



MATH*1080 Elements of Calculus I – Winter 2016

Department of Mathematics and Statistics
University of Guelph, Guelph Campus

Course Description

MATH*1080 Elements of Calculus I F,W(3-1) [0.50] This course provides an introduction to the calculus of one variable with emphasis on mathematical modelling in the biological sciences. The topics covered include elementary functions, sequences and series, difference equations, differential calculus and integral calculus.

- Prerequisite(s): 1 of 4U Advanced Functions, 4U Adv. Functions and Calculus or equivalent
- Restriction(s): [MATH*1000](#), [MATH*1030](#), [MATH*1200](#)

Required Study Materials

- *Math 1080 Elements of Calculus Course Notes and Laboratory Manual, 8th. Edition.* Author: Joseph Cunsolo, Publisher: Pearson Custom Publishing, © 2015. ***You are required to bring this manual to every lecture and lab session.***
- CourseLink at: <https://courselink.uoguelph.ca/shared/login/login.html>

Lecture Section(s)

TTh 08:30-09:50 in THRN 1200

Lab Section(s)

F 10:30-11:20 in RICH 2520

Lecturer & Lab Instructors

S. Gismondi (Lecturer)

Michael Andrews (Lab Instructor)

Erin Wild (Lab Instructor)

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Office Hours

TTh 10:00-11:00 in either THRN foyer or MACN 510

TBA

TBA

Lecture & Lab Procedures

You are required to bring the “Course Notes and Laboratory Manual” (that you purchased) to every lab and lecture session. These notes are partially completed for your convenience.

- Lecture material is divided into 15 sections presented over 12 weeks, and each section concludes with an exercise module.
 - *Homework Task I (not for marks).* Each exercise module is to be completed as independent study, not handed in. Answers are in our course manual.
- Lab material is divided into 12 labs presented over 12 weeks (except labs 5 & 9 where we have term tests instead). Each lab consists of two sets of word problems, Part A and Part B (except labs 5 and 9 – consisting only of Part B). Part A is always completed together in lab.
 - *Homework Task II (not for marks).* Part B is to be completed as independent study, not handed in. Answers for Part B are in our course manual.
 - *Homework Task III worth 3% in total. There are 3 online sample/practice quizzes worth 1% each.* You can try each sample quiz as often as you like – for the purpose of “mastery”. It’s intended that you score perfect. Even better yet, we help you i.e. *at the beginning of labs 3, 7 and 11, we’ll take-up these quizzes with a focus on related numeracy / arithmetic / algebra skills – and then you’ll take “real” online quizzes that same day. We want you to score perfect on the “real” quizzes too.*
- There are **three online lab quizzes taken outside of lab time** (worth 4% each), based upon the material presented in the preceding two labs, scheduled on the Friday of weeks 3, 7 and 11. *Please refer to our lecture and lab schedule on the last page of our outline.*

- There are **two written term tests based upon lecture, module and lab material taken in lab time** (worth 20% each), scheduled in lab in weeks 5 and 9. Recall that there is no Part A for both labs 5 & 9 (Part B is independent study) i.e. we write term tests instead. *Please refer to our lecture and lab schedule on the last page of our outline.*

Assessment Procedures

3% Online Practice Quizzes (3) @ 1% each: As indicated earlier, *there are three online practice quizzes* taken any time before the final examination. You can attempt each quiz as often as you like until you score perfect. Each practice quiz accounts for 1% of your final grade. ***These quizzes are intended as a gift for practice, familiarization and mastery AND at the beginning of labs 3, 7 and 11, we'll take-up these quizzes with a focus on related numeracy / arithmetic / algebra skills – and then you'll take “real” online quizzes that same day.***

12% Online Quizzes (3) @ 4% each: As indicated earlier, *there are three online quizzes* taken outside of lab time, on the Friday of weeks 3, 7 and 11. Each quiz normally accounts for 4% of your final grade. ***These quizzes are intended as “evaluation” – you can attempt each quiz twice.*** Need special accommodation? See **Accessibility** below re: SAS accommodations.

