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1 Course Content and Learning Goals

Calculus is the mathematical study of how quantities change. In the business world, there are many quantities that may change, such as costs of advertising and production, price of goods, and profit. For example, if a business adjusts their spending on advertising or the price they charge to consumers, how will their profit change as a result? In particular, how much should they spend on advertising and how much should they charge for their product in order to maximize their profits? We need calculus in order to answer these questions!

MAT133Y is designed for first-year Rotman Commerce students, in order to provide the mathematical foundation needed to embark on their studies in commerce and work towards a career in business. We will mainly focus on topics in differential calculus and integral calculus, in one and two variables, and their applications in business and economics.

We will provide a set of specific learning objectives each week; these are intended to be clear, actionable goals that clarify what students should be able to do after engaging in all learning activities for the week, including lectures, tutorials, homework, and other forms of self or peer study. In addition to these specific weekly learning objectives, we will also be constantly aiming to develop the following big-picture skills:

- flexibility in mathematical thinking – using and translating between different representations of mathematical ideas, including graphs, verbal descriptions, data, and formulas;
- problem-solving skills – using mathematical concepts and tools to solve new problems that you haven’t seen before, especially real-world problems from business and economics;
- communication of mathematical ideas – using written, verbal, and visual explanations to communicate mathematical ideas, for the dual purpose of presenting them to others and gaining a better understanding of them ourselves.

2 Is MAT133 the right calculus course for you?

2.1 UofT’s Four First-Year Calculus Streams

UofT offers four different first-year calculus streams. Even though MAT133Y is designed for Rotman Commerce (RC) students, some RC students choose to enrol in one of the other calculus streams instead. Here is a brief summary of all four calculus streams:
MAT133Y focuses on applications of calculus in business and economics. Compared to the other streams, a wider breadth of topics is covered. In addition to single-variable differential and integral calculus (discussed in all calculus streams), we also discuss topics from multivariable calculus that are important in business applications. Trigonometric functions are not discussed.

MAT135/136 focuses on applications of calculus in life sciences and physical sciences. Single-variable differential calculus and integral calculus are covered, including trigonometric functions.

MAT137Y covers single-variable differential and integral calculus, with a focus on developing mathematical logic and proof skills.

MAT157Y starts building the theoretical foundations needed to pursue a career in research mathematics.

Any of the above calculus streams will serve as a valid prerequisite for your future core courses in the Rotman Specialization of your choice. Is MAT133Y right for you? Here are a few of the pros and cons of MAT133Y, relative to the other calculus streams, for a typical Rotman Commerce student. Please note that this list may not be complete! Be sure to reach out to your academic advisor or professor if you are having trouble deciding which stream to take.

**Pros of MAT133Y:** For Rotman Commerce students, the two main advantages of taking MAT133Y are: (1) we explicitly focus on business applications and (2) we cover a wider breadth of topics that will be useful for you later on in your studies of business and economics. If you take one of the other calculus streams instead, you will need to pick up on some topics in multivariable calculus during your future economics courses.

**Cons of MAT133Y:** There are many courses at UofT that require first-year calculus, but will some will only accept one of MAT 135/136, 137Y or 157Y as a valid prerequisite. This includes many higher level courses in mathematics and statistics. If you think you might be interested in taking further courses in mathematics, statistics or the sciences (beyond those that are required for a Rotman Commerce Specialist Program), you might consider taking one of the other calculus streams.

### 2.2 MAT133Y and Statistics

Statistics is concerned with designing experiments and observational studies, as well as interpreting data. Statistics has important applications in commerce and economics, including in market research and econometrics. Some Rotman Commerce students choose to take more statistics courses than those that are required for their program, perhaps even enrolling in a Statistics Minor. If this sounds appealing to you, consider the following two points regarding MAT133Y and Statistics.

- You may apply credit in MAT133Y toward a Statistics Minor, however, you must obtain a score of at least 70% in MAT133Y to do so. (In general, any of the four first-year calculus streams may be applied toward a Statistics Minor.)
MAT133Y may not currently be applied to a Statistics Major. If you might be interested in taking a Statistics Major, you are encouraged to enrol in MAT137Y rather than MAT133Y. MAT137Y will help you to develop mathematical logic and proof skills, which are important in many advanced statistics courses.

2.3 Late Change Policy

To give students more time to become informed about the different first-year calculus options at UofT before deciding which one is the best fit for them, students are allowed to switch between MAT 133, 135, 137, and 157 up until Oct 2, with the exception that if you switch into MAT157, you must do so on ACORN before Sept. 18, 2019.

