UNIVERSITY OF CALGARY
FACULTY OF SCIENCE

Department of Mathematics & Statistics
MS 476
403 220-5210
math@ucalgary.ca

COURSE OUTLINE

1. **Course:** MATH 249, Introductory Calculus - Spring 2021

   Lecture 01: MWF 09:00 - 11:45 - Online

Instructor	Email	Phone	Office	Hours
Dr John Saunders	TBA	TBA	TBA	TBA

Online Delivery Details:

This course is being offered online in real-time via scheduled meeting times, you are required to be online at the same time.

To help ensure Zoom sessions are private, do not share the Zoom link or password with others, or on any social media platforms. Zoom links and passwords are only intended for students registered in the course. Zoom recordings and materials presented in Zoom, including any teaching materials, must not be shared, distributed or published without the instructor's permission.

Basic Content Delivery:

We are offering two delivery options to learn the basic course content:

- Asynchronously on D2L via pre-recorded videos and lecture notes.
- Live synchronous Zoom content sessions during the following times: Monday 10 - 11:50 a.m.

The asynchronous D2L content and live synchronous content sessions will only cover fundamental concepts and basic examples. To succeed in this course, students must also engage with the Dino Problems, D2L Quiz content, and WeBWorK content. We expect that students work through this core content before attending the more advanced Wednesday Q&A session and Friday Dino Problem session (more details below).

We except that the asynchronous delivery option will be satisfactory for the majority of students, but we chose to add this synchronous delivery option for those students who prefer the live Zoom experience to learn content.

Advanced Content Delivery:

We will meet live on Zoom twice per week to discuss your questions and more advanced problems during your Registrar scheduled class times. Students are expected to have worked through the *Basic Content* prior to these meetings.

- **Wednesdays** (Zoom): Q&A Session (...an informal Q&A session where we discuss the course content and advanced practice problems. Attendance is optional.)

- **Fridays** (Zoom): Dino Problem Session (...we will focus on problem-solving during these sessions. Attendance is highly encouraged to ensure your success in the course.)

Note that TAs and Instructors will be available throughout the week to provide one-on-one help via Zoom.

The Wednesday Q&A sessions will not be recorded. Friday Dino Problem sessions will be recorded. Recordings will be available on D2L under Communication > Zoom > Cloud Recordings.

Suggested Schedule for a Typical Week and Time Estimate for Each Task:

Monday:

- Attend the Basic Core Content recap session, and review some of the recorded videos for extra examples, or alternatively, watch all the recorded videos for the week's topics (4 hours)
- Complete test (2 hours ~every second Monday)

Tuesday:

- Work through current week's Practice Problems (2 hours).
- Begin working on WeBWorK and D2L Quiz (2 hours).

Wednesday:

- Attend live Q&A Zoom session (2 hours).

Thursday:

- Work on Dino Problems (2 hours).
- If you feel you need more practice, work on Practice Problems and Extra Practice WeBWorK (2 hours).

Friday:

- Attend live Dino Problem Zoom session (2 hours).
- Complete D2L Quiz, WeBWorK, and Dino Problems concerning current week's topic (2 hours).

Email Policy:

- All content and course-related questions should be posted to the D2L Discussion Boards. Questions will normally be answered within 24 hours (except on weekends and holidays). Do not expect a response if you email your instructor with a content or course-related question.
- All questions of a personal nature (e.g. accommodations, missed assessments) should be directed to one of the course instructors (sacha.ikonicoff@ucalgary.ca for MATH 265, john.saunders1@ucalgary.ca for MATH 249)

Course Site:

D2L: MATH 249/265 L01-(Spring 2021)-Introductory Calculus

Note: Students must use their U of C account for all course correspondence.

2. **Requisites:**

See section 3.5.C in the Faculty of Science section of the online Calendar.

Prerequisite(s):
Mathematics 30-1 or Mathematics 2 (offered by Continuing Education).

Antirequisite(s):
Not open to students with 50 per cent or higher in Mathematics 31 or a grade of "C" or higher in Mathematics 3 offered through University of Calgary Continuing Education, except with special departmental permission. Credit for Mathematics 249 and either 265 or 275 will not be allowed.

