

Mathematics 2122B Course Outline

1. Course Information

Course Information

Math 2122B Winter 2024, AHB room 1B08, lectures Tue 1:30-3:30 pm and Thurs 1:30-2:30 pm, tutorial Thurs 2:30-3:30 pm

List of Prerequisites

A minimum mark of 60% in one of [Calculus 1501A/B](#), or [Numerical and Mathematical Methods 1414A/B](#), the former Applied Mathematics 1414A/B, or the former Applied Mathematics 1413, or a minimum mark of 85% in [Calculus 1301A/B](#). [Integrated Science 1001X](#) with a minimum mark of 60% can be used in place of [Calculus 1301A/B](#).

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

Instructors	Email	Office	Phone	Office Hours
Dr. Tatyana Barron	Tatyana.barron@uwo.ca	MC 103B	Ext. 86532	TBD
TAs Alejandro, Manimugdha				

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

Office hours will be in person.

3. Course Syllabus, Schedule, Delivery Mode

Course description: A rigorous introduction to analysis on the real line. Sets and functions, logic and mathematical proof, the natural and real numbers, completeness and its consequences, limits of sequences, limits of real functions, continuity and uniform continuity.

[Course-level learning outcomes.](#)

On successful completion of this course, students will be able to

Construct mathematical proofs,

State and apply fundamental theorems from the analysis of real valued functions of one real variable,

Explain the difference between continuous and uniformly continuous functions.

Course weekly meeting times: lectures Tue 1:30-3:30 pm and Thurs 1:30-2:30 pm, tutorial Thurs 2:30-3:30 pm

Key Sessional Dates:

Classes begin: January 8, 2024

Reading Week: February 17 – 25, 2024

Classes end: April 8, 2024

Exam period: April 11 – 30, 2024

Contingency plan

Although the intent is for this course to be delivered in person, should any university-declared emergency require some or all of the course to be delivered online, either synchronously or asynchronously, the course will adapt accordingly. The grading scheme will **not** change. Any assessments affected will be conducted online as determined by the course instructor.

4. Course Materials

Textbook (required): M. Laczkovich, V. Sos, Real analysis. Foundations and functions of one variable. Published by Springer, 2015. Electronic copy (pdf) available for free from Western the library, with the uwo login credentials.

Students are responsible for checking the course OWL site (<http://owl.uwo.ca>) on a regular basis for news and updates. This is the primary method by which information will be disseminated to all students in the class.

All course material will be posted to OWL: <http://owl.uwo.ca>.

If students need assistance with the course OWL site, they can seek support on the OWL 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

In the event if any course component is moved to the online delivery, the students will need to have a stable internet connection, computer with working microphone and/or webcam, and standard access to the university provided software (e.g. Zoom or Proctortrack).

5. Methods of Evaluation

The overall course grade will be calculated as listed below:

Assignments (3)	33%
Midterm Tests (2)	30%
Final Exam	37%

The final exam is cumulative.

Midterm tests (in class): Tuesdays Feb. 13 and March 12

Each midterm test is 110 min. long.

Make up midterm tests: Friday Feb. 16, at 3:00 pm, and March 15, at 3:00 pm.

Homework assignment due dates: Tuesdays Jan. 30, Mar. 5, Mar. 26

6. Student Absences

If you are unable to meet a course requirement due to illness or other serious circumstances, please follow the procedures below.

Assessments worth less than 10% of the overall course grade:

There are no such course requirements.

Assessments worth 10% or more of the overall course grade:

For work totalling 10% or more of the final course grade, you must provide valid medical or supporting documentation to the Academic Counselling Office of your Faculty of Registration as soon as possible. For further information, please consult the University's medical illness policy at

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/academic_consideration.pdf.

The Student Medical Certificate is available at

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf.

Also, inform the course instructor immediately. Missed course work that received an approved accommodation from the Academic Counselling Office will be handled as follows: for a midterm test a make-up opportunity will be given (see the make-up dates above), for a homework assignment an

extension will be granted. If this first choice option can not resolve the issue, then reweighting may be considered.

Absences from Final Examinations

If you miss the Final Exam, please contact the Academic Counselling office of your Faculty of Registration as soon as you are able to do so. They will assess your eligibility to write the Special Examination (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” (e.g., more than 2 exams in 23-hour period, more than 3 exams in a 47-hour period).

If a student fails to write a scheduled Special Examination, the date of the next Special Examination (if granted) normally will be the scheduled date for the final exam the next time this course is offered. The maximum course load for that term will be reduced by the credit of the course(s) for which the final examination has been deferred. See the Academic Calendar for details (under [Special Examinations](#)).

Note: missed work can *only* be excused through one of the mechanisms above. Being asked not to attend an in-person course requirement due to potential COVID-19 symptoms is **not** sufficient on its own.

6. Accommodation and Accessibility

Religious Accommodation

When a course requirement conflicts with a religious holiday that requires an absence from the University or prohibits certain activities, students should request accommodation for their absence in writing at least two weeks prior to the holiday [to the course instructor](#). Please consult University's list of recognized religious holidays (updated annually) at

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.

7. Academic Policies

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

In accordance with policy,

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.

Electronic devices, including calculators, will not be permitted on tests and exams.

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.

If, in the event of health lock-down, Remote Proctoring Software may be used in this course, then tests and examinations in this course may 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>.

8. Support Services

Please visit the Science & Basic Medical Sciences Academic Counselling 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.

To connect with a case manager or set up an appointment, please contact support@uwo.ca.

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 Accessible Education at

http://academicsupport.uwo.ca/accessible_education/index.html

if you have any questions regarding accommodations.

Learning-skills counsellors at the Student Development Centre (<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/>.