If you are deciding between two (or more) first-year calculus courses, we recommend that you attend and fully engage in both courses until you have made your decision, to ensure that you are informed about the courses and that you will not miss any coursework in the course that you enter. Although most of our first-year calculus courses have flexible grading policies to account for missed assignments, we will not make any special accommodations to allow latecomers to submit missed assessments late.

3 Instructor Information

Please find the contact information for all MAT133Y instructors below.

<table>
<thead>
<tr>
<th>Instructor</th>
<th>Lecture Section(s)</th>
<th>Office</th>
<th>E-mail Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cindy Blois</td>
<td>101, 201</td>
<td>PG200C</td>
<td><a href="mailto:cblois@math.toronto.edu">cblois@math.toronto.edu</a></td>
</tr>
<tr>
<td>Yulan Qing</td>
<td>401</td>
<td>BA6172</td>
<td><a href="mailto:yqing@math.toronto.edu">yqing@math.toronto.edu</a></td>
</tr>
<tr>
<td>Jill Tate</td>
<td>5101, 5301</td>
<td>PG101A</td>
<td><a href="mailto:jill.tate@utoronto.ca">jill.tate@utoronto.ca</a></td>
</tr>
<tr>
<td>Thaddeus Janisse</td>
<td>5201</td>
<td>BA6191</td>
<td><a href="mailto:thad.janisse@mail.utoronto.ca">thad.janisse@mail.utoronto.ca</a></td>
</tr>
</tbody>
</table>

Each instructor will hold at least two office hours per week; the times will be announced in class and posted to the MAT133Y Quercus page. Students may attend the office hours for any MAT133 instructor (even if you do not attend that instructor’s lecture).

Teaching Assistants (TAs) also play a key role in our teaching team. They lead tutorial sessions, grade assessments, and provide assistance in the Math Learning Centre (MLC). TAs are not available via email, however, you may attend any TA’s office hours in the MLC (even if you are not enrolled in that TA’s tutorial section).

3.1 Email Policy

Each individual instructor may have their own policy regarding emails; they will share their policy with you on the first day of class. However, the following notes apply in general.

- Please refrain from asking math-based questions via email. We are much better able to support you on your course content-based questions through office hours, rather than email!
However, if you are unable to attend any of our office hours, then an email would be appropriate so that we can either reschedule or help you find other means of support. Remember that the Math Learning Centre in PG101 is open from 11am to 7pm most weekdays (except that it closes at 5pm on Fridays).

- **Be professional and respectful.** When emailing instructors, always use your utoronto.ca email address and begin the subject line with “MAT133:”, then summarize the topic about which you are writing. Begin your email with “Dear Professor...” and end it by signing off with your full name and UTORid.

- **Check the syllabus.** If you have a question about the course policies, check the syllabus. Then check the syllabus again. If you still didn’t find your answer, start writing an email to your course coordinator, Prof. Blois, but before pushing send, remind yourself that she has about 1000 other students who might be emailing her too, so you’d better just give the syllabus a lucky third try. Finally, if you still can’t find your answer, send off your email to admin133@math.toronto.edu; Prof. Blois will be happy to help you out at this point.*

- **Be patient.** We will try to respond to emails as quickly as possible, but during busy times, it might take several days to respond.

### 4 Textbook and Online Homework System

The required textbook is *Applied Calculus*, 6th edition by Hughes-Hallet et al. Access to this book is included within WileyPLUS. You will also be using WileyPLUS to submit your homework each week. Below are your options for purchasing access to the textbook and online homework.

- **(Recommended) ISBN 9781119661931, WileyPLUS Access, which includes online access to the textbook and homework - $60.00**
- ISBN 9781119408918, includes WileyPLUS, as well as a printed loose-leaf version of the textbook - $150.95
- ISBN 9781119408888, includes WileyPLUS, as well as a permanent downloadable e-text - $125.00

Also, please note that the $150.95 option above is exactly the same as the $60 option, except that it also provides a printout of the textbook on thin loose-leaf paper, which you can store in a binder. Using the $60 option, you may also print pages of the book, one section at a time (or about 10 pages at a time). Please note that when the course is over, you will no longer have access to WileyPLUS. With the $125 option, you will have access to a pdf version of the book after the course ends.

