



Department of Applied Mathematics
Calculus 1000A 650 SU21
Calculus I
Course Outline



Although this academic year might be different, Western University is committed to a **thriving campus**. We encourage you to check out the [Digital Student Experience](#) website to manage your academics and well-being. Additionally, the following link provides available resources to support students on and off campus: <https://www.uwo.ca/health/>.

1. Technical Requirements:



Stable internet connection



Laptop or computer



Working microphone



Working webcam

2. Course Overview and Important Dates:

Delivery Mode	Dates
Online	Asynchronous

*Details about design and delivery of the course are listed below in Section 4



Classes Start	Classes End	Exam Period
May 3	July 23	After July 23, to be announced by the Registrar Office

3. Contact Information



Instructor	Contact Information
Dr. Khoa Nguyen	knguyen@uwo.ca
Teaching Assistant	
Ao Li	ali297@uwo.ca

Emails: Any email sent to an instructor or TA MUST say Calc 1000A (section 650) in the subject line. The email must also be sent from your UWO email account. Any email without this, and/or any email sent from a non-UWO email address, could be blocked by a spam filter or otherwise be deleted unread.

4. Course Description and Design

Office Hours: Thursday 1:00 PM - 2:00 PM (online using Zoom)

Required Textbook:

- Single Variable Calculus: Early Transcendentals, 9th edition, by J. Stewart, D. Clegg, and S. Watson

Optional:

- Lecture Notes for Calculus Volume 1 (7th edition), by R. N. Bryan (Custom Course Materials)
- Midterm Tests and Final Exams for Calculus 1000, by R. N. Bryan (Custom Course Materials)

Below is a link where you can purchase the course materials at UWO bookstore

https://bookstore.uwo.ca/textbooksearch?campus=UWO&term=N2021&courses%5B0%5D=650_UW/CAL1000A

Course Website: <http://owl.uwo.ca>

5. Learning Outcomes

General learning objectives:

- Basic Algebra and Trigonometry used in Calculus
- Limit and Limit Rules, derivative and differentiation rules
- Chain rule, derivatives of exponential and logarithmic functions
- Derivatives of inverse trigonometric functions
- L'Hospital's rules
- The Fundamental Theorem of Calculus and its applications
- The method of substitution in evaluating indefinite and definite integrals

Specific learning objectives:

- Use algebra and trigonometry to formulate a problem which can be solved by calculus
- Evaluate several limits by using L'Hospital's rules
- Compute derivatives and integrals of popular functions such as polynomials, rational, exponential, and logarithmic, trigonometric, inverse trigonometric and the like
- Use derivatives to solve optimization problems
- Use integrals to compute areas between curves and volume of a three-dimensional object

6. Course content and Schedule



Week	Dates	Topic by chapters	Comments
1	May 3 – 9	Appendix D, 1.4, 1.5	Review
2	May 10 – 16	2.2, 2.3, 2.5, 2.6	Limits, rules of limits, continuity, limits at infinity
3	May 17 – 23	2.7, 2.8	Derivatives and rate of change, derivative as a function
4	May 24 – 30	3.1, 3.2, 3.3	Victoria Day, derivatives of polynomials, exponential functions, product and quotient rules, derivatives of trig functions
5	May 31– June 6	3.4, 3.5, 3.6	Chain rule, implicit differentiation, derivatives of logarithmic and inverse trig functions.
6	June 7-13	3.9, 4.1, 4.2	Related rates, maximum and minimum values, relationship between derivative and the shape of a function.
7	June 14 – 20	4.4, catch up + review	Midterm, Saturday, June 19 10:00AM-1:00 PM. L'Hospital's rule, optimization problems, antiderivatives.
8	June 21 – 27	4.7, 4.9, Appendix E	Optimization problems, antiderivatives, Sigma notation.
9	June 28-July 4	5.1, 5.2, 5.3	Canada day, area and distance, definite integrals, the Fundamental Theorem Calculus.
10	July 5 – 11	5.4, 5.5	Indefinite integrals and the Net Change Theorem, the substitution method.
11	July 12 – 18	6.1, 6.2	Area between curves, volumes.
12	July 19 – 23	Catch up + review	Prepare for the final exam.

7. Evaluation

Below is the tentative evaluation breakdown for the course.

Assessment	Format	Weighting
Assignments (7)	WeBWok	25%
Midterm	Online (Proctortrack)	35%
Final exam	Online (Proctortrack)	40%

Notes:

- The Midterm will be scheduled for Saturday, July 19, 2021, 10:00 AM – 1:00 PM. Specific details on the exam will be posted online closer to the exam date.
- The final examination will be 3 hours and will be cumulative. It will be scheduled by the Registrar's Office and will be held during the examination period.

Proctortrack: 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>

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/>

- **Assignments:** Students do their assignments in WeBWoK. There are 7 assignments, and we choose the best 6 out of 7.

Assignment 1: released May 5, due May 11
Assignment 2: released May 12, due May 18
Assignment 3: released May 19, due May 25
Assignment 4: released May 26, due June 1
Assignment 5: released June 2, due June 8
Assignment 6: released June 30, due July 6
Assignment 7: released July 7, due July 13

Information about tests and examinations:

- The Midterm will be 3.0 hours long, closed book
- Final examination will be 3.0 hours long, closed book
- Calculators will not be allowed in any test or examination
- The use of communication devices is strictly prohibited

9. Communication:

- A weekly update will be provided on the OWL announcements
- Emails will be monitored daily; students will receive a response in 24 – 48 hours

10. Office Hours:



- Office hours will be held online using Zoom on Thursday, 1:00 - 2:00 PM.
- Students can arrange Zoom appointment

11. Resources



- All resources will be posted in OWL
- Required textbook: Single Variable Calculus: Early Transcendentals, 9th Ed., by J. Stewart, D. Clegg, S. Watson
*Details about required textbook are listed above in Section 4

12. Professionalism & 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 or unlisted if streamed

13. What is expected of the student?

Students are responsible for learning the material presented in lectures, for learning how to solve the recommended practice problems, and for demonstrating that learning on exams, quizzes, and/or assignments. For each hour of lecture, 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, and is cumulative, so it will be necessary to work regularly throughout the term to do well.

14. SENATE POLICY ON PREREQUISITES:

Prerequisite checking is the **student's responsibility**. Unless you have the prerequisites for this course or written special permission from the Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision cannot be appealed. You will receive no adjustment to your fees if you are dropped from a course for failing to have the prerequisites.

STATEMENT ON ACADEMIC OFFENCES:

Scholastic offences are taken seriously, 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

Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

ABSENCE / MISSED WORK:

If you are unable to meet a course requirement due to illness or other serious circumstances, you must provide valid medical or other supporting documentation *to your Dean's Office as soon as possible* and contact *your instructor*. It is the student's responsibility to make alternative arrangements with his or her instructor once the accommodation has been approved and the instructor has been informed. In the event of a missed final exam, a "Recommendation of Special Examination" form must be obtained from the Dean's Office immediately. For information concerning UWO's Policy on Accommodation for Medical Illness please refer to this policy at:

http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf.

SUPPORT SERVICES

Office of the Registrar:

UWO <http://www.registrar.uwo.ca>

King's <http://www.kings.uwo.ca/academics/academic-deans-office/>

Student Development Services

<http://www.sdc.uwo.ca>

Learning Skills Services

<http://www.sds.uwo.ca/learning>

USC

<http://westernusc.ca/services>

Student Development Services

<http://www.sdc.uwo.ca>

Academic Calendar

<http://www.westerncalendar.uwo.ca>

ITS

<http://uwo.ca/its/helpdesk>