



## COURSE OUTLINE

### 1. **Course:** MATH 267, University Calculus II - Winter 2022

Lecture 01 : MWF 09:00 - 09:50 in MFH 162

Instructor	Email	Phone	Office	Hours
Dr Jerrod Smith	jerrod.smith@ucalgary.ca	403 220-6766	MS 442	Mon 10 - 11 AM, Wed 1 - 2 PM, Thurs 12:30 - 1:30 PM, or by appointment.

Lecture 02 : MWF 12:00 - 12:50 in ST 140

Instructor	Email	Phone	Office	Hours
Dr Mark Bauer	bauerm@ucalgary.ca	403 210-8456	MS 558	TBA

### Office Hour Information

Dr. Smith's office hours will be held on **Zoom**: <https://ucalgary.zoom.us/j/93034180899> (Passcode: ilovemath)

To account for any necessary transition to remote learning in the winter 2022 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:

#### Classes are in-person.

Students will complete Pre-Class Activities before attending class to prepare to engage with in-class activities. Classes will primarily involve students working on problems with the guidance of the instructor.

#### Supplementary online content (videos)

The supplementary content videos posted to D2L cover fundamental concepts and only basic examples. While these videos are not a replacement for attending classes, we encourage you to make use of them to reinforce key ideas.

- **Students must complete the weekly Pre-Class Activities (videos, etc.) before attending class and to be prepared to engage with in-class activities.**

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 **weekly worksheets** posted on D2L (these are test-level questions). Solutions will be provided one week (typically) after the worksheet is posted to provide sufficient opportunity to engage with the problems.

#### 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](#). **Online Delivery Details:**

Some aspects of this course are being offered in real-time via scheduled meeting times. For those aspects 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.

This course has a registrar scheduled, synchronous final exam. The writing time is 2 hours + 50% buffer time.

**There are no regularly scheduled/required Zoom meetings.**

**Pre-class activities are online and asynchronous (see D2L).**

**Labs are asynchronous.**

Students will complete online asynchronous Lab Tasks via D2L and/or WeBWork following a schedule of weekly due dates (see D2L).

**Exams (synchronous) will take place online (see below for additional details: Sections 3 and 7).**

- Students may complete exams on their own device during the exam window.
- Students are required to complete the exam during the specified time (see below).
- Students without a device will have the opportunity to write in one of the computer labs in the Department of Mathematics and Statistics with an exam supervisor. Sign-up information will be posted to D2L prior to the exam.

For any online synchronous assessment, time will be adjusted for SAS students if needed. As well, accommodations for students with issues (for example, caregiving responsibilities) will be done on a case-by-case basis.

**Course Site:**

D2L: MATH 267 L01-(Winter 2022)-University Calculus II

**Email policy**

All questions of a personal nature (e.g. accommodations, missed assessments) should be directed to Dr. Jerrod Smith (jerrod.smith@ucalgary.ca). You can usually expect a response within 36 hours (except on weekends and holidays).

**Questions about math**

Questions about mathematics are best answered during Class, Office Hours, on the D2L Discussion Boards, or at the Math Help Centre (MS 457).

See D2L for Math Help Centre (MS 457) information and a schedule.

**Frequently Asked Questions (FAQ)**

Questions about the course organization should be posted to the Frequently Asked Questions (FAQ) discussion board on D2L.

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

**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):**

3 units from Mathematics 249, 265 or 275.

**Antirequisite(s):**

Credit for Mathematics 267 and 277 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, equal weight)	15%	Ongoing		
Lab Tasks (Best 10 out of 12)	25%	Ongoing		
Term Exam 1 <sup>1</sup>	20%	Feb 07 2022 at 06:00 pm (2 Hours)	online	Online (see D2L for computer room booking information)
Term Exam 2 <sup>2</sup>	20%	Mar 14 2022 at 06:00 pm (2 Hours)	online	Online (see D2L for computer room booking information)
Registrar Scheduled Final Exam <sup>3</sup>	20%	Will be available when the final exam schedule is released by the Registrar	online	Will be available when the final exam schedule is released by the Registrar

<sup>1</sup> Online, synchronous exam.

<sup>2</sup> Online, synchronous exam.

<sup>3</sup> Online, synchronous exam.

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
<b>Minimum % Required</b>	95 %	88 %	84 %	80%	76%	72 %	68 %	64%	60%	55 %	50 %

This course will have a Registrar Scheduled Final exam that will be delivered on-line. [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.

Per section [G.5](#) of the online Academic Calendar, timed final exams administered using an on-line platform, such as D2L, will be available on the platform. Due to the scheduling of the final exams, the additional time will be added to **the end** of the registrar scheduled **synchronous** exam to support students. This way, your exam schedule accurately reflects the **start time** of the exam for any **synchronous** exams. E.g. If a **synchronous** exam is designed for 2 hours and the final exam is scheduled from 9-11am in your student centre, the additional time will be added to the **end** time of the **synchronous** exam. This means that if the exam has a 1 hour buffer time, a synchronous exam would start at 9 am and finish at 12pm.

**Students must attempt at least two out of three exams in order to earn a grade of "C-" or higher in MATH 267.**

#### Term Exam 1, Term Exam 2 and the Final Exam ("Term Exam 3")

- Multiple Choice component (13 questions, 1 point each)
- Written Problem component (7 points)

The Written Problem component will be assessed both for Mathematical Correctness and Quality of Mathematical Writing/Communication. **See D2L for a copy of the Written Problem Rubric.**

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.

