University of Victoria
Faculty of Science | Department of Mathematics and Statistics
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Course Outline
Math 200: Calculus III

Instructor

Lecturer Tom (William) Thompson

Research Area Nonlinear Partial Differential Equations

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Office David Turpin Building A533

General Course Information

Number of Units 1.5[2]

Pre-requisites Math 101.

Office Hours and Assistance

Monday, Wednesday, Thursday: 11:30 am - 1:00 pm

Other Help The Mathematics & Statistics Assistance Centre is a large space where students can go to work, on their own or in groups, and to discuss math & stats problems. The Centre is staffed with talented Teaching Assistants who are happy to discuss primarily first and second year course material with you. Please see http://www.math.uvic.ca/~msassist/index.html for more information.

Math Club Students in Undergraduate Mathematics and Statistics (SUMS) was founded in 2014 as the reincarnation of a previous undergraduate course union that had been inactive for a few years. Please see http://www.uvic.ca/science/math-statistics/current-students/undergraduate/sums/index.php for more information.

Learning Objectives

We will be covering topics of chapters 12 - 15.

- Chapter 12: Vectors in $\mathbb{R}^2$ and $\mathbb{R}^3$. Lines and planes in $\mathbb{R}^3$. Cylinders and Quadric Surfaces.
- Chapter 13: Vector-valued functions and motion in $\mathbb{R}^3$. Calculus of vector-valued functions. Curvatures and the Frenet-Serret apparatus.

[1] Please be patient on hearing back from me as I am also involved in other work than this course. I will aim to respond as soon as possible and within the day.

[2] Credit will be granted for only one of MATH 200, MATH 202, MATH 205.

- Chapter 14: Real-valued functions of several variables. Multivariable limits and continuity. Partial derivatives. The multivariable chain rule. Directional derivatives and the gradient vector. The tangent plane and differential approximations. Multivariable optimization (extreme values and Lagrange multipliers).
- Chapter 15: Double and triple integrals in Cartesian, polar, cylindrical and spherical coordinates. Physical applications of integration. Change of variables.

Course Material and Online Resources

Textbook *Thomas' Calculus Early Transcendentals* by Hass, Heil and Weir (Thirteenth or Fourteenth Edition)

Course webpage I will provide course information on the CourseSpaces webpage (http://coursespaces.uvic.ca). You can log onto the Math 200 course webpage using your netlink ID. It will be to your benefit to check the page frequently as all course content will be posted there.

Important Note No calculators are permitted in this course during midterm exams or the final. Furthermore this course will not be utilizing MyMathLab.

Class Meetings

Section A01 [CRN 30504] MTh 8:30 am - 9:50 am, MacLaurin Building D288
Section T01 [CRN 30505] W 2:30 pm - 3:20 pm, MacLaurin Building D288

To maximize your possibility of earning a good grade in this course it is highly recommended that you attend every lecture and tutorial. At times I might speculate on different methods of solving problems or give helpful advice not provided in the textbook. If you are absent for any reason feel free to schedule an appointment with me or come by my office hours to see what you have missed.

Evaluation and Grading

Your final percentage grade will be computed according to the following scheme.

Assignments	Midterms	Final Exam
3% each	15% each	55%

There will be five assignments worth a collective total of %15 and two midterms worth a collective total of %30. The final exam is worth %55 and the date of it will be announced later in the term. The due dates for each of these assessments is given below

Assignment due dates: May 23, June 6, June 20, July 4, July 25.
Midterm writing dates: June 6, July 11.

Final exam: TBD

Assignments will be posted on CourseSpaces at least one week prior to their due date. The assignments are expected to be in a hand written or typed format which will be due in tutorial on the dates listed above. Although working in groups is allowed you must write out your own work and solutions to the assignments.
Midterms will be written in tutorial so make sure to not make plans or arrangements during them.

Accessibility Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and/or the Centre for Accessible Learning (CAL) as soon as possible. The CAL staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations `http://uvic.ca/cal`. The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.

Grading Percentage scores will be converted to letter grades according to the university-wide standard table
(Undergraduate: `http://web.uvic.ca/calendar2017-05/undergrad/info/regulations/grading.html#`). (Graduate: `http://web.uvic.ca/calendar2017-05/grad/academic-regulations/grading.html#`).

