Calculus 2502A - Advanced Calculus I
Fall 2019

- **Instructor:** Masoud Khalkhali, Professor of Mathematics, UWO
  Email: masoud@uwo.ca
  Office: MC 137
  Office hours: Monday 2:30-3:30 PM, or by appointment.

- **Lectures**: MWF 1:30 - 2:20 PM in SSC-3022 . There are no tutorials.

- **Textbook**: James Stewart, Multivariable Calculus, 8th edition, Brooks/Cole. The book (as well as the student solutions manual) is available at the bookstore.

- **Teaching Assistant**: TBA

- **Help center:** Weekdays, 3:30-6:30 PM in MC 107 (not open before the third week of September).

- **Course Outline**: **The course material corresponds roughly to Chapters 12, 13, and 14, and Sections 16.1, and 16.5 from the textbook.** 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; Taylor Series; extrema; Lagrange multipliers; vector and scalar fields; divergence and curl.

- **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

- **Important dates**:

  September : First lecture.
  Thanksgiving. No lecture.

  Midterm: TBA

  Fall reading week: No 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. 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 5 sets of homeworks. They will be announced by me through OWL. Late homework will not be accepted.

Common Course Policies for 2019/20 Math Undergrad courses

The following is a list of course policies which are common to all undergraduate courses run by the Mathematics department at Western for the academic year 2019/20.

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 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.

Course Website:

Students should check OWL or the course website (if not hosted on OWL) on a regular basis for news and updates for all of the courses in which they are enrolled. This is the primary method by which information will be disseminated to all students in each class. Students are responsible for checking OWL on a regular basis.

Accommodation and Accessibility:

If you are unable to meet a course requirement due to illness or other serious circumstances, you must seek approval for the absence as soon as possible. Approval can be granted either through a self-reporting of absence or via the Dean's Office/Academic Counselling unit of your Home Faculty. 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.

For further information, please consult the university's policy on academic consideration for student absences: https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Consideration_for_absences.pdf.

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).

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

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

Electronic devices (including cell phones and calculators) are NOT allowed on exams and may be confiscated.

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.

Support Services:

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 661-2147 if you have any questions regarding accommodations.

The policy on Accommodation for Students with Disabilities can be found here: https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic%20Accommodation_disabilities.pdf.

The policy on Accommodation for Religious Holidays can be found here: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_religious.pdf

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) 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.

Acknowledgment of the Science Student Donation Fund

Mathematics undergrad courses are supported by the Science Student Donation Fund. If you are a BSc or BMSc student registered in the Faculty of Science or Schulich School of Medicine and Dentistry, you pay the Science Student Donation Fee. This fee contributes to the Science Student Donation Fund, which is administered by the Science Students' Council (SSC). One or more grants from the Fund have allowed for the purchase of equipment integral to teaching this course. You may opt out of the Fee by the end of September of each academic year by completing the online form linked from the Faculty of Science's Academic Counselling site . For further information on the process of awarding grants from the Fund or how these grants have benefitted undergraduate education in this course, consult the Chair of the Department or email the Science Students' Council at ssc@uwo.ca.