- **Online Lab Quiz 1, completed on Friday, January 29, between 6:30 – 21:30.**
 - **Online Lab Quiz 2, completed on Friday, March 4, between 6:30 – 21:30.**
 - **Online Lab Quiz 3, completed on Friday, April 1, between 6:30 – 21:30.**
- ☒ **THERE ARE NO ALTERNATE QUIZ DATES NOR MAKE-UP QUIZZES. Missed quiz marks are automatically transferred to the final examination.**

40% Written In Lab Term Tests (2) @ 20% each: As indicated earlier, *there are two term tests, 50 minutes each, WRITTEN IN LAB, in each of weeks 5 & 9.* Each term test normally accounts for 20% of your final grade. Each term test is entirely "written answer" i.e. not multiple choice. ***These term tests are intended as “evaluation” – you have exactly one attempt in lab.*** So please be sure to have reviewed and prepared yourself as best you can i.e. see the sample term tests & solutions posted online. All term tests are returned to you. Details about how tests are returned, timeline, grading, re-grading etc. are discussed later. Need special accommodation? See **Accessibility** below re: SAS accommodations.

- **WRITTEN in Lab Term Test I, Week of February 8 - 12**
 - **WRITTEN in Lab Term Test II, Week of March 14 - 18**
- ☒ **THERE ARE NO ALTERNATE TERM TEST DATES NOR MAKE-UP TERM TESTS. Missed term test marks are automatically transferred to the final examination.**

IF your final examination grade is better than your term test grade(s), I will automatically replace your term test grade(s) with your final examination grade. i.e. this applies to BOTH term tests.

But don't get the idea that this is a gift. I simply want you to work harder with a plan for better performance. Sometimes you may not be prepared as well as you'd like, and it's your own decision to skip a term test (and opt for an increased weight automatically placed upon the final examination). It's NOT advised!! Don't 'mortgage your future', and NEVER miss two term tests. Unlike final examinations, 1) term tests provide opportunities for feedback and 2) in the case of poor performance, there's another term test or the final examination, an opportunity to improve. Term tests contribute less to your final grade than does the final examination. Poor performance on a term test has less impact upon your final grade than does poor performance on the final examination, especially a more heavily weighted final examination; *and* they provide 'final examination like' writing conditions, a great way to gain examination writing

experience in preparation for the 'biggy', the final examination. Term tests encourage you to prepare and develop skill through-out the semester. That's WHY we do it. Knowledge and capability in mathematics builds in a 'pyramidal' fashion. You need foundation knowledge and practice to move forward. Preparing for the final examination late in the semester is not nearly as 'foundation building' as is a module-like, semester long approach. Besides, if you can't make small amounts of time available for study during the semester, do you honestly believe that you'll make large amounts of time available at the end of the semester?

More About How Term Tests are Returned & Posted Solutions / Marking Scheme

About one week (normally) after a term test, your grade is posted to your account on CourseLink and all term tests are returned to a set of wooden orange cabinets labelled MATH*1080 located outside the learning centre (300A of the McLaughlin Library). Please respect the original order / location of previously filed term test papers.

- If you cannot find your term test, then PLEASE LOOK IN ALL OF THE BOXES. Often people are in a rush and they may not re-file papers as originally filed.
- If you cannot find your term test after searching all boxes, check CourseLink to confirm that a grade was indeed assigned before contacting your TA or instructor.
- Solutions and marking schemes for all term tests are posted to CourseLink.

More About Re-grades / Incorrectly Posted Grades / Missing Grades

- Re-grade requests are usually processed "in person" by our lab TA. Please meet with him/her to discuss how you were graded. Be sure to have reviewed the posted online solutions for your term test, and be prepared to respond to questions about how your solution method(s) compare to posted solution methods.
- If the grade posted for your term test is wrong, please see your lab TA (bring the test).
- If your grade is not posted, then please come and see me directly.

