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 - Winter 2023

Coordinator(s)

Name	Email	Phone	Office	Hours
Dr. Lauren DeDieu	lauren.dedieu@ucalgary.ca	403 220-5056	MS 528	

Section(s)

Lecture 01 : MTWF 14:00 - 14:50 in ENC 70

Instructor	Email	Phone	Office	Hours
Mishty Ray	TBA	TBA	TBA	TBA

Lecture 02 : TWRF 16:00 - 16:50 in ICT 121

Instructor	Email	Phone	Office	Hours
Da Li	TBA	TBA	TBA	TBA

To account for any necessary transition to remote learning for the current semester, courses with in-person lectures, labs, or tutorials may be shifted to remote delivery for a certain period of time. In addition, adjustments may be made to the modality and format of assessments and deadlines, as well as to other course components and/or requirements, so that all coursework tasks are in line with the necessary and evolving health precautions for all involved (students and staff).

In Person Delivery Details:

This is an in-person course. In particular, all lectures and assessments (midterms, final exam) will be delivered in person.

Re-Entry Protocol for Labs and Classrooms:

To limit the spread of COVID-19 on campus, the University of Calgary has implemented safety measures to ensure the campus is a safe and welcoming space for students, faculty and staff. The most current safety information for campus can be found here.

Course Site:

MATH 249/265 (Winter 2023) - Calculus I

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

Labs are asynchronous

Students should complete their weekly D2L quiz during this asynchronous lab time each week (i.e., at a time of their convenience before the quiz deadline).

Email policy

- All questions of a personal nature (e.g. accommodations, missed assessments) should be directed to your course coordinator (lauren.dedieu@ucalgary.ca). You can usually expect a response within 24 hours (except on weekends and holidays).
- Questions about mathematics are best answered during class, office hours, or at the Math Help Centre. See D2L for Math Help Centre information and a schedule.
- Frequently Asked Questions (FAQ) about the course organization should be posted to the FAQ Discussion Board on D2L.

Supplementary online content (videos)

The supplementary content videos posted to D2L contain definition and theorems. The examples contained in these videos are at an introductory level. While these videos are not a replacement for attending classes, we encourage you to make use of them to reinforce key ideas. If you are not feeling well, or you have any symptoms

of respiratory illness, we do encourage you to stay home and watch the content videos for the topics you miss in class. Once you are well, you can visit the Math Help Centre, and talk to your instructor, for additional support.

Note: To succeed in this course, students must engage with the "Dino Problem" worksheets posted on D2L (these are test-level questions).

Equity Diversity & Inclusion:

The University of Calgary is committed to creating an equitable, diverse and inclusive campus, and condemns harm and discrimination of any form. We value all persons regardless of their race, gender, ethnicity, age, LGBTQIA2S+ identity and expression, disability, religion, spirituality, and socioeconomic status. The Faculty of Science strives to extend these values in every aspect of our courses, research, and teachings to better promote academic excellence and foster belonging for all.

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:

Course Component	Weight	Due Date (duration for exams)	Modality for exams	Location for exams
WeBWorK Assignments (5)[1]	20%	Ongoing		
D2L Quizzes (best 10 of 12)[2]	15%	Ongoing		
Midterms (2, equally weighted)[3]	40%	Ongoing		
Registrar Scheduled Final Exam	25%	Will be available when the final exam schedule is released by the Registrar	in person	Will be available when the final exam schedule is released by the Registrar

[1] WeBWorK due dates are: Jan. 30th, Feb. 13th, Mar. 6th, Mar. 20th, Apr. 11th

[2] D2L Quiz due dates are: Jan. 16th, Jan. 23rd, Jan. 30th, Feb. 6th, Feb. 13th, Mar. 1st, Mar. 6th, Mar. 13th, Mar. 20th, Mar. 29th, Apr. 3rd, Apr. 11th. D2L Quizzes will not be timed. You may open and close a D2L quiz as many times as you'd like. If a student misses a quiz, that will be the one automatically dropped as being the lowest. Each quiz has two attempts. To calculate your quiz grade, we take the highest of the two quiz attempts.

[3] Midterm 1# Wednesday, Feb. 15th, 2023 Midterm 2# Wednesday, Mar. 22nd, 2023

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 %

This course will have a Registrar Scheduled Final exam that will be delivered in-person and on campus. The Final Examination Schedule will be published by the Registrar's Office approximately one month after the start of the term. The final exam for this course will be designed to be completed within 2 hours.

