Calculus 1000A Calculus I

Section 570

Fall 2018-2019 academic term

Professor: Zinovi Krougly
Email: zkrougly@uwo.ca

Office: SA 057
Office Hours: Mon Wed 5:30-6:15 PM
or by appointment

Class Times and Location(s): Mon Wed 6:30-8:30 PM; BH103

Course description: Review of limits and derivatives of exponential, logarithmic and rational functions. Trigonometric functions and their inverses. The derivatives of the trig functions and their inverses. L'Hospital's rules. The definite integral. Fundamental theorem of Calculus. Simple substitution. Applications including areas of regions and volumes of solids of revolution.

Prerequizite(s): Ontario Secondary School MCV4U or Mathematics 0110A/B

Antirequisite(s): The former Calculus 1100A/B, Calculus 1500A/B, Applied Mathematics 1413.

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.

Western University, London, Ontario, Canada
Departments of Mathematics, Applied Mathematics and King's University College
Calculus 1000A Fall 2018-2019 academic term

Instructor: Zinovi Krougly, PhD, Assistant Professor
zkrougly@uwo.ca
http://fisher.stats.uwo.ca/faculty/krougly/

Section: King's 570
Times: Mon Wed 6:30 PM - 8:30 PM
Location: Mon Wed KC-BH103
Office Hour: Mon Wed 5:30 PM - 6:15 PM in SA 057, or by appointment

Textbook etc.: Single Variable Calculus, Early Transcendentals, 8th Ed., by James Stewart

Student Solutions Manual (RECOMMENDED)

Calculus...Fear No More by M. Lovric. (OPTIONAL)

Lecture Notes for Calculus 1000A, by R.N. Bryan, published for the Department of Mathematics (Custom Course Materials). (OPTIONAL)

Midterm Tests and Final Exams for Calculus 1000A, published for the Department of Mathematics (Custom Course Materials). (OPTIONAL)

Prerequisites: Ontario MCV4U or Mathematics 0110A/B.
Antirequisites: Calculus 1500A/B or the former Calculus 1100A/B, Applied Mathematics 1413.

Course description: Review of limits and derivatives of exponential, logarithmic and rational functions. Trigonometric functions and their inverses. The derivatives of the trigonometric functions and their inverses. L'Hospital's rules. The definite integral. Fundamental theorem of Calculus. Simple substitution. Applications including areas of regions and volumes of solids of revolution. 4 lecture hours. We will cover selected topics from Chapters 1-6. See Recommended Practice Problems for more details.

What is expected of the student?
Students are expected to have read the appropriate sections of Chapters 1-6 and to have completed the practice problems. Additional material and exercises may be assigned. Students that work at a consistent pace throughout the term (and do not put off asking questions until exam time), use help resources available, e.g. the Help Centre, and do self-directed exploration of topics, tend to achieve better results in university-level mathematics courses.

Evaluation of student performance:
Midterm Examination: 35% (TBA)
Final Examination: 50% (To be scheduled by the Registrar's Office, 3 hours)
Test or Quizzes/Assignments: 15%

Calculator policy:
The use of calculators will not be permitted for the midterm test and the final examination.

IMPORTANT ***Senate Policy:***
Students are responsible for ensuring that their selection of courses is appropriate and accurately recorded and that all course prerequisites have been successfully completed. Unless you have either the requisites for this course or written special permission from your Dean to enrol 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.

Medical excuse regulations:
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 the Dean's Office as soon as possible and contact your instructor immediately. 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 further information please see: http://www. uwo.ca/univsec/handbooklappeals/medical .pdf A student requiring academic accommodation due to illness, should use the Student Medical Certificate when visiting an off-campus medical facility or request a Record's Release Form (located in the Dean's Office) for visits to Student Health Services.
The form can be found here: https://studentservices.uwo.ca/secure/medical document.pdf
Important Announcements and Grades can be found on WebCT.

Important Dates:
First day of classes Fall Term: September 6, 2018. Fall Reading Week: October 8 to October 12, 2018 (including Thanksgiving Monday). Drop Deadline: November 12, 2018. Last day of classes: December 7, 2018.Study Days: December 8 - 9, 2018. Exam Period: December 10 - 21, 2018

KING'S
Western University

Faculty Office Hours:
Faculty office hours can be found on King's homepage under the menu heading Current Students (http://www.kings.uwo.ca/current-students/courses-enrolment/planning/faculty- office-hours/) and are also posted on the bulletin board across from the Administrative Assistants Office on the second floor of Dante Lenardon Hall.

