

Calculus 2502A - Advanced Calculus I

Fall 2020

This course outline may be updated later

- **Instructor:** Masoud Khalkhali, Professor of Mathematics, UWO
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Office: MC 137, Phone: 661-2111 x 86524.
Office hours: Monday 2:30-3:30 PM via Zoom, or by appointment.
Please make sure to use your Western email address when contacting me.
I cannot answer to other emails.
- **Lectures:** MWF 1:30 - 2:20 PM via zoom in real time, i.e. synchronous.
For course zoom link check OWL. Our first lecture will on Wednesday
Sept 9 at 1:30 PM. Lectures will be recorded and posted on my youtube
channel. The links to lectures will be announced in OWL.
- **Textbook:** Openstax Calculus, Vol 3. A free online version is available
at
<https://openstax.org/details/books/calculus-volume-3>
(Please note that the textbook for this course has been changed this year.)
- **Course Website:** The official website for the course is the course page
on OWL. All information about this course including the course outline,
assignments, exams, lectures, etc. will be posted only on OWL.
- **Teaching Assistant:** TBA
- **Help center:** TBA
- **Course Outline:** The course material corresponds to **Chapters 2, 3, 4, and Sections 6.1, 6.3, and 6.5 from your textbook.** Quick review of vectors in space from Chapter 2, vector valued functions (Chapter 3), Differential calculus of functions of several variables: level curves and surfaces; limits; continuity; partial derivatives; total differentials; Jacobian matrix; chain rule; implicit functions; inverse functions; curvilinear coordinates; derivatives; the Laplacian; ; extrema; Lagrange multipliers; vector and scalar fields; divergence and curl (from Chapter 4 and Sections 6.1, 6.3, 6.5 of Chapter 6).

- **Antirequisite(s):** Calculus 2302A/B.
- **Prerequisite(s):** A minimum mark of 60% in Calculus 1501A/B or Applied Mathematics 1413, or Calculus 1301A/B with a mark of at least 85%.
- **Pre-or Corequisite(s):** Mathematics 1600A/B
- **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.
- **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.
- **Important dates:**
September 9 (Wednesday): First lecture.
October 12 (Thanksgiving, Monday): No lecture.
Midterm: TBA (last week of October)
Nov. 2-8 (Fall reading week): No lecture.
Dec. 9 (Wednesday): Last lecture.
Final exam: TBA
- **Grading: Your course grade will be calculated as follows.**
Final exam: 40%
Midterm: 30%
Homework: 30%.
There are two exams: a midterm and a final. Dates will be posted on OWL. The final exam covers the entire semester.
Details for each exam will be announced as the date approaches. Your midterm will roughly cover Chapters 2 and 3 (this is unofficial and may change depending on circumstances). All exams will be closed book: notes or class material are not permitted. Calculators or other electronic devices (cell phones, ipads, tablets, etc.) are not permitted.
- **Homework:** There will be 3 sets of homeworks. They will be announced via OWL.

- Accommodation and Accessibility:
- Accommodation Policies:
 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/AcademicAccommodation_disabilities.pdf
- Academic Consideration for Student Absence:
 Students will have up to two (2) opportunities during the regular academic year to use an on-line portal to self-report an absence during the semester, provided the following conditions are met: the absence is no more than 48 hours in duration, and the assessment for which consideration is being sought is worth 30% or less of the students final grade. Students are expected to contact their instructors within 24 hours of the end of the period of the self-reported absence, unless noted on the syllabus. Students are not able to use the self-reporting option in the following circumstances:
 - * for exams scheduled by the Office of the Registrar (e.g., December and April exams)
 - * absence of a duration greater than 48 hours,
 - * assessments worth more than 30% of the students final grade,
 - * if a student has already used the self-reporting portal twice during the academic year
 If the conditions for a Self-Reported Absence are not met, students will need to provide a Student Medical Certificate if the absence is medical, or provide appropriate documentation if there are compassionate grounds for the absence in question. Students are encouraged to contact their Faculty academic counselling office to obtain more information about the relevant documentation. Students should also note that individual instructors are not permitted to receive documentation directly from a student, whether in support of an application for consideration on medical grounds, or for other reasons. All documentation required for absences that are not covered by the Self-Reported Absence Policy must be submitted to the Academic Counselling office of a student's Home Faculty. For policy on Academic Consideration for Student Absences - Undergraduate Students in First Entry Programs, see:
https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Consideration_for_absences.pdf
 and for the Student Medical Certificate (SMC), see:
http://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf
- 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>

You may also be eligible to write the Special Exam if you are in a Multiple Exam Situation. Check

http://www.registrar.uwo.ca/examinations/exam_schedule.html.

- Academic Policies:
The website for Registrarial Services is
<http://www.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 individuals 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.
- Contingency plan for an in-person class pivoting to 100% online learning:
In the event of a COVID-19 resurgence during the course that necessitates the course delivery moving away from face-to-face interaction, all remaining course content will be delivered entirely online, either synchronously (i.e., at the times indicated in the timetable) or asynchronously (e.g., posted on OWL for students to view at their convenience). The grading scheme will not change. Any remaining assessments will also be conducted online as determined by the course instructor.
- All of the remote learning sessions for this course will be recorded. The data captured during these recordings may include your image, voice recordings, chat logs and personal identifiers (name displayed on the screen). The recordings will be used for educational purposes related to this course, including evaluations. The recordings may be disclosed to other individuals participating in the course for their private or group study purposes. Please contact the instructor if you have any concerns related to session recordings. 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.
- 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.

- All tests and examinations in this course will be conducted using the remote proctoring service, such as 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. More information about this remote proctoring service 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 technical requirements for this service. Information about the technical requirements are available at the following link:
<https://www.proctortrack.com/tech-requirements/>
- 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 links:
<https://www.proctortrack.com/tech-requirements/>
<https://support.zoom.us/hc/en-us>
- Proctortrack will require you to provide personal information (including some biometric data). The session will be recorded. By taking this course, you are consenting to the use of this software. More information about remote proctoring is available in the Online Proctoring Guidelines at the following link:
<https://www.uwo.ca/univsec/pdf/onlineproctorguidelines.pdf>
- Support Services:
Please visit the Science, Basic Medical Sciences, Academic Counselling webpage for information on add/drop courses, academic considerations for absences, appeals, exam conflicts, and many other academic related matters:
<https://www.uwo.ca/sci/counselling/>
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. 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/>.