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## MAT1320 Section B (Fall 2017)

## Calculus I

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**Description of the Course:** Intuitive definition of limits; continuity, statement of intermediate value theorem. Quick review of basic derivative formulas: products, chain rule, exponentials, and trigonometric functions. Derivatives of quotients, logarithms, inverse trigonometric functions. Finite difference approximations of derivatives. Analysis of functions via the first and the second derivatives; statements of extreme and mean value theorems. L'Hospital's rule. Implicit differentiation, related rates, optimization, linear approximation, Newton's method. The definite integral and the fundamental theorem of calculus. Antiderivatives of elementary functions, techniques of integration (integration by parts, substitutions, partial fractions). Numerical integration: mid-point, trapezoidal rule and Simpson's rule; error analysis.

**Prerequisite:** One of MAT1339, Ontario 4U Calculus and Vectors (MCV4U) or an equivalent. The courses MAT1330, MAT1300, MAT1308, MAT1320 cannot be combined for credits.

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### How to learn Calculus

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**Attend the lectures:** Make sure you go to class and take good notes.

LEC	Monday	13:00–14:30	MNT 203
LEC	Wednesday	11:30–13:00	MNT 203

**Attend the DGDs:** This is your Discussion Group, led by a graduate student TA. Prepare by doing the posted exercises, and use your time well by asking questions! You are registered to **one** of the following DGD sections:

DGD B01	Friday	10:00–11:30	FTX 135
DGD B02	Friday	11:30–13:00	SMD 422
DGD B03	Friday	13:00–14:30	FTX 359
DGD B04	Friday	14:30–16:00	SMD 227
DGD B05	Friday	16:00–17:30	UCU 205

**Stay up-to-date with Virtual Campus:** The course webpage is on **Virtual Campus** (powered by Brightspace) of the University of Ottawa. Announcements, Homework assignments, DGD questions, test/homework solutions, and more will be posted there. You will need to check Virtual Campus regularly.

**Check the website:** You can find the syllabus and outline for all sections of MAT1320/1720 here: <http://web5.uottawa.ca/mnewman/calcl/outline.1320.html>

- Stay mathematically fit! Do lots of exercises:** Practice! Do homework exercises, textbook exercises, DGD exercises, and any other suggested exercises. Work on examples from class to see if you can remember how to solve them on your own. Calculus I is not a course where last-minute memorization is enough to succeed. The more time you spend regularly working on the exercises, the stronger your results will be. If you think you should try to fully understand the theory before you start working on the exercises, think again! Instead, work through the exercises *before* you fully understand what's going on; as you keep pushing through the exercises, the theoretical comprehension will follow.
- Use the textbook:** *Calculus Early Transcendentals, 8th ed.* by James Stewart. The 7th Edition is perfectly acceptable as well if you have it. The textbook is available at the [Agora Student Bookstore](#) or at the Follett Bookstore on Campus (in the University Centre).
- Get instant feedback from your MapleTA homework:** Homework assignments are to be completed online using MapleTA. You will need to purchase a license for MapleTA in order to log in, and you'll need to familiarize yourself with the syntax for MapleTA (more details to be given later). Once you get used to it, you will have the satisfaction of having your homework assignment results immediately.
- Ask for help:** Ask for help when you need it (before things become too overwhelming). Talk to your instructor and TA. We are here to help. Don't be afraid to ask questions during lectures and DGDs.
- Visit your professor's Office Hours:** Whenever you need concepts clarified or would like to discuss the course, please drop in to my Office Hours (to be announced soon). Feel free to email me to make appointments on other days/times if needed.
- Visit the Math Help Centre:** In addition to the DGDs, lectures, and professor's office hours, you can get help at the Math Help Centre, located in TBT C-115. For more details, go to <http://science.uottawa.ca/en/faculty-services/undergraduate-studies#MAT>
- Accessibility:** The University of Ottawa is committed to ensure that persons with disabilities have equal access to its services and events. If you are in need of accommodation during this course due to a disability, please consult with Access Services as soon as possible: <http://sass.uottawa.ca/en/access>.

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## How you will be evaluated

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<b>MapleTA homework worth 10%:</b>	Weekly homework assignments are to be completed online using MapleTA. Students are required to purchase a license for MapleTA. More details on this are given later.
<b>2 Tests worth 20% each:</b>	The tests will be written in class on the following two dates: <b>Test 1:</b> Wednesday, October 11, 2017 <b>Test 2:</b> Monday, November 20, 2017
<b>Final Exam worth 50%:</b>	The exam will be scheduled during the Exam Period (Dec. 8–21, 2017) <b>Note.</b> In order to pass the course, you must obtain 40% or higher on the Final Exam. If your mark on the Final Exam is lower than 40%, then you will fail the course (F), regardless of your other marks.