Policy on Accommodation for Medical Illness:
(http://uwo.ca/univsec/pdf/academic policies/appeals/accommodation medical.pdf). Student Medical Certificate (SMC)
https://www.uwo.ca/univsec/pdf/academic policies/appeals/medicalform.pdf

Tests/Examinations:
Students are responsible for seeking accommodation with appropriate documentation, prior to writing tests/examinations, if they are of the view that their performance may be affected by extenuating circumstances.

Support Services:
Students who are in emotional/mental health distress should refer to Mental Health@Western: http: //www .uwo.ca/uwocom/mentalhealth/ for a complete list of options about how to obtain help.

University Students Council provides many valuable support services for students (including the health insurance plan) http://westernusc.ca/services/.

Information about Counselling and Student Development, including Accessibility Services (formerly Services for Students with Disabilities) at King's is available at http://www.kings.uwo.ca/about-kings/who-we-are/administrative-departments/dean-of-students/

For emotional/mental health assistance see: http: //www.kings.uwo.ca/current-students/campus -services/student- support-services/personal-counselling/

The website for Academic Services at King's University College is http://www.kings.uwo.ca/current-students/academic-support/

Statement on Use of Electronic Devices:
Use of Electronic Devices:
You are not allowed to have a cell phone, or any other electronic device, with you during tests or examinations. Use of Laptops in the Classroom:
King's University College at The University of Western Ontario acknowledges the integration of new technologies and learning methods into the curriculum. The use of laptop computers can contribute to student engagement and effective learning. At the same time, King's recognizes that instructors and students share jointly the responsibility to establish and maintain a respectful classroom environment conducive to learning.
The use of laptops by students during lectures, seminars, labs, etc., shall be for matters related to the course at hand only. Students found to be using laptops for purposes not directly related to the class may be subject to sanctions under the Student Code of Conduct. See https://www.kings.uwo.ca/kings/assets/File/currentStudents/studentLife/conduct/code of conduct 2003.pdf
Inappropriate use of laptops [or smart phones] during lectures, seminars, labs, etc., creates a significant disruption. As a consequence, instructors may choose to limit the use of electronic devices in these settings. In addition, in order to provide a safe classroom environment, students are strongly advised to operate laptops with batteries rather than power cords."

Statement on Academic Offences:
King's is committed to Academic Integrity.

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

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com http://turnitin.uwo.ca/.

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.

Copyright re: Course Material
Lectures and course materials, including power point presentations, tests, outlines, and similar materials are protected by copyright. Faculty Members are the exclusive owner of copyright in those materials they create. Students may take notes and make copies for their own use. Students may not allow others to reproduce or distribute lecture notes and course materials publicly (whether or not a fee is charged) without the express written consent of a Faculty Member. Similarly, students own copyright in their own original papers and exam essays. If a faculty member is interested in posting a student's answers or papers on the course web site he/she should ask for the student's written permission.

(Commercial use of Course material - http://umd.edu/legal/commercial.html)

Mailbox re Submission of Late Essays/Assignments ONLY:
Only late essays/assignments not handed in at class may be dropped off in the drop box, located between the inner doors of the Cardinal Carter Library. Please inform your students that essays dropped into the mailbox will be picked-up twice per day: once in the morning (9:30 a.m.) and in the afternoon (4:00 p.m.). All essays dropped off after 4:00 p.m. on a Friday will be date-stamped the following Monday. Essays should be placed in an envelope addressed to the professor with the course code and student number clearly indicated.