3. **Grading:**

The University policy on grading and related matters is described in F.1 and F.2 of the online University Calendar.

In determining the overall grade in the course the following weights will be used:

Component(s)	Weighting %	Date
WeBWorK Assignments (6)	10	Mondays: May 10th, May 17th, May 25th May 31st, June 7th, June 14th
' D2L Quizzes (best 10 of 12)* 2 each on Monday	30	Mondays: May 10th, May 17th, May 25th May 31st, June 7th, June 14th
Tests**	60	Mondays: May 17th, May 31st, June 14th

* D2L Quizzes will not be timed. If a student misses a quiz, that will be the one automatically dropped as being the lowest. We strongly encourage students to complete the quizzes as they learn the material well in advance of the deadlines. You may open and close a D2L quiz as many times as you'd like. We do not recommend that students wait until the deadlines to write the quizzes, as many of these dates coincide with test dates.

**Tests must be completed between Monday 11am MST and Tuesday 5pm MST. The first two tests will consist of an untimed written portion and a timed multiple choice portion. The timed multiple choice portions are designed to take 60 minutes, but 90 minutes will be given to account for any technical issues. The last test on June 14th will have a timed multiple choice portion, but will not have a written portion. The timed multiple choice for this last test will be designed to take 80 minutes, but 120 minutes will be given to account for any technical issues. Once you open the multiple choice portion of a test, your timer will begin. Additional time will be granted to students with approved accommodations. If a student misses a test, that will be the one automatically dropped as being the lowest.

Each piece of work (reports, assignments, quizzes, midterm exam(s) or final examination) submitted by the student will be assigned a grade. The student's grade for each component listed above will be combined with the indicated weights to produce an overall percentage for the course, which will be used to determine the course letter grade.

The conversion between a percentage grade and letter grade is as follows.

	A+	A	A-	B+	B	B-	C+	C	C-	D+	D
Minimum % Required	95 %	90 %	85 %	80%	76%	72 %	68 %	64%	60%	55 %	50 %

4. **Missed Components Of Term Work:**

The university has suspended the requirement for students to provide evidence for absences. Please do not attend medical clinics for medical notes or Commissioners for Oaths for statutory declarations.

In the event that a student legitimately fails to submit any online assessment on time (e.g. due to illness etc...), please contact the course coordinator, or the course instructor if this course does not have a coordinator to arrange for a re-adjustment of a submission date. Absences not reported within 48 hours will not be accommodated. If an excused absence is approved, one possible arrangement is that the percentage weight of the legitimately missed assignment could also be pro-rated among the components of the course. This option is at the discretion of the coordinator and may not be a viable option based on the design of this course.

WeBWorK: If you miss a WeBWorK assignment, please notify the course coordinator within 48 hours of the deadline. We will accommodate on a case-by-case basis.

D2L Quizzes: The quiz deadlines provided above are not firm; if you complete a quiz after the deadline but before Apr. 12th you will not be penalized. Quizzes will no longer be available to write after Apr. 12th.

Tests: If you miss **one test**, then do nothing - this will be the test that is dropped for you. In the rare event that you miss **two tests**, both due to *excusable absences* (e.g. illness), then please contact your course coordinator; we will treat this on a case-by-case basis. We highly discourage skipping a test, because you don't know when you may become ill or have a family emergency; skipping a test is not considered an excusable absence; special accommodations will only be provided in the event of *two excusable absences*.

5. **Scheduled Out-of-Class Activities:**

There are no scheduled out of class activities for this course.

6. **Course Materials:**

   Required Textbook(s):

   > Joel Feldman, Andrew Rechnitzer, Elyse Yeager, *CLP Calculus Textbooks: CLP-I Differential Calculus and CLP-II Integral Calculus.*: Open access eBook http://www.math.ubc.ca/~CLP.