45% Final Examination (1) @ 45%: *There is one two-hour final examination composed of 45 multiple choice questions, similar to module questions, worth 45% of your final grade.*

- **Final Examination. Date, Time & Location – April 20, 2016; 19:00 – 21:00; TBA.**
☞ **THERE IS NO ALTERNATE FINAL EXAMINATION DATE NOR MAKE-UP FINAL EXAMINATION. Don't miss it!**
➔ ***EVEN IN THE CASE OF ILLNESS, if you miss the final examination, a committee (not me) independently decides your fate (final grade) in the course.***

Just as TT I and TT II each tested four weeks of material worth 20% each, the final examination will test the last four weeks of material as if we had a third term test. That is, 20 out of 45 MC questions are guaranteed to come from content presented in the last 4 weeks of the course. The remaining 25 out of 45 MC questions come from all course content with no special emphasis. Need special accommodation? See **Accessibility & SAS Students** below re: SAS accommodations.

Accessibility & SAS Students

The services of Student Accessibility Services (SAS) are available to students registered at the University of Guelph who have a permanent disability. This includes full-time or part-time, graduate and undergraduate students. The SAS also has a number of services available to students with temporary disabilities. Students must provide appropriate documentation from a medical or mental health professional to verify their disability. You must identify yourself as early as possible and no later than the 40th class day in the semester in which you are requesting accommodation and/or support. Failure to do so will mean that accommodation cannot be guaranteed for that semester. See <https://www.uoguelph.ca/csd/current-students> for complete details and procedures.

All students registered with SAS 1) are accommodated as per SAS recommendations, AND, 2) write/take their quizzes, term tests and their final examination via SAS. This means contact SAS ASAP – bring this course outline with you when you meet. Then you can be accommodated.

HELP!!! Free HELP from the Mathematics & Statistics Department

The Mathematics and Statistics Department operates a drop-in learning centre. This is YOUR RESOURCE for support with lab and course-work related problems. The TA's ARE FRIENDLY. They KNOW MATH*1080 material, and they are usually AVAILABLE TO HELP YOU 6 hours a day! Our learning centre is located on the third floor of the McLaughlin Library. During the 12-week scheduled class times, scheduled 'open times' are:

Days	Monday	Tuesday	Wednesday	Thursday	Friday
Times	09:30-15:30	10:00 - 16:00	09:30-15:30	10:00- 16:00	09:30-14:30

MORE HELP!!! Free HELP from Your Own Supported Learning Groups (SLG)

The SLG Program has provided course specific support for thousands of students since 1998. They are an enthusiastic group of undergraduate students and professional staff who are dedicated to helping students succeed. SLG sessions are free peer-led study groups. They help you navigate course material and will show you new ways to approach difficult concepts. The sessions are designed for everyone in the class, regardless of your comfort with the material. <http://www.lib.uoguelph.ca/get-assistance/studying/slgs>.

EVEN MORE HELP!!! First: Learning Resources for First-Year Students

First is a collection of resources, services, and technologies designed to help make the transition to university learning smooth and successful. Visit <https://admission.uoguelph.ca/template.aspx?SiteID=bfdc36b8-2456-47fe-8c67-10366a3a3b97>.

Steve's Course Policies & Miscellaneous Comments

No Calculator Rule

Regarding both term tests and the final examination, calculators are NOT ALLOWED. Additional aids are not allowed e.g. notes, books, communication or scrap paper.

Group Work

There is no group work. All assessment is generated by independent completion of quizzes, term tests and the final examination.

Electronic Recording of Lectures, Labs and ALL Course Related Communications

Electronic recording of classes is expressly forbidden without my consent. When recordings are permitted, they are solely for the use of the authorized student and may not be reproduced, or transmitted to others, without the express written consent of the instructor.

About Illness & Sudden Illness

If prior to a term test or the final examination, and even during a term test or final examination, you are/become ill and are unable to complete, YOU MUST 1) seek help for your illness that very instant and 2) later when you become well, obtain documentation as per "Undergraduate Degree Regulations: Illness or Compassionate Reasons". ***You cannot re-write, be excused or change the grade that you receive, if for example AFTER WRITING A TERM TEST OR EXAMINATION, you indicate that you were/became ill. Illness (inc. scheduled surgery) or compassionate reasons can be***

accommodated in advance/during assessment in accordance with University policy, but RARELY after assessment. DO NOT INCLUDE MEDICAL NOTES, WRITTEN EXPLANATIONS RE: PERFORMANCE ISSUES ETC. ATTACHED TO/WRITTEN ON YOUR TERM TEST OR EXAMINATION (OR IN A SAS ENVELOPE). I CANNOT GRADE THE TERM TEST OR EXAMINATION IN AN UNBIASED WAY. I MUST TREAT THIS KIND OF COMMUNICATION AS A REQUEST TO BE EXCUSED FROM THE TERM TEST / EXAMINATION.

