

The University of Western Ontario (Western University)

**Calculus 2302A, Fall 2020**  
**Intermediate Calculus I**

September–December 2020

[course outline version September 2, 2020; may be updated later]

**CLASS MEETINGS:** MWF 1:30-2:20 pm, online (Prof. Barron, tatyana.barron@uwo.ca)

**TEXTBOOK:** Openstax *Calculus Volume 3*.

The textbook is available for free (electronically) from openstax.org (Subjects, Math). On the website, there is an additional option to purchase a print copy.

**PREREQUISITES:** A minimum mark of 55% in Calculus 1501A/B or Calculus 1301A/B, or Applied Mathematics 1413.

Unless you have either the requisites for this course or written special permission from your Dean 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.

**ANTIREQUISITES:** Calculus 2502A/B.

**COURSE DESCRIPTION:** Three dimensional analytic geometry: dot and cross product; equations for lines and planes; quadric surfaces; vector functions and space curves; arc length; curvature; velocity; acceleration. Differential calculus of functions of several variables: level curves and surfaces; limits; continuity; partial derivatives; tangent planes; differentials; chain rule; implicit functions; extrema; Lagrange multipliers.

We will cover most of Chapters 2, 3, 4 of the textbook (2.1-2.6, 3.1-3.4, 4.1-4.8).

If you are unsure whether you should be taking Calculus 2302A or 2502A, please check the course prerequisites and your module requirements and/or contact an academic counsellor. We will briefly discuss the differences between the two courses in class.

**WHAT IS EXPECTED OF THE STUDENT:** Students are expected to attend all class meetings, review all learning materials in timely fashion, follow class announcements, complete all assignments and write all examinations. Solutions of collected homework problems must be written neatly, and handed in by the deadline.

**EVALUATION OF STUDENT PERFORMANCE:**

assignments 40%

"level of engagement" component 9%

midterm exam (**2 hours, online, to be scheduled centrally**) 31%

take home final exam (**24 hours, to be scheduled by the Registrar's office**) 20%

**ACCOMMODATED EVALUATIONS:** late homework will not be accepted. Please submit any time before the deadline. If there is a proper documentation for a missed assignment, then the homework component of the grade will be adjusted accordingly. In order to obtain a passing numerical course grade, a student must write a proctored assessment. If a student missed the midterm online test and accommodation is approved by academic counseling, then a make up test will be given.

**TECHNICAL REQUIREMENTS** for the course: computer with a microphone and webcam, stable internet connection, a scanner or an alternative.

The remote learning sessions for this course will not be recorded. All supporting learning materials will be available on the course owl site. Attendance in remote learning sessions will be used towards the "level of engagement" course evaluation component. Some of the class meetings will rely on asynchronous course materials which students are expected to review in timely fashion.

Participants in this course are not permitted to record the sessions, except where recording is an approved accommodation, or the participant has the prior written permission of the instructor.

The *midterm examination* in this course will be conducted using Zoom. You will be required to keep your camera on for the entire session, hold up your student card for identification purposes, and share your screen with the invigilator if asked to do so at any time during the exam. The exam session will not be recorded.

More information about the use of Zoom for exam invigilation is available in the Online Proctoring Guidelines at the following link:

<https://www.uwo.ca/univsec/pdf/onlineproctorguidelines.pdf>

Completion of this course will require you to have a reliable internet connection and a device that meets the system requirements for Zoom. Information about the system requirements are available at the following link: <https://support.zoom.us/hc/en-us>

Please note that Zoom servers are located outside Canada. You will be expected to attend any Zoom sessions under your full name. If you would prefer to use only your first name or a nickname on Zoom, please discuss this with the instructor in advance of the test or examination, or class meeting.

The *final examination* in this course is a take home examination.

**Students registered with Accessible Education:** the 24 hour time frame to complete the final exam paper and submit it to the instructor should cover most typical accommodations, however please do not hesitate to contact the instructor for any discussion.

**All students:** you may be asked to submit your *draft calculations/rough work*, in addition to the clean copy of final exam solutions. Students may be randomly selected for a follow up meeting during which they would be asked to explain their solutions presented in the take home final exam.

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/>

#### **ACCOMMODATION AND ACCESSIBILITY:**

If you are unable to meet a course requirement due to illness or other serious circumstances, you must provide valid medical or supporting documentation to the Academic Counselling Office of your home faculty as soon as possible. If you are a Science student, the Academic Counselling Office of the Faculty of Science is located in NCB 280 and can be contacted at scibmsac@uwo.ca

Their website is <http://uwo.ca/sci/counselling/>

For further information, please consult the university's medical illness policy at

[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/Academic\\_Consideration\\_for\\_absences.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Consideration_for_absences.pdf)

The Self Reported Absence option (page 3 of this policy) does **NOT** apply to the midterm exam and it does not apply to the final exam.

Approval of *accommodation for the midterm exam or for the final exam* can only be made by the student's Dean's Office/Academic Counselling unit. It is the student's responsibility to make alternative arrangements with the instructor, once the accommodation has been approved and the instructor has been informed.

If you missed or plan to miss the *midterm exam*, please contact your faculty's Academic Counselling Office as soon as possible, and also inform the instructor.

If you miss the *Final Exam*, please contact your faculty's Academic Counselling Office as soon as you are able to do so. They will assess your eligibility to write the Special Exam (the name given by the university to a makeup Final Exam). Course instructors are not able to grant permission for a student to miss or re-schedule a final examination. Students who plan to miss a final examination should contact an academic counsellor at their home Faculty Dean's office.

#### **ACADEMIC POLICIES:**

The website for Registrarial Services is <http://registrar.uwo.ca>

In accordance with policy, <http://www.uwo.ca/its/identity/activatenonstudent.html> , 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 his/her official university address is attended to in a timely manner.

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

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

**MEDICAL ACCOMMODATION:** if you are unable to meet a course requirement due to illness or other serious circumstances, you must ensure that you have valid medical or other supporting documentation. The Student Medical Certificate is available at

[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/medicalform.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf)

It is the student's responsibility to request accommodation and make alternative arrangements with the instructor.

**RELIGIOUS ACCOMMODATION:** Students should consult the University's list of recognized religious holidays, and should give reasonable notice in writing, prior to the holiday, to the Instructor and an Academic Counsellor if their course requirements will be affected by a religious observance. Additional information is given in the Western Multicultural Calendar:

<https://multiculturalcalendar.com/ecal/index.php?s=c-univwo>

The policy on Accommodation for Religious Holidays can be found here:

[http://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/accommodation\\_religious.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_religious.pdf)

## **SUPPORT SERVICES:**

Students with disabilities work with Accessible Education (formerly SSD) which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The Academic Accommodation for Students with Disabilities policy 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)

Please contact the 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 Student Accessibility Services (SAS) at (519) 661-2147 if you have any questions regarding accommodations.

Learning-skills counsellors at the Student Development Centre (<http://www.sdc.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.

Students who are in emotional/mental distress should refer to Mental Health@Western ([http://www.health.uwo.ca/mental\\_health](http://www.health.uwo.ca/mental_health)) for a complete list of options about how to obtain help.

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