

## CALCULUS 1301B – Course Outline – FW 2024-25

### 1. Course Information

**Course Name:** Calculus II  
**Course Number:** CALC 1301B  
**Academic Term:** FW24

**Prerequisites:** A minimum mark of 55% in one of [Calculus 1000A/B](#), [Calculus 1500A/B](#), [Numerical and Mathematical Methods 1412A/B](#), the former Applied Mathematics 1412A/B.

**Antirequisites:** [Calculus 1501A/B](#), [Numerical and Mathematical Methods 1414A/B](#), the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413.

Unless you have either the requisites for this course or written special permission from your Dean's Designate (Department/Program Counsellors and Science Academic Counselling) to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

### 2. Instructor Information

Students must use their Western (@uwo.ca) email addresses when contacting their instructors and put "CALC 1301B" in the subject line in addition to other identifiers. Feedback on calculus should be sought through office hours, in lecture, or via the math help centre. Remember to check announcements on our OWL page before contacting your instructor or the course coordinator. Issues related to the business of a given lecture section should be directed to the instructor associated to that section before involving the course coordinator. Instructors will endeavor to reply to student queries within five business days, although response times may be longer depending on the volume of emails received. It is your responsibility to ensure you raise your concerns in a timely manner.

**Office hours:** Each instructor will offer weekly in-person consultation time and the details can be located on the OWL page associated to our course. It is important that you check OWL regularly for updates/changes to the scheduling of these times.

**Extra Help:** The Mathematics Department runs free in-person and virtual help centres each weekday during the semester, starting Monday January 20<sup>th</sup>. Our help centre is in the Math-Physics Accelerator in PAB 48/49 (on the lower level of the Physics and Astronomy Building.) These help centres are staffed

by graduate student teaching assistants and all first-year mathematics courses are supported. No appointments are necessary.

Information about our help centre and other departmental supports for students can be found at:

[https://www.uwo.ca/math/undergraduate/current\\_students/Help%20Centre.html](https://www.uwo.ca/math/undergraduate/current_students/Help%20Centre.html)

### 3. Course Syllabus, Schedule, Delivery Mode

This course continues from Calculus 1000A/B and 1100A/B. We will cover selected topics from chapters 3-7 of Calculus Volume 2: arc length, techniques of integration (integration by parts, partial fractions, special substitutions, etc.); series, Taylor series, parametric curves, arc length, first order differential equations with applications. See the list of suggested Exercises on our OWL page for more details.

#### Learning Outcomes

Upon successful completion of this course, students will be able to:

1. Integrate functions using several techniques such as integration by parts, partial fractions, inverse trig substitution, etc.
2. Sketch parametric or polar curves.
3. Compute area of a region formed by parametric or polar curves.
4. Determine the convergence or divergence of a given series.
5. Write a Taylor series or a McLaurin series of a differentiable function.
6. Formulate a problem in terms of a differential equation and solve it.

#### Course Content Schedule

	week	textbook sections	notes
1	Jan. 6 - 12	3.1 and 3.2	
2	Jan. 13 - 19	3.3 and 3.4	
3	Jan. 20 - 26	3.5.1 and 3.7	Omit 3.5.2 and 3.6.
4	Jan. 27 - Feb. 2	5.1, 5.2 and 5.3.1	
5	Feb. 3 - 9	5.3.2, 5.4, 5.5 and 5.6	Omit 5.3.3
6	Feb. 10 - 14	6.1 and 6.2	

7	Feb. 15 - 23	Reading Week	No classes
8	Feb. 24 - Mar. 2	Catch-up/review and/or start 6.3	Midterm Exam on Tuesday Feb. 25, 7:00-9:00pm, covering up to and including 6.2.
9	Mar. 3 - 9	6.3, 6.4.1, 6.4.2 and 6.4.3	Omit 6.4.4 and 6.4.5.
10	Mar. 10 - 16	7.1, 7.2.1, 2.4.1 and 2.4.2	In 7.2, <i>areas</i> and <i>surface areas</i> are not covered.
11	Mar. 17 - 23	7.3 and 7.4	
12	Mar. 24 - 30	4.1 and 4.3	
13	Mar. 31 - April 4	4.5 and review	Apr. 8: last day of classes

\*\*The above schedule is *tentative*, and minor adjustments may be made as the course progresses.

Classes begin: January 6, 2025

Spring Reading Week: February 15 – 23, 2025

Classes end: April 4, 2025

Exam period: April 7 – 30, 2025

## 4. Course Materials

### Required Texts:

*Calculus: Volume 2*, by Gilbert Strang and Edwin “Jed” Herman (OpenStax, 2016) – Access for free at <https://openstax.org/details/books/calculus-volume-2>

Students are responsible for checking the course OWL site (<https://westernu.brightspace.com/>) regularly for news and updates. This is the primary method by which information will be disseminated to all students in the class.

If students need assistance with the course OWL site, they can seek support on the [OWL Brightspace Help](#) page. Alternatively, they can contact the Western Technology Services Helpdesk. They can be contacted by phone at 519-661-3800 or ext. 83800.