The University of Calgary offers a flexible grade option, Credit Granted (CG) to support student's breadth of learning and student wellness. Faculty units may have additional requirements or restrictions for the use of the

CG grade at the faculty, degree or program level. To see the full list of Faculty of Science courses where CG is not eligible, please visit the following website: https://science.ucalgary.ca/current-students/undergraduate/program-advising/flexible-grading-option-cg-grade

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, no extensions will be granted barring exceptional circumstances (see * below).

D2L Quizzes:

- You can miss up to two D2L quizzes throughout the semester. The two lowest quizzes will be dropped, so if you miss up to two quizzes, then these are the scores that we will drop.
- You are permitted to submit up to two quizzes late. In the event that you submit a quiz late, there is no need to contact anyone; the system will mark the quiz as "late" but your score will be entered in the D2L Gradebook as normal (no penalty). If you submit more than two quizzes late, then these quiz scores will receive a 0% at the end of the semester. All quizzes (including late submissions) must be submitted by Wednesday Dec. 7th. Quizzes will no longer be available to write after Dec. 7th.

Midterms: There are no make-up midterms barring exceptional circumstances (see * below).

***Exceptional Circumstances:** If exceptional circumstances (e.g., extended illness, emergency, etc.) arise, then contact your course coordinator by email within 48 hours of the assessment deadline. Accommodations in exceptional circumstances will be made on a case-by-case basis.

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

The following out of class activities are scheduled for this course.

Activity	Location	Date and Time	Duration
Midterm - 1	On-Campus, room to be announced	Wednesday, February 15, 2023 at 6:30 pm	2 Hours
Midterm - 2	On-Campus, room to be announced	Wednesday, March 22, 2023 at 6:30 pm	2 Hours

REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME-ACTIVITY. If you have a conflict with the out-of-class-time-activity, please contact your course coordinator/instructor no later than **14 days prior** to the date of the out-of-class activity so that alternative arrangements may be made.

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.

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.

Collaborating with Peers: You may not collaborate with your peers (or anyone else) during midterms and the final exam. D2L Quizzes must be completed independently. You may consult with your peers for WeBWorK assignments.

Calculators:

- No aids are allowed on midterms and exams. In particular, no electronic devices of any kind permitted in the examination rooms for the midterms and the final examination. This includes, but is not limited to, calculators, phones, smart watches, tablets, laptops, headphones and any bluetooth-enabled device. Failure to comply with this regulation will result in the rejection of the examination paper.
- You may use graphing calculators and online computer algebra systems for WeBWorK and quizzes, but we caution against relying on them too much, because you won't have access to calculators on the midterms or final exam, so it's important that you are capable of doing the computations on your own.

Discussing Assessment Questions Publicly After the Due Date: Since our quizzes don't have a firm close date (i.e., students can submit two quizzes late), we ask that you do not discuss quiz solutions publicly. Similarly, for other assessments we ask that you do not discuss the questions publicly until after we have posted the key. 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 their website 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 here.

d. **Student Ombuds Office:** A safe place for all students of the University of Calgary to discuss student related issues, interpersonal conflict, academic and non-academic concerns, and many other problems.

e. **Student Union Information:** SU contact, Email your SU Science Reps: science1@su.ucalgary.ca, science2@su.ucalgary.ca, science3@su.ucalgary.ca,

f. **Academic Accommodation Policy:**

It is the student's responsibility to request academic accommodations according to the University policies and procedures listed below. The student accommodation policy can be found at: https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Student-Accommodation-Policy.pdf

Students needing an accommodation because of a disability or medical condition should communicate this need to Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities: https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Accommodation-for-Students-with-Disabilities-Procedure.pdf.

Students needing an accommodation in relation to their coursework or to fulfil requirements for a graduate degree, based on a Protected Ground other than Disability, should communicate this need, by filling out the Request for Academic Accommodation Form and sending it to Mark Bauer by email bauerm@ucalgary.ca preferably 10 business days before the due date of an assessment or scheduled absence.

g. **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
Faculty of Science Academic Misconduct Process
Research Integrity Policy

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

h. **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.

i. **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.

j. **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.

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 - Jan 04 2023 12:07

Department Approval

Electronically Approved - Jan 06 2023 15:43

Associate Dean's Approval