students, and will be covered thoroughly.
- IV. **Integration: techniques and applications.** (4-5 weeks) Chapters 6 & 7. We develop methods for evaluating integrals and use them to solve problems in geometry and other contexts.

Tutorials: The tutorials are intended to provide additional examples to supplement the course material, and to provide additional opportunities for students to ask additional questions and seek help. Although attendance in tutorials is not mandatory, it is strongly encouraged. There are three tutorial sections, and you should be registered for one of them.

Help? More personalized assistance can be obtained by coming to the Math Drop-In Centre on the first floor of Hamilton Hall. Tutors are freely available to assist with Calculus questions. More detailed times and information is available on their web site: <https://www.math.mcmaster.ca/index.php/undergraduate-studies/math-drop-in-centre.html>

Marking Scheme:

- 20% = maximum among {WebAssign average, midterm average, final exam grade}
- 40% = best of two midterm tests
- 40% = final exam

Alternative marking schemes may also be used, in which case your final grade will be given by the maximum mark obtained among all schemes considered.

Assignments and Practice Problems: There will be periodic homework assignments, announced in class and on the website. Additional practice problems will be also be given, either via WebAssign or on the course webpage. The practice problems will not count towards your homework grade, but you will be responsible for their content on the tests and final exam. Homework and practice problems are drawn from the exercises in Stewart's text, but should be completed using WebAssign.

Midterm Tests: There are 2 midterm tests, tentatively scheduled for the normal class time on

Friday, October 6 and Friday, November 3.

Test locations will be announced later. Students must report any schedule conflicts to me within the first two weeks of class. The topics covered will be announced in class. You **MUST** bring your student ID to all tests, or your mark will be zero.

Final Exam: A final examination administered by the registrar will cover all course material. The date, time, and location will be announced by the registrar's office sometime later in the term.

Calculators: Only the McMaster Standard Calculator, either Casio FX-991 MS or Casio FX-991 MS Plus, is permitted during midterm tests and the final exam. (You may use any calculating device your heart desires for homework and studying.)

Excused Absences: Students seeking an exemption for one assignment or midterm test should use the MSAF on line tool to make the request. Please consult the web page:

http://academiccalendars.romcmaster.ca/content.php?catoid=13&navoid=2208#Requests_for_Relief_for_Missed_Academic_Term_Work

For absences for more than one test or for a period longer than 3 days the student must contact the office of the Associate Dean (Studies) of their Faculty within a week after the due or test date with proper documentation. I will act on the exemption only after receiving official communication from the relevant Associate Deans office that the grounds for exemption have been accepted. Deferrals for the final exam are handled exclusively by the Associate Deans office. The percentages for exempted tests will be transferred to the final exam.

Academic Integrity: You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity. Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behaviour 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 types of academic dishonesty please refer to the Academic Integrity Policy, located at

<http://www.mcmaster.ca/academicintegrity>

The following illustrates three forms of academic dishonesty:

- (1) Plagiarism, e.g. the submission of work that is not ones own or for which other credit has been obtained.
- (2) Improper collaboration in group work.
- (3) Copying or using unauthorized aids in tests and examinations.

Academic Accommodation of Students with Disabilities: Students who require academic accommodation must contact Student Accessibility Services (SAS) to make arrangements with a Program Coordinator. Academic accommodations must be arranged for each term of study. Student Accessibility Services can be contacted by phone 905-525-9140, ext. 2865 or e-mail sas@mcmaster.ca. For further information, consult McMaster Universitys Policy for Academic Accommodation of Students with Disabilities.

Disclaimer: 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.