MATH 2205, Multivariate Calculus
Semester 2, 2017

Webpage: `http://www.math.hkbu.edu.hk/~amypang/2205`

Class:

- Monday 12:30-14:20 @ LT3
- Tuesday 9:30-11:20 @ WLB204

Each class contains a mixture of lecture and exercises (see below).

Instructor: Dr. Amy Pang, FSC 1108, amypang@hkbu.edu.hk.

Teaching Assistants:

- Shun Ling CHIANG, gcling@hkbu.edu.hk
- Yongcun SONG, 16482557@life.hkbu.edu.hk
- Shangzhi ZENG, 15484203@life.hkbu.edu.hk
- Yulong ZHOU, 13480480@life.hkbu.edu.hk

Office hours: with Dr. Pang in FSC 1108.

- Monday 16:30-17:30
- Tuesday 15:30-17:30
- Thursday 9:30-10:30, 14:30-16:30

Textbook: Any **one** of the following:

- *Calculus: Several Variables (7th Edition)*, ISBN 978-0-321-54929-7;
- *Calculus: Several Variables (8th Edition)*, ISBN 978-0-321-87741-3;
- *Calculus: A Complete Course (7th Edition)*, ISBN 978-0-321-54928-0;
- *Calculus: A Complete Course (8th Edition)*, ISBN 978-0-321-88021-5.

All four books are by Robert A. Adams and Christopher Essex, and published by Pearson. *Several Variables* is the second half of *A Complete Course*.
Homework may be assigned from the textbook, so make sure you have access to a copy. We will cover roughly chapters 10.1-10.2, 10.4-10.6, 12.1-12.9, 13.1-13.4, 14.1-14.7 in the 7th Edition, which is chapters 10.1-10.2, 10.4-10.6, 12.1-12.9, 13.1-13.5, 14.1-14.7 in the 8th Edition.
We will also cover chapters 5.1-5.5, 6.1, 6.5 from *Calculus: Single Variable*, which is also the first half of *Calculus: A Complete Course*; for this part, you may use any single variable calculus textbook for your reference.

Prerequisites: A very good background in single variable differential calculus, and basic knowledge and computations in linear algebra. See the sample questions on the class webpage.

In-class exercises: Roughly one-quarter of class time will be spent doing problems. You are encouraged to discuss the problems with your classmates and the TAs. A worksheet will be handed out near the start of class; it will be collected at the end of class and graded by the TAs. **The problems are an important part of the class as they will involve some ideas not presented in the lecture portion.**

Homework: Homework will be released roughly every two weeks on the course webpage. It is the student's responsibility to check the webpage for new homework postings. Homework is due 15 minutes after the start of class on the due date. **No homework will be accepted after the due time, and no extensions will be granted under any circumstances.** You are encouraged to work with your classmates, but you must write up your solution by yourself.

Exams:

- 2 Midterms: 1 hour, at the start of class:
  - 12:30, Monday 27 February or 6 March @ LT3
  - 12:30, Monday 27 March or 3 April @ LT3

  (Let Dr. Pang know if you have strong preferences between the dates.)
- Final: 2 hours, between 4-16 May, probably before 10 May. Exact date and location to be announced.

Assessment: Your overall course mark will be computed from:

- 30% Continuous Assessment (mixture of in-class exercises, homework and midterms; proportion will not be announced).
- 70% Final Exam.

Some advice:

- Before each class, look on the schedule on the class webpage to see which topics will be covered, and review your notes from single-variable calculus about that topic.
- If you don't know how to solve a problem, try not to look at the solutions until two or three days later. Look for similar examples in class notes or the textbook, work with your friends, or do another question and come back to it later - sometimes good ideas come when you are not thinking about the problem. This process helps you understand the material. If you look at the solution before you try the problem, you won't understand *why* that particular method was useful.