If you are not 100% sure that you’ll stay enrolled in MAT133Y this year, you may use a free trial of WileyPLUS for up to two weeks at the beginning of the semester. You may access WileyPLUS through the MAT133Y Quercus page.

*If you are experiencing financial hardship, we are sorry to hear that this is the case. Affordability is one of our priorities and this is why we chose a textbook that costs $60 to access. Unfortunately, we are not able to provide free access to WileyPLUS. If you are experiencing financial hardship*
and you are able to access a used or rental version of the book at a cost that is significantly less than $60, then please email Prof. Blois at admin133@math.toronto.edu.

5 Course Activities

The main activities of the course consist of lectures, tutorial activities, online homework, exams and additional study time. Each of these activities are described briefly below.

5.1 Lectures

Lecture times and locations are shown in the table below.

<table>
<thead>
<tr>
<th>Section</th>
<th>Instructor</th>
<th>Times</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>Cindy Blois</td>
<td>Tu 11AM-1PM, Th 11AM-12PM</td>
<td>SS 2102</td>
</tr>
<tr>
<td>201</td>
<td>Cindy Blois</td>
<td>Mo 3-5PM, Th 12-1PM</td>
<td>SS 2118</td>
</tr>
<tr>
<td>401</td>
<td>Yulan Qing</td>
<td>Tu 1-3PM, Th 10-11AM</td>
<td>MP 202</td>
</tr>
<tr>
<td>5101</td>
<td>Jill Tate</td>
<td>Mo 6-9PM</td>
<td>BA 1160</td>
</tr>
<tr>
<td>5201</td>
<td>Thaddeus Janisse</td>
<td>Tu,Wed,Thurs 5-6PM</td>
<td>MP 203</td>
</tr>
<tr>
<td>5301</td>
<td>Jill Tate</td>
<td>Mo 2-3PM, Th 1-3PM</td>
<td>BI 131</td>
</tr>
</tbody>
</table>

Students are expected to attend all lectures. Each instructor will plan and facilitate their own lectures, in their own style. You may attend lecture sections that you are not enrolled in if you wish, provided that there is sufficient space. If we run out of seats, we may need to ask unenrolled students to leave.

Classroom etiquette rules may vary among lecture sections and will therefore be discussed in each lecture. Please ask your instructor if you have any questions about classroom etiquette.

If you miss a lecture, you are expected to use the course learning goals, relevant sections of the book, and practice problems in order to catch up on what you missed.

**Caution:** Although some of the topics in this course may sound familiar to you, based on your experience with calculus in high school, our learning goals in this course may be different from those of your high school course. University courses usually build and require a deeper level of understanding than high-school courses. *Do not assume that you can safely miss class, just because you’ve seen the topic in another course.*

5.2 Clicker Questions

Not all sections will be using clicker questions. If your lecture section is not using clicker questions, you may disregard this section of the syllabus.

“Clicker questions” are multiple-choice or short-answer questions asked during the lecture period. They are intended to get you thinking and to give your instructor real-time feedback during the lecture. You may use any internet-capable device (such as a smartphone, tablet, or laptop) to log in to the “clicker form” using your UTORid and respond to each clicker question. Clicker questions are often intended to be challenging – we will usually give you several chances to think, answer,
discuss, and try again. It is normal to get them wrong on the first try; for this reason, we only grade for participation and not for correctness. Clicker questions are not intended to be a form of attendance; the credit that we give you is to acknowledge the work that you do to engage in these questions; they are not just for showing up. We understand that you are sometimes unable to participate because you were unable to attend class. For this reason, you will receive full credit as long as you participate in clicker questions for 75% of the classes that contained clicker questions.

If you do not have a portable internet-capable device, such as a smartphone, tablet, or laptop, then please email your instructor and/or admin133@math.toronto.edu to discuss alternatives.

This year (2019-20), we are piloting a new clicker system using Microsoft Forms. There may be some unforeseen technical issues that arise. For this reason, it is possible that your instructor will try clicker questions for the first two weeks of class, but then decide not to use them. In this case, clicker questions will not count toward your final score; we will transfer the weight to the weekly reflective questions. (See Sections 5.4, 6.1, and 6.2.)

5.3 Tutorial Activities

You must register in a tutorial section through ACORN by the end of the first week of classes. Tutorials will begin during the second week of class, on September 20, 2019.

