

MAT136S Calculus I(B)

Syllabus

(2016 July/August)

*“Of course it is happening inside your head...
but why on earth should that mean that it is not real?”*
– Albus Dumbledore.

Course Description

This is a first-year introduction to integral calculus containing some applications to the sciences. Theorems will be stated precisely, mostly without proofs, but with an indication of the mathematical ideas involved. Topics to be discussed include: antiderivatives, integration and the Fundamental Theorem of Calculus, techniques of integration, applications (areas, volumes, arc length, etc.), introduction to differential equations and some applications, sequences and series, and Taylor series.

Prerequisites

MAT135H1 or MAT125H1

Textbook

(required) J. Stewart, *Single Variable Calculus Early Transcendentals*, 8th edition
ISBN-13: 978-1-305-27033-6

(optional) *Students Solution Manual* for the above textbook

You may study from an older edition of Stewart if you wish, but problem sets will assign questions from the 8th edition. It is your responsibility to have access to these questions.

Instructors

Asif Zaman asif@math.toronto.edu
Shuangjian Zhang shuangjian.zhang@mail.utoronto.ca

Lectures

Our first lectures are on June 28, 2016 and our last lectures are on August 4, 2016.

<i>Section</i>	<i>Time</i>	<i>Location</i>	<i>Instructor</i>
LEC0101	T/R 10–1	SF1101	Zaman
LEC5101	T/R 6–9	GB119	Zhang

While cell phones are not prohibited in lecture, recording or taking pictures in class is strictly prohibited without the consent of your instructor. Please ask before doing.

Email Policy

- Please send email for administrative purposes only. For math questions, use Piazza (see *Blackboard* for details) or ask your instructor/TA in person during class or office hours.
- You must use your ****@mail.utoronto.ca email account when sending us emails. Otherwise, they may be filtered as spam and deleted automatically.

Office Hours

Zaman T/R 3–5 in BA6180 Zhang T/R 1–3 in BA6283

Blackboard

All announcements, term work grades, problem sets, and other course materials will be posted on Blackboard (portal.utoronto.ca). Other supplemental resources also include:

- LECTURE SUMMARIES from Zaman’s and Zhang’s lectures, but these will be incomplete and often without solutions to examples, important comments, and other details. They are intended to show what was emphasized in lecture. You must still attend lecture to complete your notes. Be aware that the summaries from Zaman’s and Zhang’s lectures may differ, but the sections covered will remain the same.
- ONLINE VIDEOS from khanacademy.org or youtu.be with many examples of solving problems similar to those in lecture. These videos are often very detailed and an excellent supplement to your textbook, though the precise content and notation may differ. Compare with your text and if you’re still unsure, ask your instructor.
- PIAZZA, an online Q&A discussion board which we highly recommend. If you wish, you can sign up here: piazza.com/utoronto.ca/summer2016/mat136h1s. You can ask math questions anonymously and you can get an answer from your peers or instructors. The response rate is typically very fast. You can also answer other students’ questions yourself, which is actually one of the best ways to learn material.

You are expected to check Blackboard regularly. All announcements posted are considered to have been announced to the class and not having read or seen an announcement **is not** an accepted reason for not following guidelines or missing deadlines. You may configure your preferences on Blackboard to receive email notification as soon as an announcement has been posted.

Quizzes

There will be a total of 9 quizzes to be held in the last 10 minutes of tutorial. Only your best 7 of 9 quizzes will be counted towards 15% of your final grade. Quiz questions will be similar to those found on *Problem Sets*. You must write the quiz in your assigned tutorial; otherwise, you will receive a zero for the quiz. There will be no make-up quizzes (see *Missing a Term Test or a Quiz* for details). The dates of the quizzes can be found in the *Course Schedule*.

