

Mathematics 4122B/9022B Course Outline

1. Course Information

Course Information

Introduction to Measure Theory (Math 4122B/9022B), Winter 2026

Lectures: see the Academic Calendar

List of Prerequisites

Mathematics 3122A/B

Unless you have either the prerequisites for this course or written special permission from the Department of Mathematics to enroll in it, you may be removed and withdrawn from this course in accordance with university policy. This may be done after the add/drop deadline of the academic term, and the course will be marked as withdrawn (WDN) on your academic record. This decision may not be appealed.

2. Instructor Information

Instructors	Email	Office	Phone	Office Hours
Dr. Janusz Adamus	jadamus@uwo.ca	MC-122	Ext.86525	In person, weekly times TBA
TA: TBA				

Students must use their Western (@uwo.ca) email addresses when contacting their instructors. Students are responsible for reading the instructor's email communications and announcements.

3. Course Syllabus, Schedule, Delivery Mode

Lebesgue measure, measurable sets and functions, Littlewood principles; the Lebesgue integral, basic convergence theorems, approximation theorems; measure spaces, signed measures, Radon-Nikodym Theorem.

Lectures will be held in-person, Mon/Wed/Fri, 2:30 – 3:30pm.

Key Sessional Dates:

Classes begin: January 5, 2026

Spring Reading Week: February 14 – 22, 2026

Classes end: April 9, 2026

Exam period: April 12 – 30, 2026

4. Course Materials

Textbook: *Real analysis for graduate students*, R.F. Bass, ver.3.1, 2016 (recommended, available through the course website).

Other suggested reading:

- *Real and complex analysis*, W. Rudin, 3rd edition, McGraw-Hill, 1987.
- *Real and Functional Analysis*, S. Lang, 3rd edition, Springer, GTM 142, 1993.

Course Website: <https://uwo.ca/math/faculty/adamus/teaching/4122B2026/>

Students are responsible for checking the above course website 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 also available via OWL: <http://owl.uwo.ca>.

If students need assistance with the course OWL site, they can seek support on the [OWL Brightspace 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 unlikely event of the course switching to online delivery mode, the students will be expected to have a stable internet connection and access to a computer with working microphone and webcam.

5. Methods of Evaluation

For undergraduate students, the course mark will be based on their term work, 2 term tests, and the final exam, with the following weights:

Term Work	24%	
Midterm Tests (2)	36%	(18% each)
Final Exam	40%	

For graduate students, the final mark will be the weighted average of the above components and the in-class presentation of a selected topic, with weights of 95% and 5% respectively.

The Term Work will consist of bi-weekly assignments or weekly quizzes (depending on the TA support), and will be announced at the beginning of the term.

The **midterm tests** will be held **in class**, on **February 13** and **March 20**. Make-up midterm tests are tentatively scheduled for February 23 and March 23.

Use of Generative AI Tools

The use of generative AI tools in coursework and assessments is **prohibited**.

General information about missed coursework

Math 4122B students:

Students must familiarize themselves with the *University Policy on Academic Consideration – Undergraduate Students in First Entry Programs*, posted on the Academic Calendar:

https://uwo.ca/univsec/pdf/academic_policies/appeals/academic_consideration_Sep24.pdf,

This policy does not apply to requests for Academic Consideration submitted for **attempted or completed work**, whether online or in person.

The policy also does not apply to students experiencing longer-term impacts on their academic responsibilities. These students should consult [Accessible Education](#).

For procedures on how to submit Academic Consideration requests, please see the information posted on the Office of the Registrar's webpage:

https://registrar.uwo.ca/academics/academic_considerations/

All requests for Academic Consideration must be made within 48 hours after the assessment date or submission deadline.

All Academic Consideration requests must include supporting documentation; however, recognizing that formal documentation may not be available in some extenuating circumstances, the policy allows students to make one Academic Consideration request **without supporting documentation** in this course. However, the following assessments are excluded from this and, therefore, always require formal supporting documentation:

- **Examinations scheduled during official examination periods** (Defined by policy)

When a student mistakenly submits their one allowed Academic Consideration request **without supporting documentation** for the assessments listed above or those in the **Coursework with Assessment Flexibility** section below, the request cannot be recalled and reapplied. This privilege is forfeited.

Math 9022B students:

Submit any academic consideration requests to the instructor. These may be processed in consultation with the Math Graduate Chair.

Evaluation Scheme for Missed Assessments

Missing an evaluation component will result in a grade of zero unless appropriate permission is sought and granted.

