

**The University of Western Ontario  
Departments of Applied Mathematics and Mathematics**

**Calculus 1301B -Winter 2021**

**Course Coordinator:** Khoa Nguyen (*Applied Mathematics*)

**Instructors:** Khoa Nguyen (*Applied Mathematics*), Asghar Ghobanpour (*Mathematics*),

The lectures are recorded asynchronously and posted on OWL.

**Office hours:** TBA

**Lectures:**

Section 001 (Nguyen)

Section 005 (Ghobanpour)

Section 006 (Nguyen)

**Required Textbook:**

Calculus Vol. 2 by OpenStax. The pdf version of the textbook can be got free at <https://openstax.org/details/books/calculus-volume-2> or at Campus eBookstore website <https://bookstore.uwo.ca/product/cebebookid9659656>

**Website:** Information and announcements relevant to all sections will be posted on OWL at **CALCULUS 1301B 001 FW20**. Students should check OWL on a regular basis.

Students must use their Westerm (@uwo.ca) email addresses when contacting their instructors.

**Prerequisite:** A minimum mark of 55% in Calculus 1000A/B or 1500A/B or the former 1100A/B.

**Antirequisite:** CALC 1501A/B, Applied Mathematics 1413.

**Senate Policy on Prerequisites:** Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you will 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 if you are dropped from a course for failing to have the necessary prerequisites.

**Evaluation of Student Performance:** The final grade will be calculated as follows:

- In-unit questions: 5%
- Assignments: 25%
- Midterm examination: 32%
- Final examination: 38%

**In-unit questions:** After each video lecture, students are required to answer these Input-unit questions. These questions help students to understand more about the representing

material.

**Assignments:** Students do their assignments in Webwork. These assignments require to access the following website:

<https://webwork1.stats.uwo.ca/webwork2/Calc1301B-Winter2021/>

There are 8 assignments, and we will choose the best 7 out of 8.

Assignment 1: released January 20-due January 26, 2021.

Assignment 2: released January 27-due February 2

Assignment 3: released February 10-due February 23

Assignment 4: released March 10-due March 16

Assignment 5: released March 17-due March 23

Assignment 6: released March 24-due March 30

Assignment 7: released March 31-due April 5

Assignment 8: released April 6- due April 12

Please note that Assignment 3 has two weeks to complete.

**Examinations:** Since exams are conducted by Proctortrack, a student must have the following technical conditions satisfied

- Stable internet connection
- Working microphone
- Working webcam
- Working laptop or computer

Exams in this course will be conducted using a remote proctoring service, Proctortrack. 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**.

If you have questions related to Proctortrack, please access the following link:

<https://ecampusontario.pressbooks.pub/proctortrack/>

And the Remote Proctoring at Western website at

<https://remoteproctorin.uwo.ca>

**Notes:**

- The Midterm Examination will be scheduled for Tuesday, March 2, 2021, 10am – 1:00 pm. Specific details on the exam will be posted online closer to the exam date.
- The final examination will be 3 hours and will be cumulative. It will be scheduled by the Registrar's Office and will be held during the examination period.
- The exams are closed book and closed notes and are conducted by Proctortrack. No calculators or any electronic devices are allowed during the exams.

**Covered Topics:** This course continues from Calculus 1000A/B and 1100A/B. We will cover selected topics from Section 2.4, chapters 3-7 of Calculus Volume II: 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** for more details.

**What is expected of the student:** Students are responsible for learning the material presented in lectures, for learning how to solve the suggested exercises, and for demonstrating that learning on

test and exams. For each hour of lecture, an average student should spend about 2 hours studying the material at home. This includes reading the relevant sections of the textbook and, above all, doing the exercises at the end of each section. Do as many of them as necessary to feel comfortable with the material. This course covers a lot of material, and is cumulative, so it will be necessary to work **regularly** throughout the term to do well.

**Remember:** You understand the material if you can answer questions about it that you have not seen before. For this, it is important to understand the concepts. Remembering all the formulas is not enough. In particular, it is expected that you learn and remember the definitions and the statements of the theorems, and that you can provide examples of each concepts presented in class.