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## Test Policies

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<b>Test procedures:</b>	You should bring your student card to tests. Students may not enter after or leave before 20 minutes have passed from the beginning of a test. Questions about grading should be submitted to the professor within one week of the date that the graded tests are ready for students to pick up.
<b>Calculator policy:</b>	<b>NO CALCULATORS.</b> You may <b>not</b> use calculators during tests or the exam. If you are caught with a calculator during a test or the exam, then academic fraud allegations may be filed which may result in you obtaining zero on the test/exam.
<b>Policy for missing a test:</b>	If you need to miss a test for a <b>valid/serious</b> reason, then you must email the professor <b>before</b> the test and provide proper justification (such as a certificate from UO Health Services or equivalent) within <b>5 working days</b> after your justification to miss class expires, in which case the weight of the missed test will be transferred to the weight of the final exam. <b>Note.</b> Your justification/documentation must be an original hard copy, <i>not</i> an electronic copy, <i>not</i> a photocopy. Otherwise, you will be assigned a grade of 0 on that test.
<b>Electronic Devices:</b>	Cellular phones, unauthorized electronic devices, calculators or course notes are <b>not</b> allowed during tests and exams. Phones and devices (including Smartwatches) must be turned off and put away in your bag. Do not keep them in your possession, such as in your pockets. <b>If caught with such a device or document, academic fraud allegations may be filed which may result in you obtaining a 0 (zero) for the exam.</b> Therefore, come to your exams with a plan of how to store your device away from your person.

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## MapleTA information

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**MapleTA license:** Purchase your one-year MapleTA license from [here \(click this link\)](#), or go to <https://webstore.maplesoft.com/?purchasetype=student&promocode=UOTTAWA2017FA&location=Canada>

The cost for a one-year license is \$24.95 + tax, and you can use the same license for MAT1322, assuming you take it in Winter 2018. When you purchase the license you will get a username and password.

**MapleTA login:** After you own a license for MapleTA, you can login to your account from [here](#), or go to the uOttawa MapleTA portal: <http://place32.placementtester.com:8080/uottawa/login/login.do>

**Note.** Searching the web for MapleTA can and will lead you to login sites for other universities, which won't work.

**Warning:** After you have bought your license, **you must change your profile on MapleTA to enter your uOttawa student number, your "@uottawa.ca" email address, and your last name and first name. If you do not do this, then your grades will not get transferred to Brightspace and you will get zero for your assignments.**

**Warning:** The servers might be slow during peak times, such as a few hours before the deadline; you should not count on doing assignments at the last minute.

**MapleTA FAQ:** You will need to familiarize yourself with the syntax for MapleTA. If you do not enter your answers for homework using the correct format/syntax that MapleTA understands, then MapleTA may reject your answers (even if they are mathematically correct). To avoid such frustrating situations, start by reading about MapleTA here: [MapleTA FAQ \(English\)](#). [MapleTA FAQ \(French\)](#).

When something does not work, please consult the FAQ *before* contacting your professor.

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### Important dates for MAT1320B:

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Wednesday, <b>September 6</b>	first class
Friday, <b>September 15</b>	first DGDs
Monday, <b>October 9</b>	thanksgiving break
Wednesday, <b>October 11</b>	<a href="#">Test 1</a>
<b>October 22–28</b>	reading week break
Friday, <b>November 17</b>	last day to withdraw from a course
Monday, <b>November 20</b>	<a href="#">Test 2</a>
Friday, <b>December 1</b>	last DGDs
Wednesday, <b>December 6</b>	last class ←MONDAY SCHEDULE AT UOTTAWA!
<b>December 8–21, 2017</b>	final exam period

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## University of Ottawa Services and Policies

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**Academic Integrity.** Academic integrity means being responsible for the quality of your work, preparing it honestly, and respecting the intellectual community you are part of as a student. Every member of the University community has the moral obligation to learn and share knowledge with honesty and integrity. For more information, please see <http://www.uottawa.ca/vice-president-academic/academic-integrity>

**Academic Fraud.** Academic fraud refers to “an act by a student that may result in false academic evaluation of that student or another student”. Plagiarism and all forms of cheating are taken very seriously at the University of Ottawa. Please take the time to see <http://www.uottawa.ca/academic-regulations/academic-fraud.html>

**Accessibility.** The University provides academic accommodations for students with disabilities in accordance with the terms of the Ontario Human Rights Code. This occurs through a collaborative process that acknowledges a collective obligation to develop an accessible learning environment that both meets the needs of students and preserves the essential academic requirements of the University’s courses and programs. The University of Ottawa is committed to ensure that persons with disabilities have equal access to its services and events.

**Access Services.** The University of Ottawa accommodates students with disabilities through Access Services, a division of the Student Academics Success Service (SASS). SASS is a *free* network of services and programs designed to give you the tools and information you need to succeed. Delivered by professionals and fellow students who care about your success and your well-being, the programs and services of SASS complement your classroom learning and support you in achieving your academic and professional goals. Please note that there are deadlines for registering with Access Services. For more information, please visit <https://sass.uottawa.ca/en/access/>

**Sexual Violence.** The University of Ottawa will not tolerate any act of sexual violence. This includes acts such as rape and sexual harassment, as well as misconduct that take place without consent, which includes cyberbullying. The University, as well as various employee and student groups, offers a variety of services and resources to ensure that all uOttawa community members have access to confidential support and information, and to procedures for reporting an incident or filing a complaint. For more information, please visit <http://www.uOttawa.ca/sexual-violence-support-and-prevention/>

**Test/Exam Policy for Electronic Devices.** Cellular phones, unauthorized electronic devices, calculators or course notes are **not** allowed during tests and exams. Phones and devices must be turned off and put away in your bag. Do not keep them in your possession, such as in your pockets. **If caught with such a device or document, academic fraud allegations may be filed which may result in you obtaining a 0 (zero) for the exam.** Therefore, come to your exams with a plan of how to store your device away from your person.