



MATH*2080 Elements of Calculus II – Winter 2017

Department of Mathematics and Statistics

University of Guelph, Guelph Campus

Course Description

This course will expand on integration techniques, and introduce students to difference and differential equations, vectors, vector functions, and elements of calculus of two or more variables such as partial differentiation and multiple integration. The course will emphasize content relevant to analyzing biological systems, and methods will be illustrated by application to biological systems.

- Prerequisite(s): 1 of IPS*1500, MATH*1000, MATH*1080, MATH*1200
- Restriction(s): IPS*1510, MATH*1210

Study Materials

- REQUIRED: CourseLink at: <https://courselink.uoguelph.ca/shared/login/login.html>
- OPTIONAL: *Calculus for Biology and Medicine, 3rd. Edition* Author: Claudia Neuhauser, Publisher: Pearson Publishing, © 2011.

<u>Instructors</u>	<u>Office</u>	<u>Meeting Times</u>	<u>Email</u>
S. Gismondi ¹	MACN 510	MWF (lectures), 15:30-16:20 in RICH2520	gismondi@uoguelph.ca
M. Ghasemi ²	MACN 506	F (lab) 16:30-17:20 in RICH2520	mghasemi@uoguelph.ca

Lecture and Lab Procedures

There are three lectures and one lab every week. Attend all lectures and labs. *Please download (CourseLink), print & bring the corresponding set of weekly "Class Notes" to every lecture.* These notes are hand written and YOU WILL MAKE YOUR OWN NOTES in class. Labs in weeks 1, 2, 4, 6, 8, 10 & 12 are used for study and preparatory sessions in advance of tests and the final examination i.e. we take up sample test materials. Labs in weeks 3, 5, 7, 9 & 11 are used for testing.

Assessment Procedures

75% Tests (5) @ 15% each: *There are five tests, 60 minutes each, written in lab.*

- **WRITTEN Test 1, Friday, January 27**
- **WRITTEN Test 2, Friday, February 10**
- **WRITTEN Test 3, Friday, March 3**
- **WRITTEN Test 4, Friday, March 17**
- **WRITTEN Test 5, Friday, March 31**

☞ **THERE ARE NO ALTERNATE TEST DATES NOR MAKE-UP TESTS. BE PREPARED and don't miss any of these tests (excepting illness, see below).** Missed test marks are automatically transferred to the final examination.

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

^{1,2} Office hours posted online. See "Welcome ..." news item.

But don't get the idea that this is a gift! Sometimes you may not be prepared as well as you'd like, and it's your own decision to skip a test (and opt for an increased weight automatically placed upon the final examination). It's NOT advised!! Don't 'mortgage your future'. Unlike final examinations, 1) tests provide opportunities for feedback and 2) in the case of poor performance, there's another test or the final examination, an opportunity to improve. Tests contribute less to your final grade than does the final examination. Poor performance on a test has less impact upon your final grade than does poor performance on the final examination, especially a more heavily weighted final examination. Tests provide 'final examination like' writing conditions, a great way to gain examination writing experience in preparation for the 'biggy', the final examination. Tests encourage you to prepare and learn 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 piece-wise, 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? Don't chance it.

About How Tests are Returned & Posted Solutions / Marking Scheme

About one week (normally) after a test, your grade is posted to your account on CourseLink and all tests are returned to a set of wooden orange cabinets labelled MATH*1080 located on the 3rd floor of MACN, at the south end of the corridor. Respect the original order of previously filed test papers.

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

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 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 test is wrong, please see your lab TA (bring the test).
- If your grade is not posted, then please come and see me directly.

25% Final Examination (1) @ 25%: *There is one two-hour final examination on the date indicated below.* The final examination normally accounts for 25% of your final grade.

- **Final Examination. Wednesday April 19, 2017, 11:30-13:30. Location 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.**

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 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*2080 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 a success. Visit

<https://admission.uoguelph.ca/template.aspx?SiteID=bfdc36b8-2456-47fe-8c67-10366a3a3b97>.

Steve's Course Policies & Miscellaneous Comments

No Calculator Rule

Regarding all 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 *assessed* group work. BUT of course work together to help better understand things. Just know that all assessment is generated by independent completion of tests and the final examination.

About Recording of Labs, Lectures, Conversations, Casual Meetings, Office Hour Meetings and All Written, Recorded, Presented Materials, Utterances, Stories and EVERYTHING related and vaguely related to information acquired in the course of study here at the University of Guelph IS ALLOWED FOR THIS COURSE FOR THE COMPONENT THAT I TEACH a.k.a lectures. THIS IS MY WRITTEN PERMISSION that material recorded is restricted for use with MATH2080. Copy whatever you need (in my lecture and office hour times) in order to successfully complete the course. BUT NEVER violate copyright laws, nor violate privacy laws e.g. postings to YouTube etc., slanderous comments in chats, messages, tweets etc. Of special note, the textbook is copyright material from Pearson Publishing – author Claudia Neuhauser. I have no authority. Don't copy the text. These issues become legal issues, and affect students'/professors' professional career.

