MATH 225C: Multivariate Calculus
Spring 2017 Syllabus
MWF 11:15-12:05, CAS 224
http://math.bu.edu/people/lau/Lau/Teaching.html

Instructor:	Siu-Cheong Lau	**Teaching fellow:**	Roderic Guigo
Office:	MCS 230	**Office:**	MCS 250
Email:	lau@math.bu.edu	**Email:**	rguigo@bu.edu
Office hours:	Mon, Thu 2:30-4	**Office hours:**	Wed 1:30-2:30, Fri 11-12

Grading:

Homework	Collected in discussion section every week	20%
First mid-term test	February 15 in class	25%
Second mid-term test	April 5 in class	25%
Final exam	May 12 12:30-2:30 at COM 101	30%

Textbook:
Thomas — Calculus 13th edition 2014, Chapter 12 – 16, ISBN 1323006982.
Purchased from www.mypearsonstore.com. **Discount code: terriers**

Lecture and discussion:
You are strongly encouraged to attend both.
Discussion Sections:
Thursday   12:30-1:20   3:35-4:25   Friday   9:05-9:55   10:10-11

Homework:
You must turn in physical HW, collected **every week (except the first week) at the end of your discussion section**.
If you are unable to attend discussion, you may put your HW in your TF's mailbox in the main math office (MCS 142) *before* the beginning of your discussion section.
Late assignments will not be accepted.
Please **write down your name, BU ID, and discussion section clearly** at the top of the front page of each assignment.
The assignments will be posted on the course webpage and worth 10 points each:
• **4 points for effort**
• **6 points for correctly answering three selected problems (2 points each)**
If you make a concerted attempt at each problem, you will get all 4 effort points.
You will not be told in advance which three problems will be selected.
You are encouraged to work together on the HW, but your write-ups must be your own.
Identical HW could be considered plagiarism.
Your lowest two HW grades will be dropped.

MyMathLab www.pearsonmylabandmastering.com:
You must turn in physical HW. **Assignments in MyMathLab do not count in grading.**
Course ID for login: **lau61037**

We may use **Learning Catalytics** (accessed from your MyMathLab homepage) in class. Please bring your own **laptop** (or smart phone that can access Learning Catalytics).

In-class tests and Final Exam:

You cannot use book, note, or calculator in tests and the final exam.

I do not give make-up tests unless you have a legitimate excuse, such as a serious illness or family emergency, and a written excuse. If possible, please notify me in advance. **University policy states that you must take the final exam at the scheduled time.**

If you feel that your in-class test or final exam was incorrectly graded, you may submit it to me for regrading within one week of receiving it.

We are pleased to help:

- Come to my or your TF's office hours, or email me or your TF.
- Go to the tutoring room, MCS B24, to get help from a graduate student. The full schedule is at
  http://www.bu.edu/math/undergraduate/resources/tutoring-room-schedule/
- Get free peer tutoring from the Educational Research Center.
  http://www.bu.edu/erc/tutoring/

	Monday	Wednesday	Friday
Jan 19–20	**Winter break**		Coordinates and distance
Jan 23–27	Vectors and dot product	Cross product	Lines and planes
Jan 30 – Feb 3	Level surfaces; quadrics	Curves	Arc length
Feb 6–10	Curvature and torsion	Polar frame	Parametric surfaces
Feb 13–17	Review	**1st mid-term**	Continuous functions
Feb 20–24	**(Feb 21)** Partial derivatives	PDE	Chain rule
Feb 27 – Mar 3	Directional derivative	Tangent plane	Critical points
Mar 6–10	**Spring recess**		
Mar 13–17	Lagrange multipliers	Global extrema	Taylor's formula
Mar 20–24	Double intergrals	Polar integration	Area of curved surfaces
Mar 27–31	Review	**2nd mid-term**	Triple integrals
Apr 3–7	Substitution	Integration of functions on curves and surfaces	Vector fields
Apr 10–14	Line integrals of vector fields	Line integral theorem	Conservative fields
Apr 17–21	**Holiday**	Greens theorem	Curl, divergence and flux
Apr 24–28	Surface integrals of vector fields	Stokes theorem	Divergence theorem
May 1–3	Fundamental theorem	Review	