### Technical Requirements

Students will be required to purchase a license for the WebAssign online assessment platform. The cost of this license is approximately \$37 and there are no other additional required costs associated to this course. Purchases can be made through our Bookstore. Please do not purchase a WebAssign account via any other method. **When registering your license make sure to use your @uwo.ca email address and have your Student ID ready.** Deferred payment options may be available. Licenses cannot be purchased after April 4, 2025.

Gradescope (<https://www.gradescope.ca/>) will be used as a grading platform for written work in the course. A free account will be created on your behalf, although you will be required to verify the account and change the password during the first week of class. Details regarding the set-up of your account and the submission requirements for your written work will be posted on OWL. It is the responsibility of the student to ensure their homework assignments are submitted in the correct format (PDF or PNG.) Submitting work in an improper format may result in your work not being graded, and this cannot form the basis of a regrade request. Additionally, the term test may be scanned by the course staff and uploaded to Gradescope for grading and viewing.

Additionally, students will need:

- a laptop or computer;
- a stable internet connection;
- a working microphone and webcam;
- to have installed recent versions of Chrome AND Firefox browsers, a pdf reader, and Zoom on their computer;
- a device for scanning documents to upload to Gradescope (either a scanner or an app that can be used in conjunction with your device's camera).

All other course material will be posted to OWL: <https://westernu.brightspace.com/>

## 5. Methods of Evaluation

Calculus 1301B is an in-person lecture-based course. Students are expected to attend all classes. A list of suggested exercises from the OpenStax will be provided in OWL to supplement the weekly lessons. All of the evaluations (homework, quizzes, the midterm test, and exam) for Calculus 1301B are based on the course material covered in weekly lectures.

The overall course grade will be calculated as listed below:

Assessment	Format	Weighting	Date
Submitted Homework	Online, asynchronous, via Gradescope	Three equally weighted written assignments totaling 15% of final grade.	The three assignments will be due on January 31 <sup>st</sup> , February 14 <sup>th</sup> , and March 21 <sup>st</sup> , respectively
Quizzes	Online, asynchronous, via WebAssign	Best Six of Eight equally weighted short assessments totaling 10% of final grade.	Due dates are posted on OWL, with the first quiz open during the week of Jan 20 <sup>th</sup> .
Midterm Test	In-person	35%	Tuesday February 25 <sup>th</sup> , 7pm until 9pm.
Final Exam	In-person	40%	TBA (3 Hours)

- The midterm test will be 120 minutes in duration and will consist of a mixture of short answer and multiple-choice-style questions, covering the course material from weeks 1-6, inclusive. *This will be a closed book test and no calculators, electronic devices, or aids of any other kind will be permitted.*
- The make-up midterm is tentatively scheduled for Tuesday March 4<sup>th</sup>, 7-9pm.
- The final exam will be cumulative, 180 minutes in duration, and will consist of a mixture of short answer and multiple-choice-style questions. *This will be a closed book exam and no calculators, electronic devices, or aids of any other kind will be permitted.*

### General information about missed coursework

Students must familiarize themselves with the *University Policy on Academic Consideration – Undergraduate Students in First Entry Programs* posted on the Academic Calendar:

[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/academic\\_consideration\\_Sep24.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/academic_consideration_Sep24.pdf),

This policy does not apply to requests for Academic Consideration submitted for **attempted or completed work**, whether online or in person.

The policy also does not apply to students experiencing longer-term impacts on their academic responsibilities. These students should consult [Accessible Education](#).

For procedures on how to submit Academic Consideration requests, please see the information posted on the Office of the Registrar's webpage:

[https://registrar.uwo.ca/academics/academic\\_considerations/](https://registrar.uwo.ca/academics/academic_considerations/)

All requests for Academic Consideration must be made within 48 hours after the assessment date or submission deadline.

All Academic Consideration requests must include supporting documentation; however, recognizing that formal documentation may not be available in some extenuating circumstances, the policy allows students to make one Academic Consideration request **without supporting documentation** in this course. However, the following assessments are excluded from this, and therefore always require formal supporting documentation:

- The Final Exam (scheduled by the Office of the Registrar)
- The Midterm (tentatively scheduled for Feb 25, 7pm to 9pm)

When a student mistakenly submits their one allowed Academic Consideration request **without supporting documentation** for the assessments listed above or those in the **Coursework with Assessment Flexibility** section below, the request cannot be recalled and reapplied. This privilege is forfeited.

### Evaluation Scheme for Missed Assessments

In the case of a missed midterm, a common makeup test will be arranged. If a student misses the midterm and the corresponding makeup midterm and has appropriate permission for both, then the final exam will be re-weighted to include the weight of the missed term test.

When a student misses the Final Exam and their Academic Consideration has been granted, they will be allowed to write the Special Examination (the name given by the University to a makeup Final Exam). See the Academic Calendar for details (under [Special Examinations](#)), especially for those who miss multiple final exams within one examination period.