Weekly tutorials are facilitated by TAs. Attendance is mandatory. Tutorial activities are designed to give you an opportunity to reinforce your understanding of course concepts, practice problem-solving, and communicate mathematical ideas from the course. Each tutorial session may have a different format, however, you should generally expect to work individually, in groups, and sometimes to present your work to the rest of the class.

Assessments completed in tutorials are intended to be formative, rather than summative. This means that they are intended to help you learn and grow, rather than to assign you a score based on your current mastery of the learning objectives. In each tutorial, the TA will be clear about the grading rubric. As long as you attend (on time), follow instructions, and try your best, you should receive a 100% score. Some tutorial assessments may have a take-home component.

5.4 Weekly Reflective Questions

Weekly reflective questions will be posted to Quercus each week (either through the Quercus portal itself or through Microsoft Forms). These questions are dual-purpose: (1) to help you reflect on what you learned (or didn’t learn) that week and (2) to collect feedback about the course, so that we can be responsive to any issues as they arise. **We will all benefit most from this exercise if you take your time to write thoughtful responses!**

We will read a selection of student responses to reflective questions each week, but we are unable to give you direct feedback on them. If you have an urgent issue that requires a response from your instructor, please email them directly.

You will receive credit for participating in weekly reflective questions. Plagiarising or submitting totally nonsensical responses (such as “asdlkfja;oieng;oaiejw”f”), are considered academic offences and may result in a total mark of 0 on the entire Weekly Reflective Question portion (which is either worth 2% or 5% of your overall grade depending on whether your instructor is using clicker questions). Please note that your score for this activity will likely not be posted to Quercus until
the very end of the course.

5.5 Online Homework

Online homework will be submitted roughly once per week, using WileyPLUS, which is accessible through the MAT133Y Quercus page. It is the student’s responsibility to log into WileyPLUS regularly to keep updated on all homework assignments and their deadlines. Please note the following:

- You may submit up to 15 attempts to each question.
- Late submissions will be accepted, but they will be penalised by 25%.

5.6 Additional Self and Group Study

As a rule of thumb for courses at UofT, you should be spending about 2-3 hours working outside of class for each hour you spend in class. In this course, that time should include the weekly online homework, any take-home portions of tutorial assignments (if applicable), responding to the reflective questions in Quercus, as well as any additional studying and practice problems that you do on your own (not for points).

You are responsible for your own learning. After completing the required course activities, it is essential that you reflect on what you’ve learned and what you are still confused about. Find additional problems from the textbook (at the end of each section) to give yourself more practice. Try reading the chapter of the book again to clarify any difficult parts.

That said, you’re not alone! Although you are responsible for your own learning, there are many resources available to help you! This includes instructor office hours and TA support in the Math Learning Centre (MLC). Another important resource that should not be overlooked is your peers. Setting aside time both for individual time and for studying in a group will help you to succeed in this course. This is especially helpful for review before the exams!

In your self-study, beware of the “Dunning-Kruger effect,” which says roughly that people who are lacking in knowledge or expertise in a certain subject area are unable to accurately assess their own competence in that subject area – furthermore, they are biased to overrate their own competence in that subject area, becoming overconfident. Therefore, it is important to develop metacognitive awareness – to constantly question your own thoughts and reasoning, so that you can more accurately assess your own understanding.

5.7 Exams

There will be three midterms and a final exam.

- **Closed Book:** No notes or books will be permitted for use during exams.
- **Calculators:** You are allowed and expected to use a simple scientific non-programmable and non-graphing calculator on exams. These are the only types of calculators allowed:
  - Casio FX-95MS
– Casio FX300ES Textbook Display
– Casio FX-300MS Plus Scientific Calculator
– Sharp EL244WB
– Sharp EL-531XB-WH
– Sharp EL510RTB Scientific Calculator
– Texas Instruments TI-30Xa Scientific Calculator
– Texas Instruments TI-30XIIS Solar 2-Line Scientific Calculator
– Texas Instruments TI30-XS Multiview Scientific Calculator

If you don’t already have one of these calculators, you are encouraged to acquire one as soon as possible, so that you can have plenty of practice with it before the first midterm exam. Note in particular, that you may not use your phone as a calculator during an exam!
The use of any device not listed above would constitute academic dishonesty; such cases may result in sanctions on guilty parties, as per the Code of Behaviour on Academic Matters.

• **Format:** There will be a mixture of multiple-choice, short answer, and long answer questions on each exam. Sample problems will be posted so that the format will not be a surprise.