About Illness & Sudden Illness

If prior to a test or the final examination, and even during a 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 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 TEST OR EXAMINATION (OR IN A SAS ENVELOPE). I CANNOT GRADE THE TEST OR EXAMINATION IN AN UNBIASED WAY. I WILL TREAT THIS KIND OF COMMUNICATION AS A REQUEST TO BE EXCUSED FROM THE 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, and 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: 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 test is scheduled, then ask your coach to contact me. I'll try (NOT promise) to arrange for you to write the 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>

Copies of Out-of-Class Assignments: Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

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 10, 2017**. For regulations and procedures for Dropping Courses, see the Academic Calendar: <http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml>

Electronic Recording of Lectures, Labs and ALL Course Related Communications

Electronic recording of classes is expressly forbidden without lecturer/instructor 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.

E-mail Communication: As per university regulations, all students are required to check their <uoguelph.ca> e-mail account regularly: e-mail is the official route of communication between the University and students.

Everything Else Including More Information Related to the Material Above: The Academic Calendars are the source of information about the University of Guelph's procedures, policies and regulations that apply to undergraduate, graduate and diploma programs.

Lecture, Lab & Textbook Reference Schedule *Textbook homework will be assigned in class, not handed in.	Test Schedule
Week 1: Jan. 9-13 <ul style="list-style-type: none">Lectures as regularly scheduled. Text 7.1 – 7.3Lab Friday Jan. 13. Preparation for test 1, e.g. download & work sample assign.	
Week 2: Jan. 16-20 <ul style="list-style-type: none">Lectures as regularly scheduled. Text 7.3, 5.5, 7.4Lab Friday Jan. 20. Preparation for test 1, e.g. download & work sample assign.	
Week 3: Jan. 23-27 <ul style="list-style-type: none">Lectures as regularly scheduled. Text 7.4, 10.7Lab Friday Jan. 27. Test 1.	Test 1 Friday January 27 in lab (15%). Usually covers all material from weeks 1 & 2. BUT the instructor will advise with certainty. Always attend lecture!
Week 4: Jan. 30 – Feb. 3 <ul style="list-style-type: none">Lectures as regularly scheduled. Text 10.7 & mostly our class notesLab Friday Feb. 3. Preparation for test 2, e.g. download & work sample assign.	
Week 5: Feb. 6-10 <ul style="list-style-type: none">Lectures as regularly scheduled. Text 8.1 – 8.3Lab Friday Feb. 10. Test 2.	Test 2 Friday February 10 in lab (15%). Usually covers all material from weeks 3 & 4. BUT the instructor will advise with certainty. Always attend lecture!
Week 6: Feb. 13-17 <ul style="list-style-type: none">Lectures as regularly scheduled. Text Continuing with 8.1 – 8.3 (possibly 11.4.1)Lab Friday Feb. 17. Preparation for test 3, e.g. download & work sample assign.	
** READING WEEK, February 20-24. NO CLASSES. **	
Week 7: Feb. 27 – Mar. 3 <ul style="list-style-type: none">Lectures as regularly scheduled. Higher dimensional integrals, area and volume.Lab Friday Mar. 3. Test 3.	Test 3 Friday March 3 in lab (15%). Usually covers all material from weeks 5 & 6. BUT the instructor will advise with certainty. Always attend lecture!
Week 8: Mar. 6-10 <ul style="list-style-type: none">Lectures as regularly scheduled. Double integrals over general regions.Lab Friday Mar. 10. Preparation for test 4, e.g. download & work sample assign.	
Week 9: Mar. 13-17 <ul style="list-style-type: none">Lectures as regularly scheduled. Double integrals and polar coordinates.Lab Friday Mar. 17. Test 4.	Test 4 Friday March 17 in lab (15%). Usually covers all material from weeks 7 & 8. BUT the instructor will advise with certainty. Always attend lecture!
Week 10: Mar. 20-24 <ul style="list-style-type: none">Lectures as regularly scheduled. Text 10.1 – 10.4Lab Friday Mar. 24. Preparation for test 5, e.g. download & work sample assign.	
Week 11: Mar. 27-31 <ul style="list-style-type: none">Lectures as regularly scheduled. Text. Continuing 10.1 – 10.4Lab Friday Mar. 31. Test 5.	Test 5 Friday March 31 in lab (15%). Usually covers all material from weeks 9 & 10. BUT the instructor will advise with certainty. Always attend lecture!
Week 12: Apr. 3-7 <ul style="list-style-type: none">Lectures as regularly scheduled. Text. Continuing 10.1 – 10.4Lab Friday Apr. 7. Test 5.	
	Final Examination (25%). Wednesday April 19, 11:30-13:30. Location: TBA. Covers all material from all weeks.

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