   Students must be able to submit the written portion of their tests as a single PDF file. Student may write their work on paper and photograph/scan their work, then convert it to a single PDF. Or, they may write their work on a tablet and save it as a single PDF file. Some resources that may help:

   - Merge multiple photos or PDF files into a single PDF: https://jpg2pdf.com/
   - Take photos of work with iPhone / iPad: https://tinyurl.com/tlhhkj3
   - Taking photos of work with Android: https://tinyurl.com/v7csw88

   In order to successfully engage in their learning experiences at the University of Calgary, students taking online, remote and blended courses are required to have reliable access to the following technology:

   - A computer with a supported operating system, as well as the latest security, and malware updates;
   - A current and updated web browser;
   - Webcam/Camera (built-in or external);
   - Microphone and speaker (built-in or external), or headset with microphone;
   - Current antivirus and/or firewall software enabled;
   - Stable internet connection.

   For more information please refer to the UofC ELearning online website.

7. **Examination Policy:**

   Homework Answer Services: You may NOT use homework answer services (e.g. Chegg.com) on any assessments. Posting and/or viewing solutions from such services is considered academic misconduct.

   Outside Content Sources: The only materials you are permitted to consult during assessments are the materials provided on D2L. In particular, taking worked solutions from other websites is considered academic misconduct. We caution against using the D2L content during the timed portion of tests, because it will waste too much time. We instead encourage you to create a "cheat sheet" for yourself in advance; this will not only help you maximize your time, but will also help you to synthesize the material in the process.

   Collaborating with Peers: You may not collaborate with your peers (or anyone else) during quizzes and tests. You must complete the tests and quizzes independently. You may consult with your peers for WeBWorK assignments.

   Calculators: You may use basic scientific calculators to assist with the computational aspects of the course (e.g. arithmetic, evaluating trig functions). You may not use graphing calculators or online computer algebra systems during quizzes or tests. You may use graphing calculators and online computer algebra systems for WeBWorK and homework, but we caution against relying on them too much, because quiz and test questions are designed in such a way that these calculators will not be helpful, so it's important that you are capable of doing the computations on your own.

   Discussing Assessment Questions Publicly After the Due Date: Even after an assessment has closed, please do not discuss the assessment questions publicly. We instead encourage you to discuss the questions on the D2L Discussion Board. Keeping the assessments private will allow us to better accommodate students with extenuating circumstances.

   Students should also read the Calendar, Section G, on Examinations.

8. **Approved Mandatory And Optional Course Supplemental Fees:**

   There are no mandatory or optional course supplemental fees for this course.

9. **Writing Across The Curriculum Statement:**

   For all components of the course, in any written work, the quality of the student's writing (language, spelling, grammar, presentation etc.) can be a factor in the evaluation of the work. See also Section E.2 of the University Calendar.

10. **Human Studies Statement:**

    Students will not participate as subjects or researchers in human studies.

    See also Section E.5 of the University Calendar.

11. **Reappraisal Of Grades:**

    A student wishing a reappraisal, should first attempt to review the graded work with the Course coordinator/instructor or department offering the course. Students with sufficient academic grounds may request a reappraisal. Non-academic grounds are not relevant for grade reappraisals. Students should be aware that the grade being reappraised may be raised, lowered or remain the same. See Section I.3 of the University Calendar.

    a. **Term Work:** The student should present their rationale as effectively and as fully as possible to the Course coordinator/instructor within **ten business days** of either being notified about the mark, or of the item's return to the class. If the student is not satisfied with the outcome, the student shall submit the Reappraisal of Graded Term work form to the department in which the course is offered within 2 business days of receiving the decision from the instructor. The Department will arrange for a reappraisal of the work within the next ten business days. The reappraisal will only be considered if the student provides a detailed rationale that outlines where and for what reason an error is suspected. See sections I.1 and I.2 of the University Calendar

    b. **Final Exam:** The student shall submit the request to Enrolment Services. See Section I.3 of the University Calendar.