Additional information about the midterms and final exams will be provided on Quercus.

## 6 Assessments

### 6.1 Grading Scheme

Your overall mark in this course will be computed using either Scheme 1 or Scheme 2 below. We will use the scheme that results in your highest overall mark.

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Scheme 1</th>
<th>Scheme 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Clicker Questions and/or Reflective Questions</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Tutorial Work</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Midterm with your highest score</td>
<td>17%</td>
<td>12%</td>
</tr>
<tr>
<td>Midterm with your second highest score</td>
<td>13%</td>
<td>10%</td>
</tr>
<tr>
<td>Midterm with your third highest score</td>
<td>10%</td>
<td>8%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>35%</td>
<td>45%</td>
</tr>
</tbody>
</table>

Opportunities to gain extra credit, if any, will be shared on the MAT133Y Quercus page.

This system of grading is designed to reward growth and improvement throughout the course, as well as to lessen the impact of a low exam score. Here are two fictional stories to illustrate the point.

• Annie has always struggled with math in school. Furthermore, she is having trouble adjusting to the transition from life in high school to university, feeling stretched thin between academic and social commitments. She missed a few MAT133Y classes in September and
finds herself cramming the night before the first midterm to catch up. She does her best to memorize some of the solutions to the practice midterm, so that she can imitate them the next day. Unfortunately, this strategy does not pay off; she fails the first midterm. After setting up a meeting with her instructor to make a plan to get back on track, she starts attending more office hours, going to the Math Learning Centre (MLC), spends more time in library doing practice problems on her own, and she even forms a study group with some of her fellow students. She starts to realize that success in this course hinges upon understanding the concepts, rather than just memorizing procedures (which she had been used to in high school). Furthermore, she realizes that if she works hard enough and reflects on the work she’s done, she is fully capable of understanding all course material. Her marks begin to improve, with each successive exam. She studies very hard for the final exam and achieves an excellent score of 87%! The MAT133Y grading scheme rewards her improvement, by weighing her first (and worst) midterm by only 8%, while her final counts for 45% of her overall average.

• Chao has been working hard in MAT133, attending all lectures and tutorials, meeting once per week with a study group, and spending several hours on his own in the library, working on practice problems. His performance on all three midterm exams has been excellent. However, during the night before the final exam, someone pulls the fire alarm in his apartment building at 3am and the building needed to be evacuated. Due to a lack of sleep, his brain is not operating at full capacity during the exam. His final exam grade ends up being significantly lower than his three midterm scores. While his overall course mark will suffer, at least with the flexible grading scheme in MAT133Y, his final exam score will only count for 35% of his mark, rather than 45%. (This story could also be adjusted so that the low exam score is one of the three midterms, in which case, the lowest midterm score would only count for 8%.)

6.2 Clicker Questions and/or Reflective Questions

Not all instructors are using clicker questions this semester. Please read the point below relevant to your situation.

• If your instructor is using clicker questions in the lecture, then 3% of your grade will come from your participation in clicker questions and 2% of your grade will come from your responses to weekly reflective questions. (As discussed in section 5.2, as long as you participate in clicker questions for 75% of the lectures, you will receive the full 3%.)

• If your instructor is NOT using clicker questions in the lecture, then 5% of your grade will come from your responses to weekly reflective questions.

6.3 Interpreting University Grades

If you are noticing a large difference between your high school and university grades, part of the reason could be a difference in marking standards. To interpret your grades at UofT, please refer to the Faculty of Arts and Science Academic Calendar. For example, note that percentages of 80% or higher are considered to be excellent and in the A range (either A+, A or A-).

*For more support regarding the high-school-university transition, please visit https://studentlife.utoronto.ca/ote.
Also, please note the following important minima:

- In order to continue into the second year of a Rotman Commerce program, you earn a mark of at least 63% in MAT133Y.
- In order to enrol in a Statistics Minor, you must earn a mark of at least 70% in MAT133Y.
- In order pass MAT133Y, you must earn a mark of at least 50%.

6.4 “Curving”

UofT does not grade “on the curve”. In other words, there are no quotas for the number of As, Bs, etc. Your mark will represent your mastery of the learning objectives of the course, not your performance relative to your peers. For example, if all students truly master all learning objectives, then all students in the course will earn an A!

We want to emphasize that you are not competing for the top marks with your peers. It is in everyone’s best interest if you work together to succeed, rather than compete with each other.