### **If you miss a Lab Task...**

The best 10 out of 12 lab tasks will determine the Lab Task grade component. If a student misses two lab tasks, then these are the two lowest grades that will be dropped.

If a student misses a third lab task due to exceptional circumstances, then they must contact Dr. Jerrod Smith within 48 hours of the missed due date. Accommodation for missed lab tasks will be made on a case-by-case basis.

### **Term Exams (Term Exam 1, Term Exam 2)**

**There will be no make up Term Exams.** If a student misses one Term Exam, then they must contact Dr. Jerrod Smith within 48 hours of the missed exam. If a student misses **one** Term Exam **due to an approved absence** (e.g., illness or emergency), then the weight will be redistributed across the remaining Term Exam and the Final Exam.

**Students must attempt at least two out of three exams (Term Exam 1, 2 and the Final Exam) in order to earn a grade of "C-" or higher in MATH 267.**

### **WeBWork**

**No extensions will be granted barring exceptional circumstances (see below: (\*)).**

- It is your responsibility to keep up with the WeBWork Assignment deadlines.
- Do not leave your WeBWork to the last day -- complete it early!
- (\*) If exceptional circumstances (e.g., extended illness, emergency, etc.) arise: contact your Dr. Jerrod Smith within 48 hours of the assignment 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.

<b>Activity</b>	<b>Location</b>	<b>Date and Time</b>	<b>Duration</b>
Midterm Exam 1	online	Monday, February 7, 2022 at 6:00 pm	2 Hours
Midterm Exam 2	online	Monday, March 14, 2022 at 6:00 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:

Recommended Textbook(s):

Feldman, Reznitzer, & Yeager, *CLP-2 Integral Calculus*: Open Source.  
Feldman, Reznitzer, & Yeager, *CLP-3 Multivariable Calculus*: Open Source.  
Gilbert Strang, et al., *Calculus Volume 2 - OpenStax*: OpenStax. Available at <https://openstax.org/details/books/calculus-volume-2>.  
Gilbert Strang, et al., *Calculus Volume 3 - OpenStax*: OpenStax. Available at <https://openstax.org/details/books/calculus-volume-3>.

## Technology Requirements

**Students must be able to scan/photograph written work and convert the images to PDF files.**

- For iPhone / iPad try the \*free\* Adobe Scan Digital PDF Scanner <https://tinyurl.com/tlhhkj3>
- On Google Play try the \*free\* Adobe Scan Digital PDF Scanner <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:

**On ALL assessments (WeBWork, Lab Tasks, and Exams)**

- You may **NOT** use homework answer services, like "Chegg", "Slader", etc.

**Term Exam 1, Term Exam 2 and Final Exam** (Online synchronous exams) are referred to below as **'exams'**.

The exams will have both multiple choice and written-answer components.

On exams you **MAY**...

- use a scientific calculator, if you find it helpful. A calculator is not required.
- use the notes that you've taken, or any of the notes posted to D2L.
- use (online) computer algebra systems like *Wolfram Alpha*, *Mathematica*, etc. One of our course learning outcomes is to explore the **limitations of technology**, so you may not find this helpful.

On exams we recommend that you **DO NOT** ...

- collaborate with your peers. The intent is to assess **your understanding** of the course material.
- re-watch content videos posted to D2L or external videos. The exams are timed and synchronous, you do not have time to do this.

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](http://www.ucalgary.ca/wellnesscentre) or call [403-210-9355](tel: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](mailto:svsa@ucalgary.ca)) or phone at [403-220-2208](tel:403-220-2208). The complete University of Calgary policy on sexual violence can be viewed at (<https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Sexual-and-Gender-Based-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:

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](mailto:bauerm@ucalgary.ca) preferably 10 business days before the due date of an assessment or scheduled absence.

- 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](tel:403-220-3911) Email: [suvpaca@ucalgary.ca](mailto:suvpaca@ucalgary.ca). SU Faculty Rep., Phone: [403-220-3913](tel:403-220-3913) Email: [sciencerep@su.ucalgary.ca](mailto:sciencerep@su.ucalgary.ca). [Student Ombudsman](#), Email: [ombuds@ucalgary.ca](mailto: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 integral calculus, and apply the key concepts to compute integrals of functions of several real variables.
- 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.
- Techniques of Integration. Students will be able to calculate indefinite integrals using techniques covered in the course.
- Applications of Integration. Students will be able to set up and calculate an appropriate definite integral in order to evaluate the volume of a solid, the length of a curve, and the area of a surface of revolution
- Partial Differentiation and Double Integration. Students will be able to explain the notion of a function of several variables, its graph, cross-sections, and level curves/surfaces. Students will be able to evaluate partial derivatives and double integrals, and will be able to demonstrate the geometric significance of these concepts
- Sequences and Series. Students will be able to identify sequences and series, determine convergence by applying a suitable test or theorem covered in the course and contrast between absolute and conditional convergence. Students will be able to determine a Taylor series, analyze the error of Taylor polynomial approximations and compute the radius and interval of convergence of a power series

Electronically Approved - Jan 04 2022 16:52

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#### Department Approval

Electronically Approved - Jan 10 2022 11:04

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**Associate Dean's Approval**