12. **Other Important Information For Students:**

    a. **Mental Health** The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, Mental Health Services Website) and the Campus Mental Health Strategy website (Mental Health).

    b. **SU Wellness Services:** For more information, see www.ucalgary.ca/wellnesscentre or call 403-210-9355.

    c. **Sexual Violence:** The Sexual Violence Support Advocate, Carla Bertsch, can provide confidential support and information regarding sexual violence to all members of the university community. Carla can be reached by email (svsa@ucalgary.ca) or phone at 403-220-2208. The complete University of Calgary policy on sexual violence can be viewed at (https://www.ucalgary.ca/policies/files/policies/sexual-violence-policy.pdf)

    d. **Misconduct:** Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. We expect members of our community to act with integrity. Research integrity, ethics, and principles of conduct are key to academic integrity. Members of our campus community are required to abide by our institutional Code of Conduct and promote academic integrity in upholding the University of Calgary's reputation of excellence. Some examples of academic misconduct include but are not limited to: posting course material to online platforms or file sharing without the course instructor's consent; submitting or presenting work as if it were the student's own work; submitting or presenting work in one course which has also been submitted in another course without the instructor's permission; borrowing experimental values from others without the instructor's approval; falsification/fabrication of experimental values in a report. Please read the following to inform yourself more on academic integrity:

        Student Handbook on Academic Integrity
        Student Academic Misconduct Policy and Procedure
        Research Integrity Policy

    Additional information is available on the Student Success Centre Academic Integrity page

    e. **Academic Accommodation Policy:** Students needing an accommodation because of a disability or medical condition should contact Student Accessibility Services in accordance with the procedure for accommodations for students with disabilities available at procedure-for-accommodations-for-students-with-disabilities.pdf.

    Students needing an accommodation in relation to their coursework or to fulfill requirements for a graduate degree, based on a protected ground other than disability, should communicate this need, preferably in writing, to the Associate Head of the Department of Mathematics & Statistics, Mark Bauer by email bauerm@ucalgary.ca or phone 403-220-4189. Religious accommodation requests relating to class, test or

exam scheduling or absences must be submitted no later than **14 days** prior to the date in question. See [Section E.4](#) of the University Calendar.

f. **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). Students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information, see [Legal Services](#) website.

g. **Student Union Information:** [VP Academic](#), Phone: [403-220-3911](#) Email: [suvpaca@ucalgary.ca](#). SU Faculty Rep., Phone: [403-220-3913](#) Email: [sciencerep@su.ucalgary.ca](#). [Student Ombudsman](#), Email: [ombuds@ucalgary.ca](#).

h. **Surveys:** At the University of Calgary, feedback through the Universal Student Ratings of Instruction ([USRI](#)) survey and the Faculty of Science Teaching Feedback form provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses. Your responses make a difference - please participate in these surveys.

i. **Copyright of Course Materials:** All course materials (including those posted on the course D2L site, a course website, or used in any teaching activity such as (but not limited to) examinations, quizzes, assignments, laboratory manuals, lecture slides or lecture materials and other course notes) are protected by law. These materials are for the sole use of students registered in this course and must not be redistributed. Sharing these materials with anyone else would be a breach of the terms and conditions governing student access to D2L, as well as a violation of the copyright in these materials, and may be pursued as a case of student academic or [non-academic misconduct](#), in addition to any other remedies available at law.

Course Outcomes:

- use the language and notion of differential calculus, and apply the key concepts to compute derivatives of functions of a real variable.
- explore the relationship between key calculus concepts and their geometric representation, and seek to apply calculus techniques to a wide variety of practical problems
- recognize that not only the technology can be used to achieve some desired results; but also it has limitations.
- Mathematical Literacy This includes the fluent reading, manipulation, and graphic interpretation of algebraic expressions and functions
- The concept of Limit Students will gain an intuition of the concept of limit, and acquire a basic level of mathematical literacy on limits and their computations
- The concept of Derivative Students will be to associate the concept of differentiation with rates of change, and they will be able to compute and manipulate derivatives
- Applications of Derivatives Students will be able to analyze the shape of functions through their derivatives. Students will use derivatives to solve a variety of applied problems, including optimization problems.
- The Riemann Integral Students will explore the process of estimating areas under a curve, develop the notion of integral, and compute basic integrals. Students will be able to demonstrate the fundamental relations between the processes of integration and differentiation.

Electronically Approved - May 04 2021 11:38

Department Approval

Electronically Approved - May 04 2021 15:14

Associate Dean's Approval