

Math 253 / Math 200- Summer Term 1 2017

Instructor: Jim Bryan
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Office: MATH 226
Office Hours: Tuesday 12:00pm - 2:00pm
Lectures: Tues Thurs Fri 10:00-11:50, Wed 10:00-10:50 LSK200

Texts

Our primary reference for the course will be the following online textbook, Chapters 10, 12, and 13: www.apexcalculus.com

At times, especially in the last few weeks of the course, I will also refer to the following secondary online textbooks:

<https://www.whitman.edu/mathematics/multivariable/multivariable.pdf>

<https://open.umn.edu/opentextbooks/bookdetail.aspx?bookid=10>

Our reference and use of these free online textbooks will be in accordance with the [creative commons license](#). In addition to these, any standard textbook in multivariable calculus will also serve as a reference for most of the topics in this course. This includes the textbook by Stewart, used for this course in recent past years.

Question and Discussion Forum

We are using the Piazza platform in this course for questions and discussion. You can ask questions about the material, or the homework, or the midterms, or anything else pertaining to the class. I will look at this once a day or so and answer questions. Students can also post answers. Posts can be anonymous if desired.

Marking Scheme

The student's grade will be determined by higher of the following two schemes:

Scheme 1

Homeworks - 20%

Midterms - 30%
Final Exam - 50%

Scheme 2

Final exam grade minus 10 points.

Remarks

The lowest two homework scores will be dropped at the end of the term (but there will be no makeup homeworks --- if you miss one, it will just have to be one of the ones that is dropped). The grades on the midterms and the final may be scaled. Scheme 2 above is meant to be your "safety net" --- for example if you do very poorly on one or two of the midterms for some reason, you can still get a good grade in the course by doing well on the final exam. Do not plan to use option 2!

Midterm Policies

The midterms will take place in class. There will be no calculators or cheat sheets allowed on the midterms or final exam. **There will be no make-up midterms.** If a student misses a midterm for a legitimate, well documented reason, then the remaining midterm and the final exam will be given more weight in the grading scheme for that student. A student missing both midterms will have to retake the course. The midterms are tentatively scheduled for **May 31st** and **June 14th**.

Course calendar:

Homework due at the beginning of class every Tuesday and Friday.

Week 1: Introduction, Three dimensional coordinate systems, vectors, Dot product, Cross Product, Equations of lines and planes, cylinders, and quadric surfaces, Functions of several variables.

Week 2: Partial derivatives, tangent planes, linear approximation, Chain rule
Assignment Due Tuesday May 23rd:

Week 3: Directional derivatives, gradient, maximum and minimum values, Lagrange multipliers.
No assignment due Tuesday May 30th. Midterm May 31st.

Week 4 : Double integrals over rectangles, iterated integrals, double integrals in polar coordinates, surface area, applications .

Week 5 : Applications of double integrals continued, triple integrals
assignment: No homework Due Tuesday June 13th due to midterm.

Week 6 : Triple integrals in cylindrical and spherical coordinates

The final will take place on June 27th, from 3:30 until 6:30. Location: Hebb 100.

The final will cover all topics of the term with some emphasis on topics which have not yet been tested by the midterms. For details, please see the learning expectation links for midterms 1 and 2, along with the following topics: double and triple integrals (including switching orders of integration and setting up integrals in polar, cylindrical, and spherical coordinates), and applications of double and triple integrals (surface area of graphs, volume of a solid, mass of a solid with given density function, center of mass).

Course policies

1. No electronic devices will be allowed at the final examination. This includes calculators, cell phones, music players, and all other such devices. Formula sheets and other memory aids will not be allowed.
2. Missing midterms: If a student misses a midterm, that student shall provide a documented excuse or a mark of zero will be entered for that midterm. Examples of valid excuses are an illness which has been documented by a physician and Student Health Services, or an absence to play a varsity sport (your coach will provide you with a letter). **In the case of illness, the physicians note must contain the statement that "this student was/is physically unfit to attend the examination on the scheduled date"**. There will be no make-up midterms, and the weight of the missed midterm will be transferred to the final examination. **Please note that a student may NOT have 100% of their assessment based on the final examination. A student who has not completed a substantial portion of the term work normally shall not be admitted to the final examination.**
3. Missing the Final Exam: You will need to present your situation to the Dean's Office of your Faculty to be considered for a deferred exam. See the Calendar for [detailed regulations](#). Your performance in a course up to the exam is taken into consideration in granting a deferred exam status (e.g. failing badly generally means you won't be granted a deferred exam). In Mathematics, generally students sit the next available exam for the course they are taking, which could be several months after the original exam was scheduled.
4. UBC takes cheating incidents very seriously. After due investigation, students found guilty of cheating on tests and examinations are usually given a final grade of 0 in the course and suspended from UBC for one year. Note that academic misconduct includes misrepresenting a medical excuse or other personal situation for the purposes of postponing an examination or quiz or otherwise obtaining an academic concession.