

The University of Western Ontario

## Calculus 1501B - Winter 2021 – Preliminary Outline

**Course coordinator:** M. Pinonnault mpinson@uwo.ca.

**Instructors:** M. Pinonnault mpinson@uwo.ca and A. Neshitov aneshito@uwo.ca.

### Communication with instructors:

- Since both lecture sections share the same OWL website, video lectures, course notes, assignments, and exams, you may receive notifications from both instructors.
- If you have questions, **never reply directly to a global course announcement**. Always write a new email.
- Questions about **evaluations, academic accommodations, and other administrative issues** must be sent to the **course coordinator**.
- Questions about **mathematics** can be sent to any of the **two instructors**.
- Questions **specific to a tutorial session** must be sent to the **appropriate lecturer**: A. Neshitov for tutorials 003 and 004, and M. Pinonnault for tutorials 005 and 006.
- For any email communication, always use your **UWO account**.
- In your emails, always include **CALC 1501B in the title**. Always include your **full name** and your **student number** in the email.

**Prerequisite:** A minimum mark of 60% in either CALC 1000A/B or CALC 1500A/B.

**Antirequisite:** CALC 1301A/B, Applied Mathematics 1413.

**Course Description:** Students who intend to pursue a degree in Mathematics, Applied Mathematics, Statistics, Actuarial Sciences, Physics or Astronomy should take this course. Techniques of integration; The Mean Value Theorem and its consequences; series, Taylor series with applications; parametric and polar curves with applications; first order linear and separable differential equations with applications.

**OWL websites:** Course details, announcements, pre-recorded lectures, and access to all assignments and exams will be provided via the main OWL website (both sections share the same website). Students are responsible for monitoring the OWL site for the course and should aim to check for updates every day or two.

In addition, each tutorial section has its own OWL subsite that is accessible through the main course website. Each tutorial site will only display information pertaining to the tutorial section. In particular, the Zoom links to access the online sessions are available in the tutorial OWL subsites. The password for all tutorials is **Riemann**.

**Format:** Online course with pre-recorded (asynchronous) lectures and live (synchronous) tutorials. Both sections (001 and 002) share the same content and the same evaluation components. **Students must sign up for one of the synchronous tutorials (sections 003 – 006). The procedure is explained at the end of this course outline and on the OWL website.**

- The course material will be discussed in pre-recorded video lectures that will be posted on the main website on a regular basis.
- Weekly exercises will be posted on the website and solutions will be given during the tutorials of the following week. Consequently, each week you should endeavor to complete the lessons and exercises of the previous week so that you are well prepared for your tutorials.

**Tutorials schedule:** Please note that the times below are given in Eastern Time (EST).

003: Monday & Wednesday, 08:30 – 09:30

004: Monday & Wednesday, 12:30 – 13:30

005: Tuesday & Thursday, 08:30 – 09:30

006: Tuesday & Thursday, 12:30 – 13:30

Again, the Zoom links are available in the tutorial OWL subsites. The password is **Riemann**.

**Technical requirements for the course:** Each student must have access to:

- Laptop or desktop computer
- A browser meeting the requirements for OWL, Gradescope, and Proctortrack
- Stable internet connection
- Working microphone
- Working webcam
- Device for scanning (either a scanner or an app that can be used in conjunction with your phone's camera)

If students need assistance with any of the above items, they can seek support on the OWL Help page <https://owlhelp.uwo.ca/students/index.html>. Alternatively, they can contact the Western Technology Services Helpdesk <https://wts.uwo.ca/helpdesk/>. Phone: 519-661-3800 or Ext 83800.

**Textbook and supplementary material:**

- *Calculus 1* from the OpenStax project. Freely available at <https://openstax.org/details/books/calculus-volume-1>
- *Calculus 2* from the OpenStax project. Freely available at <https://openstax.org/details/books/calculus-volume-2>

- Some topics will be covered in more detail than what is available in the textbook, and supplementary course notes will be available on the course website. These notes are an integral part of the course and their content will be covered in the evaluation components.

**Evaluation of student performance:** The final grade will be calculated as follows:

- 9 problem sets on WeBWork: 5%
- 3 homeworks:  $3 \times 5\% = 15\%$
- 2 midterm examinations:  $2 \times 20\% = 40\%$
- Final examination: 40%

**Evaluation schedule:**

- The problem sets will be delivered through the online platform WeBWork. The homeworks will be submitted online using Gradescope.
- The **tentative released and due dates** for the WeBWork problem sets are
  - Set#1: released on 2021/01/18 – due 2021/01/24
  - Set#2: released on 2021/01/25 – due 2021/01/31
  - Set#3: released on 2021/02/01 – due 2021/02/07
  - Set#4: released on 2021/02/22 – due 2021/02/28
  - Set#5: released on 2021/03/01 – due 2021/03/07
  - Set#6: released on 2021/03/08 – due 2021/03/14
  - Set#7: released on 2021/03/22 – due 2021/03/28
  - Set#8: released on 2021/03/29 – due 2021/04/04
  - Set#9: released on 2021/04/05 – due 2021/04/11
- The **tentative released and due dates** for the homeworks are
  - HW#1: released on 2021/01/25 – due 2021/02/07
  - HW#2: released on 2021/03/01 – due 2021/03/14
  - HW#3: released on 2021/03/29 – due 2021/04/11

These dates are tentative and may be modified as the course progresses.