“Not Withstanding” Clause a.k.a. What About Unforeseen Fateful Events?

When fate intervenes e.g. snow days, emergencies, work disruptions & other fateful events, and the conduct of the course falls outside of my control in a way that lectures, labs, quizzes / term tests etc. might need to be cancelled/rescheduled, then please refer to CourseLink for further instruction *which may now deviate in any manner whatsoever from published course outlines, past cases and any other commitments previously made by me with or without knowledge of these unforeseen fateful events.*



➔ **IN THE EXTREMELY UNLIKELY EVENT THAT ALL COMMUNICATIONS FAIL (strike/lock-out, pandemic, war, terrorism etc., AND EVEN CourseLink is unavailable):**

- 1. DURING THE FIRST TWO WEEKS, try to keep to our schedule (last page) independently however you can manage i.e. try and stay current so that it'll be easier when we finally resume from where we left off.***
- 2. BEYOND TWO WEEKS, it's a disaster. We'll worry about it later, if ever.***

Miscellaneous Comments

- PERSONAL TUTORS: If you would like to find/work with a private tutor, then perhaps work with all of the TA's in the learning centre, and if you find that you get along especially well with a particular TA, why not ask them if they would tutor privately? You might also like to try these links.
 - <https://www.uoguelph.ca/tutoring/welcome-tutoring-guelph-tag>
 - <http://www.kijiji.ca/b-tutor-language-lessons/guelph/math-tutor-guelph/k0c16911700242>
 - <https://helphub.me/networks/university-of-guelph>
- UNIVERSITY RELATED EVENTS THAT WILL BE ACCOMMODATED re: TERM TEST CONFLICTS. For University related events only, e.g. sporting events, if you need to be away from campus at the same time that a term test is scheduled, then ask your coach to contact me. I'll try (NOT promise) to arrange for you to write the term test under your coach's supervision while you are away.
- SHARING COURSE MATERIALS: UNIVERSITY OF GUELPH BASED TEACHING ORGANIZATIONS e.g. SLG's: We completely support our SLGs. Please feel free to share course materials with SLG members and leaders.
- SHARING COURSE MATERIALS: NON-UNIVERSITY OF GUELPH BASED TEACHING ORGANIZATIONS: We neither endorse nor support these groups, e.g. Prep 101. They exist separate from, and independent of the University. They may or may not be useful, credible, helpful etc., they are in no way associated with the University, and they may or may not act in your best interests. We do not provide materials, hints, notes, sample tests, examinations, texts, course outlines etc. to these groups, no matter what you may be shown and/or told. Whatever materials these groups develop, promote, claim as relevant to the course etc., these materials are in no way sanctioned by us and/or the University. While these groups can be helpful to you, they are not accountable to the University, unlike University of Guelph instructors that are accountable for their decisions - a benefit and security that you surrender in dealing with these

groups. Do not copy / provide any course materials to these organizations i.e. copyright issues to be resolved. Contact me directly if you are asked to share your materials with these groups.

University Policies, Course Evaluation & Drop Date

Academic Accommodation of Religious Obligations: If you are unable to complete a course requirement due to religious obligations, please let the instructor know within the first two weeks of class. See the academic calendar for more information:

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-accomrelig.shtml>

Academic Consideration: When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor in writing, with your name, id, and e-mail contact. See the academic calendar for information on regulations and procedures for Academic Consideration: <http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

Academic Misconduct: The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community, faculty, staff, and students to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection. Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor. The Academic Misconduct Policy is detailed in the Undergraduate Calendar:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

Accessibility: The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact the Student Accessibilities Services (SAS) as soon as possible.