There are some rare instances where adjustments to grades are required, to ensure that we are adhering to UofT’s grading policy. The instructors and the Dean reserve the right to make such adjustments, if necessary. However, such adjustments will never be based on quotas. There is no “curve”.

6.5 Missed Coursework

- **Missed Tutorials:** Your lowest 3 tutorial scores will be dropped in the calculation of your average. This is not simply for boosting your grade; the reason we drop these scores is because we understand that you sometimes need to miss tutorials due to valid reasons, such as illness or other academic commitments. We drop the three scores automatically to account for such issues, so that we reduce the logistical work needed to account for accepting excuse notes or administering makeup tutorials. If you have a medical issue or accessibility accommodation that causes you to miss more than three tutorials, please email your course coordinator, Prof. Blois, at admin133@math.toronto.edu and provide supporting documentation.

- **Missed Midterm Exams:** If you miss a midterm exam due to a legitimate reason such as illness, please upload your documentation to Quercus as soon as possible, no later than one week after the exam. We will post an announcement on Quercus shortly before the exam to clarify what needs to be uploaded and how to upload it. The weight of the missed midterm will either be shifted to the final exam, a combination of the other midterm exams and the final exam, or to a makeup exam. You will be informed of the accommodation after your documentation is approved; you will not be allowed to choose the accommodation.

- **Missed Homework Assignments:** Since we do accept late submission of homework assignments (with a 25% penalty), you should be able to catch up on homework that you were not able to submit before the deadline. Therefore, we will not drop any homework scores.

- **Missed Weekly Reflections:** We will drop the lowest 3 weekly reflection scores, to give you more flexibility in your schedule during especially busy weeks.
7 Missed Clicker Questions: If your lecture section uses clicker questions, you may miss up to 25% of days during which clicker questions were used and still receive a 100% clicker score.

7 Course Schedule

7.1 Exam Dates

Please note that the exam dates below are all tentative. They will be confirmed as soon as possible.

• Midterm 1: Tuesday, Oct. 22, time TBA.
• Midterm 2: Tuesday, Jan. 21, time TBA.
• Midterm 3: Tuesday, Mar. 10, time TBA.
• Final Exam: The date, time, and location will be announced in UofT’s final exam schedule.

If you are unable to attend one of the midterms due to a valid reason, please follow the instructions on Quercus to upload your supporting documentation as soon as possible.

7.2 Tentative Topic Schedule

Sections listed below are from our textbook, Applied Calculus, 6th ed, by Hughes-Hallet et al. The topic schedule is tentative and subject to change throughout the semester.

Week 1 - Functions and Rates of Change (1.1, 1.8, 1.3) (Sept 5-13)
Week 2 - Functions in Economics (1.2, 1.4, 1.3) (Sept 16-20)
Week 3 - Exponential Growth and Decay (1.5-1.7, Appendix B)
Week 4 - Instantaneous Rate of Change and the Derivative (2.1-2.3)
Week 5 - The Derivative (cont’d) (2.3-2.5)
Week 6 - The Derivative (cont’d) - Flex Time and Midterm Review
Week 7 - Shortcuts to Differentiation (3.1-3.4), Midterm on Tuesday Oct 22
Week 8 - Chain Rule; Introduction to Optimization Problems (3.3, 4.1, 4.2)

READING WEEK

Week 9 - Optimization Continued, Applications to Business (4.3, 4.4, 4.5)
Weeks 10-11 - Accumulated Change: The Definite Integral (5.1-5.5)
Week 12 - Antiderivatives and Applications (6.1-6.3)

WINTER BREAK

Week 13 - Techniques of integration (6.5-6.7) (Jan. 6-10)
Week 14 - Integration Strategy, Flex Time, Review for Midterm 2

Week 15 - Probability (7.1 - 7.3); Midterm 2 on Tuesday, Jan. 21.

Week 16 - Introduction to Functions of Several Variables, Contour Maps & Partial Derivatives (8.1-8.3)

Week 17 - Partial Derivatives, Optimization I (8.4-8.5)

Week 18 - Optimization II (8.6), Flex Time

Week 19 - Integration for Functions of Two Variables

Week 20 - Review for Midterm 3, Flex Time

Week 21 - Geometric Series (10.1, 10.2); Midterm 3 on Tuesday, March 10

Week 22 - 24 TBA. Topics may include (but are not limited to) series, linear and/or logistic regression, projects involving real data, basic linear algebra and/or linear programming, and review for the final exam.