### Coursework with Assessment Flexibility

By policy, instructors may deny Academic Consideration requests for the following assessments with built-in flexibility:

#### Flexible Completion

**Quizzes.** This course has 8 quizzes, and the 6 quizzes with the highest marks are counted towards your final grade. Should extenuating circumstances arise, students do not need to request Academic Consideration for the first 2 missed quizzes. Academic consideration requests will be denied for the first 2 missed quizzes. Academic Consideration requests may be granted when students miss more than 2 quizzes, and these additional (3<sup>rd</sup>, 4<sup>th</sup>...) missed quizzes will be reweighted to the final exam.

**Deadline with a No-Late-Penalty Period**

**Assignments.** Students are expected to submit each of the 3 assignments by the deadline listed. Should extenuating circumstances arise, students do not need to request Academic Consideration and they are permitted to submit their assignment up to 48 hours past the deadline without a late penalty. Should students submit their assessment beyond 48 hours past the deadline, a late penalty of 20% per day will be applied, although assignments submitted more than 96 hours past the deadline will not be accepted. Academic Consideration requests may be granted only for extenuating circumstances that started before the deadline and lasted longer than the No-Late-Penalty Period. Students who receive academic consideration lasting longer than the No-Late-Penalty Period will have the weight of the relevant assignment shifted to the final exam.

## 6. Additional Statements

**Religious Accommodation**

When conflicts with a religious holiday that requires an absence from the University or prohibits certain activities, students should request an accommodation for their absence in writing to the course instructor and/or the Academic Advising office of their Faculty of Registration. This notice should be made as early as possible but not later than two weeks prior to the writing or the examination (or one week prior to the writing of the test).

Please visit the Diversity Calendars posted on our university's EDID website for the recognized religious holidays:

<https://www.edi.uwo.ca>.

**Accommodation Policies**

Students with disabilities are encouraged to contact Accessible Education, which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The policy on Academic Accommodation for Students with Disabilities can be found at:

[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/Academic\\_Accommodation\\_disabilities.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Accommodation_disabilities.pdf).

**Academic Policies**

The website for Registrar Services is <https://www.registrar.uwo.ca/>.

In accordance with policy,

[https://www.uwo.ca/univsec/pdf/policies\\_procedures/section1/mapp113.pdf](https://www.uwo.ca/univsec/pdf/policies_procedures/section1/mapp113.pdf),

the centrally administered e-mail account provided to students will be considered the individual's official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at their official university address is attended to in a timely manner.

No electronic devices of any kind are permitted during the midterm test or final examination for this course.

**Scholastic offences** are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:

[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/scholastic\\_discipline\\_undergrad.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf).

In the event of a health lockdown or any other university-declared emergency that requires some or all of the course to be delivered online, tests and examinations in this course will be conducted using a remote proctoring service. By taking this course, you are consenting to the use of this software and acknowledge that you will be required to provide **personal information** (including some biometric data) and the session will be **recorded**. Completion of this course will require you to have a reliable internet connection and a device that meets the technical requirements for this service. More information about this remote proctoring service, including technical requirements, is available on Western's Remote Proctoring website at:

<https://remoteproctoring.uwo.ca>.

### Support Services

Please visit the Science & Basic Medical Sciences Academic Advising webpage for information on adding/dropping courses, academic considerations for absences, appeals, exam conflicts, and many other academic-related matters: <https://www.uwo.ca/sci/counselling/>.

Students who are in emotional/mental distress should refer to Mental Health@Western (<https://uwo.ca/health/>) for a complete list of options about how to obtain help.

Western is committed to reducing incidents of gender-based and sexual violence and providing compassionate support to anyone who has gone through these traumatic events. If you have experienced sexual or gender-based violence (either recently or in the past), you will find information about support services for survivors, including emergency contacts at

[https://www.uwo.ca/health/student\\_support/survivor\\_support/get-help.html](https://www.uwo.ca/health/student_support/survivor_support/get-help.html).

To connect with a case manager or set up an appointment, please contact [support@uwo.ca](mailto:support@uwo.ca).

Please contact your course instructor if you require lecture or printed material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Accessible Education at

[http://academicsupport.uwo.ca/accessible\\_education/index.html](http://academicsupport.uwo.ca/accessible_education/index.html)

if you have any questions regarding accommodations.

Learning-skills counsellors at Learning Development and Success (<https://learning.uwo.ca>) are ready to help you improve your learning skills. They offer presentations on strategies for improving time management, multiple-choice exam preparation/writing, textbook reading, and more. Individual support is offered throughout the Fall/Winter terms in the drop-in Learning Help Centre, and year-round through individual counselling.

Western University is committed to a thriving campus as we deliver our courses in the mixed model of both virtual and face-to-face formats. We encourage you to check out the Digital Student Experience website to manage your academics and well-being: <https://www.uwo.ca/se/digital/>.

Additional student-run support services are offered by the USC, <https://westernusc.ca/services/>.