Problem Sets

Problem sets for each tutorial will be available on Blackboard about one week in advance of the tutorial. They will consist of three general sections:

- LEARNING THE LANGUAGE: Basic knowledge and warm-up questions before you continue with the rest. These questions summarize the main terminology/concepts.
- SELECTED PROBLEMS: Problems to work on before and during tutorial.
- ADDITIONAL PROBLEMS: Extra problems for studying throughout the term or before exams.

These problem sets will *not* be graded; however, your quizzes will be similar to one of the SELECTED PROBLEMS. To succeed in this course, you should regularly complete the problem sets.

Tutorials

Tutorials begin on Thursday, June 30 and are held twice a week.

- *How should I prepare for tutorial?*

Work on the problem set beforehand. If you have questions, you will be able to ask your TA for help. Bring your textbook and problem set to tutorial.

- *What will I be doing in tutorial?*

Your TA will spend part of the time discussing questions on the problem set. You will spend part of the time working on the problem set while your TA walks around to help. You may be asked to work in groups or independently. Tutorials will usually have a 10 minute quiz at the end. See *Quizzes* or *Course Schedule* for details.

As with lectures, recording or taking pictures in tutorial is strictly prohibited without the consent of your TA. Please ask before doing.

Term Tests

There will be two term tests, each 110 minutes in duration. More details will be announced later.

The regular sitting of Test 1 is scheduled for Monday July 11th, 2016 from 6:10–8:00 pm.

The regular sitting of Test 2 is scheduled for Monday July 25th, 2016 from 6:10–8:00 pm.

Missing a Term Test or a Quiz

If you have an academic conflict with the regular sitting of the term test (e.g. a tutorial, lecture, or lab for another course), then you must inform your instructor no later than one week before the relevant term test. Assuming you obtain approval, you will write the early sitting of the corresponding test which will be at 4:10–6:00 pm on the same day as the regular sitting. If you have an academic conflict with both the early sitting and the regular sitting then your grade will be adjusted by increasing the final exam component of your work.

If you miss a term test or a quiz for any other legitimate reason (e.g. severe illness), you should notify your instructor as soon as possible, no more than 24 hours after the missed test/quiz, to obtain special permission and provide proper documentation (see *Medical Notes and other Documentation* for details). You should submit your documentation to your instructor no later than one week after the day of the missed test/quiz. There will be no make-up term tests or quizzes so your grade will be adjusted by increasing the final exam component of your work.

Reasons which are not legitimate include but are not limited to:

- “I have been extremely busy recently because of personal reasons and do not have enough time to prepare for the test.”
- “I have other tests on the same day as the MAT136 test (which do not have a direct time conflict with the MAT136 test).”
- “My employment has a direct time conflict with the MAT136 test.”
- “I have another test at the same time as my MAT136 quiz.”

If you skip a test or quiz without prior approval, you will receive a zero for the test or quiz (unless the absence is due to an illness or exceptional circumstances and properly documented).

Medical Notes and other Documentation

The University's "Verification of Illness and Injury" form (illnessverification.utoronto.ca) is the **only** acceptable form of direct medical documentation. For non-medical documentation, please see these [guidelines](#) by the Faculty of Arts and Science and the corresponding [petition form](#) if relevant.

Grading Scheme

Your grade will be the maximum of:

15% Quizzes + 20% Test 1 + 20% Test 2 + 45% Final Exam

or

15% Quizzes + 15% Test 1 + 15% Test 2 + 55% Final Exam

Note the "15% Quizzes" only counts your best 7 out of 9 quizzes. Each of your best 7 quizzes is therefore worth approximately 2.1% of your grade.

Your raw scores for quizzes and term tests will be posted on *Blackboard*. If there are any discrepancies, please contact your instructor immediately; do not wait for weeks to go by.

Final Exam

Our final exam will be held the week of August 9–15, 2016 and is scheduled by the Faculty of Arts and Science. The timetable will be posted on the Arts and Science website on July 13, 2016.

Accessibility Services

The University of Toronto is committed to accessibility. If you require additional academic accommodations, please contact Accessibility Services as soon as possible (studentlife.utoronto.ca/as).