8 Academic and Personal Support

Your MAT133Y instructional team is available to support your learning outside of standard lecture and tutorial times, in the following ways:

- **Instructor Weekly Office Hours** - You may attend any instructor’s office hours. The times and locations are to be announced on Quercus.

- **MLC**: The main Math Learning Centre (MLC) in PG101 is open 11am-7pm on Mondays - Thursdays and Fridays at 11am-5pm, starting on Sept. 16, 2019. You may go there anytime to find other students to work with and support from TAs. Any TA should be able to help you with MAT133, however, you may also use the MLC website to find the times in which our MAT133Y are working.

- Math Learning Centres are also available in the Colleges; click here for more information.

- **Online MLC**: We are piloting a new program that allows students to work with a TA and with other students online. This is not just a message board; TAs will be able to questions using audio. The online MLC TAs will be available Mondays - Thursdays 7-9pm on Bb Collaborate and on weekend afternoons for 2 hours each (times are TBA). Sign in via the Math Learning Centre course in Quercus.

Here are some additional resources that you might find helpful:

- The Writing Centres
- Feeling distressed?
- UofT Health and Wellness Services
- UofT Student Life
- College/Faculty Registrar
- Student Crisis Response: 416-946-7111
9 Accessibility Services

We are committed to accessibility at UofT. If you may require accommodations for a disability, please contact Accessibility Services, by visiting their website, emailing accessibility.services@utoronto.ca or calling 416-978-8060. It is important that you get in touch with them right away because the process for obtaining your accommodations letter may take up to several weeks.

If you have general questions or concerns about the accessibility of this course, you are encouraged to reach out to your instructor, course coordinator, or Accessibility Services.

9.1 Volunteer Notetaking

If you’re interested in helping to make our classroom more accessible, volunteer to be a notetaker! Accessibility Services needs dependable volunteer notetakers to assist students living with a disability to achieve academic success. All you have to do is attend classes regularly and submit your notes consistently.

1. Register online as a Volunteer Note-Taker at:
   https://clockwork.studentlife.utoronto.ca/custom/misc/home.aspx

2. Follow the link that says “Volunteer Notetakers”

3. Select your course and upload a sample of your notes

4. Once you have been selected as a notetaker, you’ll get an email notifying you to upload your notes.

If you have any questions or require assistance, please email as.notetaking@utoronto.ca or call 416-978-6186.

Volunteers may receive co-curricular credit or a certificate of appreciation.

10 Academic Integrity

UofT maintains high standards of academic integrity. All students are expected to read and abide by The University of Toronto’s Code of Behaviour on Academic Matters.

You might reasonably have some confusion about what constitutes an offence, especially considering that in some circumstances collaboration is allowed and encouraged, but in others, collaboration is forbidden. The Code of Behaviour on Academic Matters clarifies what constitutes an offence. To further reduce confusion, here are a few examples of offences and non-offences in the context of MAT133Y.

Examples of Offences:

- responding to a clicker question from outside of the classroom
- writing a student’s name on your group’s tutorial submission when they were not present during the tutorial session or did not contribute to the work submitted
• allowing another person to complete your WileyPLUS online homework for you, or completing it for someone else
• looking at another student’s work during an exam
• allowing another student to peak at your exam paper
• communicating with another student during an exam
• using unauthorized materials, such as notes or books, during an exam
• using an unauthorized calculator on an exam
• using a cell phone during an exam
• opening the exam paper before invigilators have announced the start of the exam
• continuing to write in your exam after the end of the exam time has been announced

Examples of Non-Offences:

• discussing homework problems with your peers, but submitting your own responses on WileyPLUS
• submitting group work in the tutorial, provided that the instructions permit you to do so and that all group members contributed
• using online resources to help you understand course content or homework problems

If you have any questions about what constitutes an academic offence, please do not hesitate to contact your instructor or TA.

11 Copyright in Instructional Settings

If a student wishes to tape-record, photograph, video-record or otherwise reproduce lecture presentations, course notes or other similar materials provided by instructors, he or she must obtain the instructor’s written consent beforehand. Otherwise all such reproduction is an infringement of copyright and is strictly prohibited. In the case of private use by students with disabilities, the instructor’s consent will not be unreasonably withheld.

For more information on copyright and the University of Toronto, please visit the copyright page.

Last update: September 16, 2019. Minor updates will be posted to Quercus throughout the term without notice. Students will be notified of any major updates.