Missed Quizzes and/or Assignments: Each student can miss up to 2 quizzes without penalty. Beyond that, students who are granted an academic consideration for a missing quiz and/or written assignment will get the other components of their evaluation reweighted. For example, if only one assignment worth 4% is missing, the course grade will be computed out of 96 instead of 100.

Missed Midterm: Students who are granted an academic consideration will get a make-up midterm exam. The tentative dates of make-up midterms are February 23 (Test 1) and March 23 (Test 2). Students who are granted an academic consideration and who are not able to complete the scheduled make-up will get their evaluation reweighted. For example, if only one midterm (18%) is missing, the course grade will be computed out of 82 instead of 100.

When a student misses the Final Exam and their Academic Consideration has been granted, they will be allowed to write the Special Examination (the name given by the University to a makeup Final Exam). See the Academic Calendar for details (under [Special Examinations](#)), especially for those who miss multiple final exams within one examination period.

6. Additional Statements

6.1 Religious Accommodation

When a recognized religious holiday or observance conflicts with an examination, test, or other scheduled academic obligation, students must request accommodation via the University's Student Absence Portal (SAP). This request should identify the conflict and specify which course component(s) (e.g. test, midterm, exam) are affected.

Students are encouraged to submit the SAP request as early as possible, but no later than two weeks before any examination, or one week before any mid-term test or quiz, to allow sufficient time for adjustment.

The SAP request serves as official notification to both the course instructor and the Academic Advising Office, in accordance with University policy:

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

The Faculty of Science considers religious accommodations as scheduling conflicts. Instructors should provide either a make-up exam or an earlier sitting of the same exam to accommodate the student.

For more information on recognized religious holidays, please visit the Diversity Calendar posted on the Equity, Diversity & Inclusion website - <https://www.edi.uwo.ca>

6.2 Academic 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.

6.3 General Academic Policies

The website for Registrar Services is <https://www.registrar.uwo.ca/>.

Use of @uwo.ca email: 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 email address. It is the responsibility of the account holder to ensure that emails received from the University at their official university address are attended to in a timely manner.

Requests for Relief (formally known as “appeals”)

Policy on Request for Relief from Academic Decision:

https://uwo.ca/univsec/pdf/academic_policies/appeals/requests_for_relief_from_academic_decisions.pdf

Procedures on Request for Relief from Academic Decision (Undergraduate):

https://uwo.ca/univsec/pdf/academic_policies/appeals/undergrad_requests_for_relief_procedure.pdf

Procedures on Request for Relief from Academic Decision (Graduate):

https://uwo.ca/univsec/pdf/academic_policies/appeals/graduate_requests_for_relief_procedure.pdf

6.4 Scholastic Offences

Policy on Scholastic Offences:

https://uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_offences.pdf

Procedures on Scholastic Offences (Undergraduate):

https://uwo.ca/univsec/pdf/academic_policies/appeals/undergrad_scholastic_offence_procedure.pdf

Procedures on Scholastic Offences (Graduate):

https://uwo.ca/univsec/pdf/academic_policies/appeals/graduate_scholastic_offence_procedure.pdf

Use of Electronic Devices During Assessments

In courses offered by the Faculty of Science, the possession of unauthorized electronic devices during any in-person assessment (such as tests, midterms, and final examinations) is strictly prohibited. This includes, but is not limited to: mobile phones, smart watches, smart glasses, and wireless earbuds or headphones.

Unless explicitly stated otherwise in advance by the instructor, the presence of any such device at your desk, on your person, or within reach during an assessment will be treated as a *scholastic offence*, even if the device is not in use.

Only devices expressly permitted by the instructor (e.g., non-programmable calculators) may be brought into the assessment room. It is your responsibility to review and comply with these expectations.

Use of Generative AI Tools

Unless otherwise stated, the use of generative AI tools (e.g., ChatGPT, Microsoft Copilot, Google Gemini, or similar platforms) is **not permitted** in the completion of any course assessments, including but not limited to: assignments, lab reports, presentations, tests, and final examinations.

Using such tools for content generation, code writing, problem solving, translation, or summarization—when not explicitly allowed—will be treated as a **scholastic offence**.

If the use of generative AI is permitted for a particular assessment, the conditions of use will be specified by the instructor in advance. If no such permission is granted, students must assume that use is prohibited. It is your responsibility to seek clarification before using any AI tools in academic work.

6.5 Support Services

Please visit the Science & Basic Medical Sciences Academic Advising webpage for information on adding/dropping courses, academic considerations for absences, requests for relief, 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 (GBSV) and providing compassionate support to anyone who has gone through these traumatic events. If you have experienced GBSV (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. If you have any questions regarding accommodations, you may also wish to contact Accessible Education at

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

Learning-skills counsellors at Learning Development and Success (<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.

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