Class Cancellations:
All reported class cancellations are posted at: http: //www .kings.uwo.ca/ current-students/outages-service - interruptions/

Calculus 1000A Fall 2018 Recommended Practice Problems

TEXT: *Single Variable Calculus, 8th Edition, Early Transcendentals, with Student Solutions Manual,* by James Stewart

FOR REVIEW		
Section	Page	Problems
1.1	19	# 1-3, 7, 9, 25, 27-29, 31, 33, 35, 39-49(odd), 57, 63-65, 73-79(odd)
1.2	33	# 1, 2, 11, 13
1.3	42	# 1, 31, 35, 41, 42, 45, 53
Chapter 1 Review	68	Concept Check 1, 2, 7, 8; True-False 1-14; Exercises 5, 7, 11, 17, 19, 25, 26
3.1	180	# 3-35 (odd), 45, 55, 57, 59, 79
3.2	188	# 3, 5, 11, 15, 17, 27, 33, 43, 45
THE COURSE BEGINS WITH SECTION 1.4		
LIMITS AND DIFFERENTIATION		
1.4	53	# 1-5, 11, 13, 15, 21, 23
Appendix D	A32	# 1-9 (odd), 13, 17-31 (odd), 46, 48, 50, 65, 69
1.5	66	# 5, 7, 9, 11, 15, 17, 21, 23, 25, 33-41 (odd), 49, 51, 53, 55, 63, 66, 68, 69, 71, 72, 75
2.2	92	# 1, 2, 5, 7, 9, 11, 31-41 (odd)
2.3	102	# 1-31 (odd), 37-43 (odd), 49, 51, 53

2.5	124	# 1,3,11,13, 19, 21, 35, 37, 39, 43,45, 47, 51, 53,55,57a,69
2.6	137	# 1, 3,15-27 (odd), 31-41 (odd), 47, 49, 51, 65a
2.7	148	# 5, 7, 21, 27, 31-37 (odd), 41
2.8	160	# 21-31 (odd), 57(a,b), 59, 61
Chapter 2 Review	165	Concept Check 1, 2, 3, 6, 7, 9-19; True-False 1-13, 20-24; Exercises 3-19 (odd), 23, 29, 35, 36, 39(a,b)
Problems Plus	171	3, 9, 13

LIMITS AND DIFFERENTIATION (Continued)		
Section	Page	Problems
3.3	196	# 1-17(odd), 18, 21, 23, 29, 31, 33, 39-47(odd), 55
3.4	204	# 1-53 (odd), 55(a), 61, 63, 69, 71, 77, 79
3.5	215	# 3-21 (odd), 25, 27, 29, 31, 37, 49-57 (odd), 75
3.6	223	# 1-33 (odd), 43-49 (odd)
3.9	249	# 3, 5, 9, 13-17, 19, 23, 31, 37, 39
Chapter 3 Review	266	True-False odd; Exercises 1-41 (odd), 49, 65, 69, 83, 85, 97, 99
MAX/MIN, L'HOSPITAL'S RULE, ANTIDIFFERENTIATION		
4.1	283	# 1, 3, 5, 29-43 (odd), 47-61 (odd)
4.3	300	# 1-7, 9-21 (odd), 37-57 (odd)

4.4	311	# 1, 7, 13-27 (odd), 31-67 (odd)
4.7	336	# 3, 5, 7, 13, 15, 23, 31, 33, 35, 45
4.9	355	# 1-17(odd), 25-47 (odd), 51, 59, 61, 63, 73
Chapter 4 Review	358	Concept check 1, 5, 6, 7; True/false odd; Exercises 1-13 (odd), 53, 57, 59, 65-73 (odd), 77, 83
INTEGRATION		
Appendix E	A38	# 11-33(odd), 41, 43, 45, 49
5.1	375	# 3, 5, 21, 23, 25
5.2	388	# 1, 17-29 (odd), 35-41 (odd), 45, 47, 49, 55-63 (odd)
5.3	399	# 1-47 (odd), 55, 57, 61, 63, 69, 75
5.4	408	# 7-11 (odd), 15, 17, 21-45 (odd), 49-61 (odd), 71
5.5	418	# 1-35 (odd), 39-47 (odd), 53-73 (odd), 66, 77, 81, 85
Chapter 5 Review	421	Concept Check 1, 2, 4, 5, 7; True-False 1-10, 16; Exercises 3, 8, 9-37 (odd), 45, 47, 49, 67-70
Problems Plus	425	1, 5
APPLICATIONS OF INTEGRATION		
6.1	434	# 1, 13, 15, 17, 21, 23, 27, 35
6.2	446	# 1-17 (odd), 23, 27, 49, 51
Chapter 6 Review	466	Exercises 1, 3, 5, 15