Other Resources

If you are having difficulties succeeding in this course due to academic, personal, or financial circumstances, you can find some very helpful people at your college registrar (artsci.utoronto.ca).

Academic Integrity

Academic integrity is fundamental to learning and scholarship at the University of Toronto. Participating honestly, respectfully, responsibly, and fairly in this academic community ensures that the U of T degree that you earn will be valued as a true indication of your individual academic achievement, and will continue to receive the respect and recognition it deserves.

Familiarize yourself with the University of Toronto's Code of Behaviour on Academic Matters:

governingcouncil.utoronto.ca/policies/behaveac.htm

It is the rule book for academic behaviour at the U of T, and you are expected to know the rules. A simplified version is available here:

[What is academic misconduct?](#)

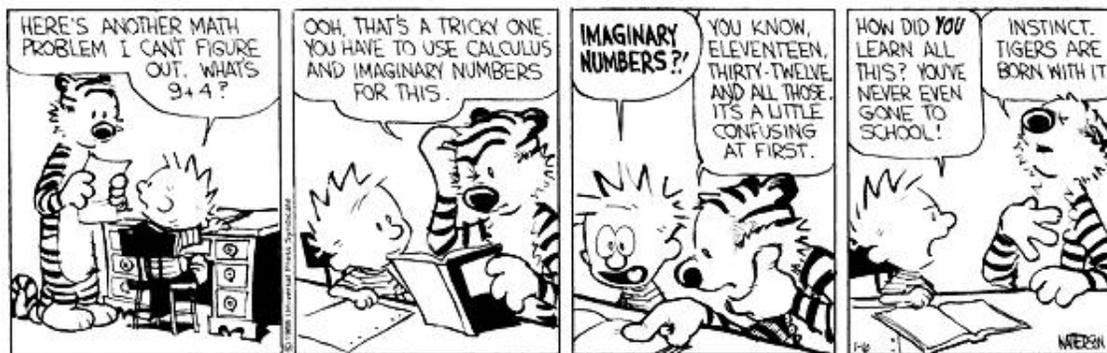
The University of Toronto treats cases of academic misconduct very seriously. All suspected cases of academic dishonesty will be investigated following the procedures outlined in the Code. The consequences for academic misconduct can be severe, including a failure in the course and a notation on your transcript. If you have any questions about what is or is not permitted in this course, please do not hesitate to contact your instructor. If you are experiencing personal challenges that are having an impact on your academic work, please speak to your instructor or seek the advice of your college registrar.

Course Schedule

This schedule below is tentative and subject to change; however, the dates of term tests and quizzes are confirmed. Lecture content lists the relevant textbook sections in Stewart.

Date	Lecture Content	Additional Notes
June 28	5.1, 5.2	No tutorial
June 30	4.9, 5.3, 5.4	Quiz 1 in tutorial
July 5	5.5, 6.1, 6.2, 6.3	Quiz 2 in tutorial
July 7	6.5, 7.1, 7.2	Quiz 3 in tutorial
July 11	no lecture	Test 1
July 12	7.3, 7.4, 7.5	No quiz in tutorial
July 14	7.5 (ctd), 7.8, 8.1	Quiz 4 in tutorial
July 19	9.1, 9.3, 9.4	Quiz 5 in tutorial
July 21	11.1, 11.2	Quiz 6 in tutorial
July 25	no lecture	Test 2
July 26	11.2 (ctd), 11.3, 11.4	No quiz in tutorial
July 28	11.5, 11.6	Quiz 7 in tutorial
August 2	11.7, 11.8	Quiz 8 in tutorial
August 4	11.9, 11.10	Quiz 9 in tutorial

Tutorials and corresponding *Problem Sets* will focus on content from the previous lecture. For example, in the first tutorial on June 30 you will discuss lecture material from June 28.



Calvin & Hobbes, ©Bill Watterson.