Department of Mathematics & Statistics
Concordia University

> **MATH 205**
> Differential & Integral Calculus II
> *Summer 2021*

Instructor*: _____

Email: _____

Office Hours: _____

*Students should get the above information from their instructor during class time. The instructor is the person to contact should there be any questions about the course.

Preface: Due to exceptional circumstances, this course will be taught and all assessments will be done completely ONLINE. Given the subject matter and nature of this course, at least one of the exams, including **the midterm and/or the final exam will be given online through the Concordia Online Exams (COLE) platform with online proctoring.** For more details see the ADDENDUM at the end of this Course Outline.

Text: *Thomas' Calculus: Early Transcendentals, Single Variable, (ed. 14)* Books a la Carte edition plus MyLab Math, (Pearson). Options with or without the loose-leaf text (E-book only, including in MyLabMath) can be ordered.
The digital version of the textbook will be available at:
https://www.co-opbookstore.ca/service/textbooks/
The print version of the textbook will be available at:
https://www.bkstr.com/concordiastore/home
Note: Students should order textbooks as early as possible, especially for printed versions in case books are backordered or there are any shipping delays.

Prerequisite: Math 203 or an equivalent Calculus I course.

Office Hours: Your professor will announce her/his office hours during which she/he will be also available to give a reasonable amount of help. Note, however, that if you missed a class you should not expect your professor to cover the missed material for you.

Tutorials: The material in this course requires a lot of practice. The Department has therefore organized special ONLINE tutorial sessions conducted every week to provide additional support to students outside the online lecture environment. These online sessions are conducted by tutors who will help with solving problems on the topics learned in class that week, with particular emphasis on the material that students may have difficulties with in this course. Students are strongly encouraged to participate and be active at these problem-solving sessions. Tutorials are an important resource to help students succeed in this course.

Math Help Centre:	In addition to Tutorials, a Math Help Centre staffed by graduate students is available. The schedule of its operation will be posted on the Department webpage (https://www.concordia.ca/artsci/math-stats/services/math-help-centre.html).
WeBWorK:	Every student will be given access to an online system called **WeBWorK**. The system provides you with many exercises. Students will use this system to do assignments (see **Assignments** below). In addition, before the midterm test and before the final exam, a number of practice problems will be posted in WeBWorK to help you review the material of the course.
MyLab Math:	Every student who purchases the loose-leaf version of the textbook will be given access to one more online system called **MyLab Math**. This system contains an E-version of the textbook, as well as a large number of various resources, like practice exercises, typical examples on different topics, often with solutions, video materials, etc., that help you master the course material.
Assignments:	Students are expected to submit assignments using **WeBWorK**. Late assignments **will not** be accepted. Assignments contribute 10% to the final grade. Working regularly on the assignments is essential for success in this course. Students are also strongly advised to do as many problems as their time permits from the list of recommended problems included in this outline, as well as work on the practice exercises opened in WeBWorK and in MyLab.
Midterm Test:	There will be one **midterm test** in Week 4 (based on the material of weeks 1-3) which will contribute up to 35% to your final grade (see the Grading Scheme below). **NOTE:** It is the Department's policy that tests missed for any reason, **including illness,** cannot be made up. If you miss the midterm test **because of illness** (*medical note required*) the final exam will count for 90% of your final grade, and the Assignments will count for the remaining 10%.
Final Exam:	The final examination will be two hours long, given online through the COLE platform. The exam will cover all the course material, and will contribute up to 80% to the final grade (see the Grading Scheme). **NOTE:** Students are responsible for finding out the date and time of the final exams once the schedule is posted by the Examinations Office. Conflicts with the final exam schedule must be reported directly to **the Examinations Office, not to your instructor**.
Grading Scheme:	The final grade will be based on the higher of (a) or (b) below: a) 10% for the assignments, 35% for the midterm test, 55% for the final exam. b) 10% for the assignments, 10% for the midterm test, 80% for the final exam.
IMPORTANT:	**PLEASE NOTE THAT THERE IS NO "100% FINAL EXAM" OPTION IN THIS COURSE**
Calculators:	Only calculators approved by the Department such as **Sharp EL 531** or the **Casio FX 300MS**, are permitted for the class test and final examination. See http://www.concordia.ca/artsci/math-stats/services.html #calculators for details.