Final Examination Off-schedule final examinations (i.e., deferred examinations) are given only in accordance with the university policy as outlined in the Calendar. If you are unable to write a final examination due to illness, accident or family affliction, please refer to the following webpages for detailed instructions how to proceed:
Undergraduate: `http://web.uvic.ca/calendar/undergrad/info/regulations/concessions.html` Graduate: `http://web.uvic.ca/calendar/grad/registration/concessions.html` Students are **strongly advised not to make plans for travel or employment during the final examination period** as special arrangements will not be made for examinations that conflict with such plans.

Supplemental Examinations. The Department of Mathematics and Statistics does not award 'E' grades or offer Supplemental Examinations in any of its courses.

Policies and Ethics

Attendance The university Calendar states 'Students are expected to attend all classes in which they are enrolled.'
Undergraduate: `http://web.uvic.ca/calendar/undergrad/info/regulations/attendance.html` Graduate: `http://web.uvic.ca/calendar/grad/academic-regulations/attendance.html#`

Our courses are conducted on that basis. If you miss an announcement (information concerning midterms, corrections to assignment, etc.) because you did not attend class, you must accept the consequences of not having learned of the change.

Guidelines on Religious Observances Where classes or examinations are scheduled on the holy days of a religion, students may notify their instructors, at least two weeks in advance, of their intention to observe the holy day(s) by absenting themselves from classes or examinations. Instructors will provide reasonable opportunities for such students to make up work or missed examinations.

Missing a Midterm Exam The following reasons for excusing a missed test are illness, accident, or family affliction. A university sponsored event that causes a conflict usually is counted as an accident. In all cases, an excuse note from an appropriate official (e.g. doctor, counselor, couch) is required and must be received no later than five working days after the missed exam. Your course score will be calculated out of the remaining course work, excluding the final exam. A score of 0 will be entered for any missed exam that is not excused.

Academic Integrity Academic integrity is intellectual honesty and responsibility for academic work that you submit individual or group work. It involves commitment to the values of honesty, trust, and responsibility. It is expected that students will respect these ethical values in all activities related to learning, teaching, research, and service. Therefore, plagiarism and other acts against academic integrity are serious academic offenses.

The responsibility of the institution

Instructors and academic units have the responsibility to ensure that standards of academic honesty are met. By doing so, the institution recognizes students for their hard work and assures them that other students do not have an unfair advantage through cheating on essays, exams, and projects.

The responsibility of the student

Plagiarism sometimes occurs due to a misunderstanding regarding the rules of academic integrity, but it is the responsibility of the student to know them. If you are unsure about the standards for citations or for referencing your sources, ask your instructor. Depending on the severity of the case, penalties include a warning, a failing grade, a record on the students transcript, or a suspension.

It is your responsibility to understand the Universitys policy on academic integrity: Undergraduate: `http://web.uvic.ca/calendar/undergrad/info/regulations/academic-integrity.html#` Graduate:`http://web.uvic.ca/calendar/grad/academic-regulations/academic-integrity.html`

Important Scheduling Information

- Classes begin: May 7, 2018
- Victoria Day: May 21, 2018
- Fee Deadlines and Drop Dates:
  - Last day to drop with 100% fee reduction: May 19, 2018
  - Summer term fee deadline: May 31, 2018

  - Last day to drop with 50% fee reduction: June 9, 2018
  - Last day to drop: July 4, 2018
- Reading Break: July 2-3, 2018
- BC Day: August 6, 2018
- Last day of classes: August 3, 2018
- Examination period: August 7 - 21, 2018

How to Succeed in This Course

Show up to each lecture, work on problems as they're assigned, revisit problems frequently to keep yourself tuned up, visit my office hours if you're confused or need reminding of something. Practice everyday on recommended problems to make sure you know how to comfortably solve them while feeling you can apply the tools to more general situations and unfamiliar problems you encounter. If you can't comfortably solve a problem, don't let it go untouched! Figure out what parts you are struggling with, find help with myself or others or try reviewing over similar examples and relevant notes. I personally find that I learn a lot when I work with and observe how others tackle problems, so go be [academically] social!