**Objectives:**

At the end of the course, a student should be able to

- integrate functions using several techniques such as integration by parts, partial fractions, inverse trig substitution, etc.
- sketch parametric or polar curves.
- compute area of a region formed by parametric or polar curves.
- determine the convergence or divergence of a given series.
- write a Taylor series or a McLaurin series of a differentiable function.
- formulate a problem in terms of a differential equation and solve it.

**Medical Excuse Regulations:** If you are unable to meet a course requirement due to illness or other serious circumstances, you must provide valid medical or other supporting documentation to the Dean's Office as soon as possible and contact your instructor immediately. It is the student's responsibility to make alternative arrangements with their instructor once the accommodation has been approved and the instructor has been informed. In the event of a missed final exam, a "Recommendation of Special Examination" form must be obtained from the Dean's Office immediately. For further information please see:

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

A student requiring academic accommodation due to illness, should use the Student Medical Certificate when visiting an off-campus medical facility or request a Records Release Form (located in the Dean's Office) for visits to Student Health Services. The form can be found here:

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

Exam Conflicts See the University's policy on exam conflicts:

[http://www.uwo.ca/univsec/pdf/academic\\_policies/exam/conflicts.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/exam/conflicts.pdf)

Here are the first two paragraphs:

A student who is scheduled to write more than two examinations in any 23-hour period may request alternative arrangements through the office of the dean of their faculty.

A student who is scheduled to write two examinations concurrently must notify the Registrar so that arrangements may be made for both examinations to be written in the Examination Conflict Room in a sequence established by the Registrar.

Please also let your instructor know about the conflict and read the entire University policy.

**Academic Offences:** 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: [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).

**Accessibility:** Please contact the course instructor if you require material in an alternate format or if you require any other arrangements to make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 661-2111 ext. 82147 for any specific question regarding an accommodation.

**Health and Wellness:** As part of a successful student experience at Western, we encourage students to make their health and wellness a priority. Western provides several on campus health-related services to help you achieve optimum health and engage in healthy living while pursuing your degree. Students who are in emotional/mental distress should refer to Mental Health@Western <http://www.uwo.ca/uwocom/mentalhealth/> for a complete list of options about how to obtain help.

*New for 2021 (related to online issues)*

### **Statements concerning Online Etiquette**

Some components of this course will involve online interactions. To ensure the best experience for both you and your classmates, please honour the following rules of etiquette:

- please “arrive” to class/tutorials on time
- please use your computer and/or laptop if possible (as opposed to a cell phone or tablet)
- ensure that you are in a private location to protect the confidentiality of discussions in the event that a class discussion deals with sensitive or personal material
- to minimize background noise, kindly mute your microphone for the entire class until you are invited to speak, unless directed otherwise
- In order to give us optimum bandwidth and web quality, please turn off your video camera for the entire class unless you are invited to speak
- please be prepared to turn your video camera off at the instructor’s request if the internet connection becomes unstable
- unless invited by your instructor, do **not** share your screen in the meeting

The course instructors/TAs will act as moderator for the class and will deal with any questions from participants. To participate please consider the following:

- if you wish to speak, use the “raise hand” function and wait for the instructor to acknowledge you before beginning your comment or question
- remember to unmute your microphone and turn on your video camera before speaking
- self-identify when speaking.

- remember to mute your mic and turn off your video camera after speaking (unless directed otherwise)

General considerations of “netiquette”:

- Keep in mind the different cultural and linguistic backgrounds of the other students in the course.
- Be courteous toward the instructor, your colleagues, and authors whose work you are discussing.
- Be respectful of the diversity of viewpoints that you will encounter in the class and in your readings. The exchange of diverse ideas and opinions is part of the scholarly environment. “Flaming” is never appropriate.
- Be professional and scholarly in all online postings. Cite the ideas of others appropriately.

Note that disruptive behaviour of any type during online classes, including inappropriate use of the chat function, is unacceptable. Students found guilty of Zoom-bombing a class or of other serious online offenses may be subject to disciplinary measures under the Code of Student Conduct.