

THE UNIVERSITY OF WESTERN ONTARIO  
LONDON CANADA  
DEPARTMENT OF MATHEMATICS

**Mathematics 0110A**  
**Introductory Calculus**

September - December 2017

**INSTRUCTORS:** *(Course Coordinators: J. Turnbull and V. Olds)*

001 - H. Seyedinejad; 550 (Huron) - M. Mollahajiaghahi; 570 & 571 (King's) - J. Turnbull

*(See Class Schedule and Instructor Contact Information on next page.)*

**TEXTBOOK:** *Custom package (text and student solutions manual). Introductory Calculus: Math 0110A/B. ISBN 0176849491.* This is a new textbook, with no previous editions. **Only** this textbook is acceptable. A photograph of the cover is on the course OWL page, to help you identify the correct textbook to purchase.

**PREREQUISITES:**

One or more of Ontario Secondary School MCF3M, MCR3U, or equivalent.

**ANTIREQUISITES:**

Mathematics 1225A/B, 1230A/B, Calculus 1000A/B, the former 1100A/B, 1500A/B, Applied Mathematics 1413.

**COURSE OUTLINE:**

Limits, continuity, definition of derivative, rules for differentiation, higher-order derivatives, velocity, acceleration, implicit differentiation, related rates, exponential functions, logarithmic functions, differentiation of exponential and logarithmic functions, maxima and minima, concavity, curve sketching, optimization.

**COURSE WEB SITE:**

Various supplemental materials, such as practice tests and solutions for some homework exercises, are posted on the course OWL web site. In addition, there are forums on which students may post questions. Important information will be posted on the NEWS forum and/or on the class page on the web site. All students are expected to be aware of information, and make use of materials, posted on the course web site.

**WHAT IS EXPECTED OF THE STUDENT?**

Working knowledge of, and any needed review of, all relevant pre-Calculus concepts; regular attendance at classes; completion of all assigned work; assumption of complete responsibility for any classes, tests, or assignments which are missed; awareness of items on the NEWS forum and use of materials posted on the course OWL web site. It is up to the student to seek out help when needed.

**Please contact your course instructor if you require material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 661-2111 x82147 for any specific question regarding an accommodation.**

## EVALUATION OF STUDENT PERFORMANCE:

Students will be assessed on the basis of "Class Work", 2 Term Tests, and a Final Exam. The means of assessing the Class Work component will be determined by the instructor of each section, and may be for participation, quizzes, assignments, etc. For each class, information about how the Class Work component will be assessed, and details of the timing, will be announced in class and also posted on the appropriate "class page" on the OWL web site.

The 2 Term Tests, each 90 minutes in length, will be held on:

**Friday October 27 2017, 7:00 - 8:30 p.m.** and **Friday November 17 2017, 7:00 - 8:30 p.m.**

Locations of these tests will be announced in class and/or on the course web site. The Final Exam will be 3 hours in length, covering all of the course material. This exam will be scheduled by the Registrar's Office during the December Exam Period. A mark of 0 will be recorded for any test or examination missed.

### Calculation of Final Grade:

Each Term Test counts for 25%, the Class Work counts for 10% and the Final Exam counts for 40%.

### Notes:

1. The Tests and Examination will all have some multiple choice questions and some written answer questions.
2. **NO calculators or other electronic devices or any other aids are allowed on tests and exams.**
3. *If the student's final exam mark is higher than a test mark (for a test which the student wrote), the weight from that test will be shifted to the final exam. This may apply to either, or both, of the term tests. This policy does not apply to the class work – the final exam grade cannot replace your assignments, quizzes, etc.*
4. See Absence / Missed Work policy on next page.

**Your mark in the course will be the mark that you earn based on your demonstrated understanding of the course content, assessed using the criteria outlined above. Extra credit assignments are not available and tests and exams cannot be rewritten to obtain a higher mark. There are no exceptions for any reason.**

## CLASS SCHEDULE:

Section	Location	Campus	Instructor	Days & Times
001	Main		H. Seyedinejad	TuTh 7 - 9 p.m. 3M - 3250
550	Huron UC		M. Mollahajiaghahi	MTuWF 1:30-2:30 PM HUC - W 112
570	King's UC		J. Turnbull	MW 5:30-7:30 KUC - BH 103
571	King's UC		J. Turnbull	M 1:30 - 3:30 KUC - LH 101 W 1:30 - 3:30 KUC - BH 103

## INSTRUCTOR CONTACT INFORMATION: (any changes/updates will be posted in the course OWL web site)

H. Seyedinejad (001): [sseyedin@uwo.ca](mailto:sseyedin@uwo.ca), office MC 129

M. Mollahajiaghahi (550): [mmollaha@uwo.ca](mailto:mmollaha@uwo.ca), office A 2D

J. Turnbull (course co-coordinator & 570 & 571): [jturnbu7@uwo.ca](mailto:jturnbu7@uwo.ca), office KUC - Wemple 233

V. Olds (course co-coordinator): [volds@uwo.ca](mailto:volds@uwo.ca)

**Note:** Any email sent to an instructor or a course coordinator **MUST say Math 0110A in the subject line.** Any email without this, and/or any email sent from other than a UWO email address, may be deleted unread.

