

Mathematics 200, Section 201

Course Information, Spring 2013

Course: Math 200/201, MWF 9-9:50, Buch A103

Instructor: Dale H. Peterson
Room 228 in Mathematics Building, 604-822-4594, peterson@math.ubc.ca
Office hours Mon. 10:10-11, Wed. 4:10-5, Fri. 11-11:50.

Drop-In Tutorials: Free drop-in tutoring will be offered by the Mathematics Department. See <http://www.math.ubc.ca/Ugrad/ugradTutorials.shtml>

Exams and Grades: There will be four 50-minute Term Exams, on 18 January (Fri.), 8 February (Fri.), 8 March (Fri.) and 22 March (Fri.). There will be a Final Exam scheduled by the University in April. No calculators, electronic communication devices, books, notes or aids of any kind will be allowed for exams. Students are required to bring ID to all exams. Students who observe religious holidays on Term Exam dates must let me know during the first two weeks of class.

Math 200 is a 3-credit course with a maximum grade of 100. The WebWorks online homework available at "<https://webwork.elearning.ubc.ca/webwork2/>", and occasional written homework assignments, will count for 10% of the course grade. Each of the 4 Term Exams will count for 10% of the course grade. Missing a Term Exam normally results in a mark of 0. Exceptions may be granted in two cases: prior consent of the instructor or a medical emergency. In the latter case, the instructor must be notified within 48 hours of the missed test, and presented with a doctor's note immediately upon the student's return to UBC. The physician's note should specifically state that the student was medically unfit to write the missed exam on that day. No make-up exams will be given. The Final Exam will count for 50% of the course grade. The instructor reserves the right to revise or round off grades if circumstances warrant. In order to make course grade standards consistent across sections, the raw final grade will be scaled.

Homework from the Textbook: You are strongly advised to work out the homework problems listed below in detail as they will give you practice in the techniques learned in class and provide an essential help in preparing for midterm and final examinations.

Textbook: The textbook for this course is *Multivariable Calculus* by J. Stewart, 7th Edition (which is included in *Calculus* by J. Stewart, 7th Edition). Or equivalently, *Calculus / Multivariable Calculus: Early Transcendentals* by J. Stewart, 7th Edition.

Topics: We cover calculus of *several* variables, so an appreciation of 3D geometry is essential. The main topics are partial derivatives and multiple integrals. Specific topics:

- A. Vectors, quadratic surfaces (Sections 12.1-12.6, 10.5)
- B. Partial derivatives, increments, chain rule (Sections 14.1, 14.3-14.5)
- C. Directional derivatives and Gradients (Section 14.6)
- D. Max/min, Lagrange multipliers (Sections 14.7-14.8)
- E. Double integrals (Sections 15.1-15.5)
- F. Triple integrals (Sections 15.7-15.9)

Use of the WeBWorK system for Math 200 Section 201:

Online homework for the course will be provided via the WeBWorK system. You can find this system by going to the WeBWork site at

"<https://webwork.elearning.ubc.ca/webwork2/>"

and logging in for "MATH_200_201_2012W2" with your CWL ID.

Assignments will open on Mondays at 9am and close at the same time one week later (except in the case of holidays or midterm weeks). The first assignment is open now and closes January 14 at 9am.

There is an Assignment 0 which is already online, for you to complete without credit to show you how the system works.

Please note the following items:

i) You may attempt most questions as often as you like until you solve them. There is no penalty for a wrong answer. This is to help you correct your own mistakes, and to get instant feedback on your attempts.

ii) Please try to do the problems by yourself, and without the use of calculators or software. Since calculators and software are not allowed in the exams, you should practice working without them.

iii) Please use the "Email your instructor" button ONLY for technical questions (problems not displaying correctly, etc.).

iv) In general, it's a good idea to start the assignments early rather than waiting till the last minute. The deadlines are enforced by the system, and it will shut down automatically when time is up, so give yourself plenty of extra time in case of problems.

Weekly Assignments for Math 200, Spring 2013 – not to be handed in

This is a rough guide to what is covered each week. It is not necessary to complete all the assigned problems, but you do need to know how to complete them.

January 2-4: 12.1, 12.2

12.1: 3, 5, 7, 9, 11, 13, 15, 21, 25, 27, 33, 35, 39; 41;

12.2: 5, 7, 13, 17, 19, 21, 25, 29, 33, 35, 37, 41, 51

January 7-11: 12.3, 12.4

12.3: 1, 3, 5, 7, 9, 11, 15, 17, 21, 23, 25, 27, 39, 41, 45, 49, 55;

12.4: 3, 5, 7, 9, 13, 17, 19;

January 14-18: 12.5; Midterm 1, January 18 (1-variable calculus, 12.1-5)

12.5: 3, 5, 7, 11, 13, 23, 25, 27, 29, 33, 35, 37, 51, 61, 65, 67

January 21-25: 10.5, 12.6, 14.1

10.5: 3, 5, 7, 13, 17, 21, 23, 25, 27, 29;

12.6: 1, 3, 7, 9, 11, 15, 19, 23, 25, 27, 29, 31

14.1: 1, 3, 7, 9, 11, 15, 19, 25, 27, 33, 39, 43, 47, 49, 53, 65

January 28 – February 1: 14.3, 14.4

14.3: 1, 11, 13, 15, 17, 21, 27, 29, 35, 43, 45, 49, 53, 55, 61, 63, 69, 75, 77, 79, 81, 83, 89, 93

14.4: 1, 3, 5, 11, 13, 17, 19, 21, 25, 29, 31, 33, 35, 37, 39, 41;

February 4-8: 14.4 (continued), 14.5; Midterm 2, February 8 (13.6, 14.1, 14.3-4)

14.5: 1, 3, 5, 7, 11, 13, 17, 19, 21, 23, 35, 39, 41, 43, 47, 49, 53

February 13-15: 14.6, 14.7

14.6: 3, 5, 7, 9, 11, 15, 19, 21, 25, 27, 29, 31, 33, 41, 45, 49, 53, 55, 61

14.7: 1, 3, 5, 7, 9, 11, 13, 15, 29, 31, 35, 39, 41, 45, 47, 49, 51, 53, 55

February 25 – March 1: 14.7 (continued), 14.8

14.8: 1, 3, 5, 7, 9, 11, 15, 17, 21, 27, 31, 35, 43

March 4-8: 15.1, 15.2; Midterm 3, March 8 (14.5-8)

15.1: 1, 3, 11, 13;

15.2: 3, 5, 7, 9, 11, 13, 15, 17, 23, 25, 27, 31;

March 11-15: 15.3, 15.4

15.3: 1, 3, 5, 7, 9, 15, 17, 23, 29, 35, 37, 43, 45, 47, 49, 51, 59, 65

15.4: 9, 11, 17, 19, 21, 23, 25, 29, 31, 37, 39

March 18-22: 15.4 (continued), 15.5; Midterm 4, March 22 (15.1-4)

15.5: 3, 5, 9, 11, 13, 15;

March 25-27: 15.7

15.7: 1, 3, 5, 7, 9, 11, 15, 21, 27, 33, 41

April 3-5: 15.8 & 15.9

15.8: 9, 11, 15, 17, 19, 21, 25, 27, 29;

15.9: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 25, 29, 31, 35, 46