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Weeks/ Lectures	Section	Topic	Page	Recommended problems
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	5.2	Sigma Notation and Limits of Finite Sum	316	1, 3, 5, 7, 9, 17, 23, 25, 35
	5.3	The Definite Integral	326	3, 7, 9, 13, 15, 17, 21, 43,45,65, 67
1/2	4.8	Antiderivatives	287	5, 9, 13, 15, 21,23, 29, 39, 45, 61
	5.4	The Fundamental Theorem of Calculus	339	3, 7, 11, 13, 23, 29, 39, 43, 47, 51
2/3	5.5	Indefinite Integrals & the Substitution Method	348	3, 7, 9, 11, 21, 23, 31, 37, 47, 57
	5.6	Definite Integral Substitutions, Area Between Curves.	355	1, 5, 7, 11, 17, 25, 29, 37, 39, 41, 65, 69, 73, 75, 77, 79, 85, 97
2/4	8.1	Using Basic Integration Formulas	465	1, 3, 5, 9, 13, 19, 21, 31, 33, 39, 41
	8.2	Integration by Parts	471	1, 3, 5, 9, 11, 13, 17, 23, 25, 27, 31 33, 35, 43, 45, 55
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4		**MIDTERM TEST** (includes all previous material, Lectures 1-6)		
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	10.4	The Comparison Tests	610	3,5, 7, 9, 15, 23, 25, 33, 35, 45
6/9	10.5	Absolute Convergence, Ratio and Root Tests	616	3, 5, 7, 11,13, 17, 19, 21, 27, 37
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7/11	10.8	Taylor and Maclaurin series (omit Taylor Inequality and Binomial Series)	640	3, 5, 7, 9, 13, 15, 23, 29, 35, 37, 39, 41, 37, 39, 43
7		**REVIEW (*time permitting*)**		

Academic Integrity and the Academic Code of Conduct

This course is governed by Concordia University's policies on Academic Integrity and the Academic Code of Conduct as set forth in the Undergraduate Calendar and the Graduate Calendar. Students are expected to familiarize themselves with these policies and conduct themselves accordingly. "Concordia University has several resources available to students to better understand and uphold academic integrity. Concordia's website on academic integrity can be found at the following address, which also includes links to each Faculty and the School of Graduate Studies: concordia.ca/students/academic-integrity

Addendum: This course will be taught and all assessments will be completely online. A midterm and/or a final online exam will be provided through the Concordia Online Exams (COLE) platform with online proctoring (also known as auto-proctoring). More information about the COLE system may be found at the COLE website. Additionally, an **online proctoring tool called Proctorio** will be used to provide proctoring during the exam.

Please note the following with respect to online proctored exams:

- That the exam will take place during the exam period at the designated date and time set by the professor (midterm) or the Exams office (final). All exam times will be set to Eastern Standard/Daylight Time.
- That your image, voice and screen activity will be recorded throughout the duration of the exam.
- That you must show your Concordia University Identification card to validate your identity. Alternative government-issued photo identification will be accepted, though it is not recommended. Only identification in English or French will be accepted.
- That any recording made will only be viewed by authorized university personnel (no external entity has authorization to review the recording).
- That you will be responsible for ensuring appropriate, properly functioning technology (webcam, a microphone, appropriate browser and an ability to download any necessary software, as well as a reliable internet connection with a minimum of a 3G connection).
- That you are very **strongly recommended** to enter the virtual test site found at the COLE website and become familiar with the software that will be used for your exam before starting the exam.
- That you will need a quiet place within which to take the exam. Earplugs or noise-cancelling headphones that are not connected to a device may also be used to allow you to focus for the duration of the exam.

Students who are unable to write an exam because they are unable to meet the above conditions and requirements are advised that they will need to drop the course. More information can be provided on the next offering of this course by consulting the Department. Students are advised that the drop deadline (DNE) for this course is **May 17, 2021, for Summer 1 session and July 12, 2021, for Summer 2 session**.

Students who require additional accommodations for their exams due to a documented disability should contact the Access Centre for Students with Disabilities as soon as possible (acsdinfo@concordia.ca).

If you face issues during the exam, you should inform your professor of those issues immediately. Please note that there are in-exam supports you should spend time getting to know. Visit the COLE website for more information.

Note: Zoom is included as an institutionally approved technology. This means we have been assured of the privacy protections needed to use freely within the classroom.

Zoom will be used in this course to facilitate learning at a distance. It may be used to record some or all of the lecture and/or other activities in this course. If you wish to ensure that your image is not recorded, speak to your instructor as soon as possible.

Also, please note that you may not share recordings of your classes and that the instructor will only share class recordings for the purpose of course delivery and development. Any other sharing may be in violation of the law and applicable University policies, and may be subject to penalties.

Behaviour

All individuals participating in courses are expected to be professional and constructive throughout the course, including in their communications.

Concordia students are subject to the Code of Rights and Responsibilities which applies both when students are physically and virtually engaged in any University activity, including classes, seminars, meetings, etc. Students engaged in University activities must respect this Code when engaging with any members of the Concordia community, including faculty, staff, and students, whether such interactions are verbal or in writing, face to face or online/virtual. Failing to comply with the Code may result in charges and sanctions, as outlined in the Code.

Intellectual Property

Content belonging to instructors shared in online courses, including, but not limited to, online lectures, course notes, and video recordings of classes remain the intellectual property of the faculty member. It may not be distributed, published or broadcast, in whole or in part, without the express permission of the faculty member. Students are also forbidden to use their own means of recording any elements of an online class or lecture without express permission of the instructor. Any unauthorized sharing of course content may constitute a breach of the Academic Code of Conduct and/or the Code of Rights and Responsibilities. As specified in the Policy on Intellectual Property, the University does not claim any ownership of or interest in any student IP. All university members retain copyright over their work.

Extraordinary circumstances

In the event of extraordinary circumstances and pursuant to the Academic Regulations the University may modify the delivery, content, structure, forum, location and/or evaluation scheme. In the event of such extraordinary circumstances, students will be informed of the changes.