- The **tentative dates** for the midterm exams are
  - Thursday February 11<sup>th</sup> 2021, 19h00 – 21h00.
  - Thursday March 18<sup>th</sup> 2021, 19h00 – 21h00.

These dates are tentative as we await approval by the administration.

- The final examination will be scheduled by the Office of the Registrar and will be held during the set examination period.

### **Other information about examinations:**

- Virtual proctoring will be employed for the two midterms and the final exam.
- You will have 120 minutes to complete both midterms. They will be made of a mixture of short-answer and multiple-choice questions.
- You will have 180 minutes to complete the final exam. It will be made of a mixture of short-answer and multiple-choice questions. Note that the final exam will cover all the material covered during the course.
- All examinations will be closed book exams, and the use of calculators and communication devices during the exams is prohibited.
- For the multiple choice components of all exams, we will use specialized software to check for academic integrity violations.

**Missed evaluation components:** Missing any evaluation component will result in a grade of zero unless appropriate academic accomodation is sought and granted.

- If you miss a problem set with proper academic accomodation, your mark will be re-weighted.
- Submitting a homework after the due date will result in a penalty of 10% per day unless appropriate permission is granted. If you miss a homework with proper academic accomodation, your mark will be re-weighted.
- If you miss a midterm examination with proper academic accomodation, a makeup midterm will be taken the next available week.
- If you miss the final exam with proper academic accomodation, a special exam will be taken at a later date chosen by the Mathematics Department.

**Academic accomodation:** 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](mailto: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](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](http://www.registrar.uwo.ca/examinations/exam_schedule.html)

**Exam conflicts:** 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. 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).

**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 visit the Accessible Education Western website [http://academicsupport.uwo.ca/accessible\\_education/index.html](http://academicsupport.uwo.ca/accessible_education/index.html) for any specific question regarding an accommodation.

**Remote proctoring statement:** Tests and examinations in this course will be conducted using the 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. 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>. Information about the technical requirements are available at the following link: <https://www.proctortrack.com/tech-requirements/>

**Copyright and audio/video recording statement:** 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.

Course material produced by faculty is copyrighted and to reproduce this material for any purposes other than your own educational use contravenes Canadian Copyright Laws. You must always ask permission to record another individual and you should never share or distribute recordings.

**Professionalism and privacy:** Western students are expected to follow the Student Code of Conduct. Additionally, the following expectations and professional conduct apply to this course:

Students are expected to follow online etiquette expectations provided on OWL. All course materials created by the instructor(s) are copyrighted and cannot be sold/shared. Recordings are not permitted (audio or video) without explicit permission. Permitted recordings are not to be distributed. Students will be expected to take an academic integrity pledge before some assessments. All recorded sessions will remain within the course site.

**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 exams and other assignments. For each lecture hour, 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 that is cumulative, so it will be necessary to work **regularly** throughout the term in order 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 memorize key definitions and statements of key theorems, that you can provide examples of each concept presented in class, and that you are able to reproduce proofs of simple propositions.

**Help centers** The Department of Mathematics runs online Help Centers from January 18th until April 9th. It will run Monday to Friday 08:00–09:00, and 17:00–20:00 EST. It will not run during the Winter Reading week of February 15– February 19. It is accessible at [https://www.math.uwo.ca/undergraduate/help\\_centre.html](https://www.math.uwo.ca/undergraduate/help_centre.html). **Warning:** The Help Centers often get overcrowded during examination times. Work regularly and don't wait until the last minute to try problems and ask questions.

**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 in the event that you are dropped from a course for failing to have the necessary prerequisites.

**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.

**Important information about tutorials:** In order to be able to participate in tutorials you will need to swap your initial Calculus 1501B TUT 030 component with any TUT component having section number 003 through 006 (irrespective of the instructor).

The TUT section 030 is not an active section and students who do not place themselves in one of the four active sections mentioned in the previous paragraph will not be able to transfer after the add/drop/swap date has passed in January. Consequently, those students will miss out on critical supplementary synchronous activities offered by your professors throughout the duration of the course.

Here's how you do it:

1. In Student Centre, select [Enroll in Classes] under [Academics].
2. Tap [Swap] under the [Enroll] tab.
3. Select [Calculus 1501B: Calculus II] and enter the \*class number\* for the new tutorial section you want. NOTE: The “class number” is not the same as the “section number” or “course

number” and this can be confusing. It is the class number that you must use for the swap in these steps. For example, the class number of TUT 003 is 13007.

Please consider carefully associated weekly meeting times when you make your decision. It is possible for sections to reach capacity, so please attempt to make the swap as soon as possible.

**Key sessional dates:**

- Jan. 11      Classes begin
- Jan. 19      Last day to add a second-term full course or second-term half course
- Feb. 14–21   Reading week
- Mar. 14      Last day to withdraw from a second-term half course without academic penalty
- Apr. 12      Winter Term classes end
- Apr. 13      Study Day
- Apr. 14–30   Final examinations period

See <http://westerncalendar.uwo.ca/SessionalDates.cfm?SelectedCalendar=Live&ArchiveID=> for a complete list of sessional dates.