For more information, contact SAS at 519-824-4120 ext. 56208 or email csd@uoguelph.ca or see the website: <https://www.uoguelph.ca/csd/current-students>

Course Evaluation Information: Please see

<http://www.mathstat.uoguelph.ca/files/TeachevaluationformF10.pdf>

Drop Date: The last date to drop one-semester courses, without academic penalty, is **Friday, March 11, 2016**. For regulations and procedures for Dropping Courses, see the Academic Calendar:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml>

MATH1080W16 “Get to work!!” Schedule

Lecture, Lab & Module Schedule. Post this schedule on your fridge! Do it now! Right now!	Quizzes & Term Test Schedule
Week 1: Jan. 11 - 15 <ul style="list-style-type: none"> • Lectures as regularly scheduled. Complete module(s) 1. • Lab 1: Complete Part B as independent study. 	Online practice quizzes 1, 2 & 3. Due anytime before the final examination but not after the final examination.
Week 2: Jan. 18 - 22 <ul style="list-style-type: none"> • Lectures as regularly scheduled. Complete module(s) 2 & 3. • Lab 2: Complete Part B as independent study. 	
Week 3: Jan. 25 - 29 <ul style="list-style-type: none"> • Lectures as regularly scheduled. Complete module(s) 4. • Lab 3: Complete Part B as independent study. 	<u>Online Quiz 1 due Friday January 29, taken online Friday (4%). Usually covers lecture, module and lab material from weeks 1 & 2. BUT I will advise with certainty. Always attend lecture!</u>
Week 4: Feb 1 – 5 <ul style="list-style-type: none"> • Lectures as regularly scheduled. Complete module(s) 5 & 6. • Lab 4: Complete Part B as independent study. 	
Week 5: Feb. 8 - 12 <ul style="list-style-type: none"> • Lectures as regularly scheduled. Complete module(s) 7. • Lab 5: No Part A – Term Test instead. Complete Part B as independent study. 	
** READING WEEK, February 15-19. NO CLASSES. **	
Week 6: Feb. 22 - 26 <ul style="list-style-type: none"> • Lectures as regularly scheduled. Complete module(s) 8 & 9. • Lab 6: Complete Part B as independent study. 	<u>Term Test I (20%) written in LAB in the week of Feb. 8 – 12.</u> Term Test I usually covers lecture, module and lab material from weeks 1 through 4 inclusive. I will advise with certainty via CourseLink.
Week 7: Feb. 29 - Mar. 4 <ul style="list-style-type: none"> • Lectures as regularly scheduled. Complete module(s) NONE. • Lab 7: Complete Part B as independent study. 	<u>Online Quiz 2 due Friday March 4, taken online Friday (4%). Usually covers lecture, module and lab material from weeks 5 & 6. BUT I will advise with certainty. Always attend lecture!</u>
Week 8: Mar. 7 - 11 <ul style="list-style-type: none"> • Lectures as regularly scheduled. Complete module(s) 10. • Lab 8: Complete Part B as independent study. 	
Week 9: Mar. 14 - 18 <ul style="list-style-type: none"> • Lectures as regularly scheduled. Complete module(s) 11 & 12. • Lab 9: No Part A – Term Test instead. Complete Part B as independent study. 	
Week 10: Mar. 21 -24 <ul style="list-style-type: none"> • * HOLIDAY * on Friday Mar. 25 (Good Friday) • Lectures as regularly scheduled. Complete module(s) 13. • Lab 10: NO LAB this week. Complete Part A and Part B as independent study. 	<u>Term Test II (20%) written in LAB in the week of Mar, 14 - 18.</u> Term Test II usually covers lecture, module and lab material from weeks 5 through 8 inclusive. I will advise with certainty via CourseLink.
Week 11: Mar. 28 - Apr. 1 <ul style="list-style-type: none"> • Lectures as regularly scheduled. Complete module(s) 14. • Lab 11: Complete Part B as independent study. 	<u>Online Quiz 3 due Friday Apr. 1, taken online Friday (4%). Usually covers lecture, module and lab material from weeks 9 & 10. BUT I will advise with certainty. Always attend lecture!</u>
Week 12: Apr. 4 - 8 <ul style="list-style-type: none"> • Lectures as regularly scheduled. Complete module(s) 15. • Lab 12: Complete Part B as independent study. 	
<u>Final Examination (45%). April 20; 19:00-21:00. Location TBA.</u> Covers all lecture, module and lab material from all weeks.	