**IMPORTANT NOTE:** The provision in note 3 above about the weighting of the final exam is intended to allow students who struggle with the course material, but **DO** master it by the end of the term, to receive a grade which reflects their understanding at the end of the course. It **DOES NOT** mean that it's okay to ignore the course until just before the final exam. Most of the students who take this course find that the material does not come easily. Students need to work steadily at this course **THROUGHOUT** the term to have any realistic hope of a successful result.

### **SENATE POLICY ON PREREQUISITES:**

Prerequisite checking is the **student's responsibility**. Unless you have either the prerequisites 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.

### **STATEMENT ON 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)

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 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 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](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_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](https://studentservices.uwo.ca/secure/medical_document.pdf)

A makeup will be held for each term test as well as for the final exam. Only students with prior permission from their instructor will be allowed to write the makeup for a test. Only students with a Recommendation for Special Exam from their Dean's Office will be allowed to write a makeup for the Final Exam. Any student who misses a portion of the Class Work component of the grade for any legitimate reason should contact your instructor as soon as possible. Supporting documentation may be required. In the case of missed Class Work, or if a student is unable to write the scheduled makeup for a Term Test due to a documented prolonged or recurring absence or other legitimate conflict, your instructor will decide whether to accommodate by rescheduling or by reweighting that component of the grade.

### **SUPPORT SERVICES**

Office of the Registrar

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

Huron <http://www.huronuc.on.ca/CurrentStudents/StudentLifeandSupportServices/AcademicResources>

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

Student Development Services <http://www.sdc.uwo.ca/>

Learning Skills Services <http://www.sdc.uwo.ca/learning>

USC <http://westernusc.ca/services>

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

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

Students who are in emotional/mental distress should refer to Mental Health @ Western via the link given below for a complete list of the options about how to obtain help: <http://www.uwo.ca/uwocom/mentalhealth/>

**Mathematics 0110A Recommended Exercises - Fall 2017**

<b>Section</b>	<b>Page</b>	<b>Problems</b>
<b>Pre-Calculus Review</b>		
0.3	18	odd 1-15, odd 21-29, odd 37-43, odd 45-51.
0.4	24	odd 9-17, odd 35-45.
0.5	32	odd 1-13, 19, 25, 27, 29.
<b>Homework Problems</b>		
1.3	65	odd 1-13, odd 19-23, odd 27-35, 91.
1.4	78	odd 21-33, 37, 39.
1.5	91	odd 17-21, odd 23-45, odd 51-59.
1.6	101	odd 1-21, 25, 27.
Ch. 1 Review	108	1, 3, odd 43-51, 69 (no graph), 73, odd 79-89, 105, 107, 111, 113.
3.5	246	odd 1-9, odd 13-19, odd 29-37
2.1	123	15, 17, 19, 23, 25, 27, 31, 37, odd 51-59.
2.2	134	odd 5-27, odd 29-33, odd 35-47, 53, 55.
2.3	143	odd 3-7 (no graph, and only find the average rate of change on interval).
2.4	155	odd 1-15, odd 17-23, odd 25-33, 41 (no graph), 43 (no graph), 47, 65.
2.5	165	odd 1-13, odd 23-35, odd 39-45 (no graph), odd 51-65, 69 (no graph).
2.6	172	odd 1-33, 35, 41.
Ch. 2 Review	178	odd 9-15, 17, 21, 23, <a href="#">all 25-28</a> , 31, 39, odd 49-65, odd 73-79.
App B1	190	odd 1-23, 25, 27.
App B2	196	1, 3, 5, 7, 9, 11, 15.
4.1	279	odd 1-7, <a href="#">all 13-18</a> , 31b.
4.2	285	1, 3, <a href="#">all 5-10</a> , 11, 13.
4.4	302	<a href="#">all 9-12</a> , odd 23-27, odd 31-39, odd 41-45, 51, 53, 57, 59, 63, 67, <a href="#">86</a> (calculator).
4.3	293	odd 5-15, 17, 21, 23, 25.
4.5	311	odd 5-17, 23, odd 39-47, 49, 51, 55, 57, 61, 65.
Supplement	343	all 1-8.
Ch 4 Review	338	odd 1-13, 25, 27, 31, 33, odd 45-51, odd 69-83, odd 93-105, 111, 113, 125, 127.
3.1	207	odd 1-7, odd 9-25, odd 29-37.
3.2	217	odd 1-17, odd 19-23, 29.
3.3	226	odd 1-21, <a href="#">all 27-30</a> , 31, 35, 39, 43.
3.4	235	1, 3, 5, 7, 11, 17, 19, 21.
3.6	256	odd 1-11, 17, 19, 37.
4.3	293	29.
4.5	311	67.
Ch 3 Review	269	odd 1-7, odd 11-19, odd 21-29, odd 33 - 43, 49, 53, 57, odd 59-65.

- **Chapter 0 problems are for review by the student and should be completed as soon as possible.**

- Page numbers and text references refer to the custom text for Math 0110A/B.

- Any changes to this list will be announced on the NEWS and/or Homework forums in the OWL web site.

- Answers for odd numbered questions are in the back of the text. See OWL for solutions to the even-numbered questions.