



Shanghai Jiao Tong University

MA082: Multivariable Calculus (Calculus III)

Instructor:	Linghai Zhang	Email:	liz5@lehigh.edu
Home Institution:	Lehigh University	Office:	505 Main Bldg
Office Hours:	TBD		
Term:	28 May - 28 June, 2018	Credits:	4
Classroom:	TBD	Teaching Assistant(s):	TBD
Class Hours:	Monday through Thursday, 3:20 pm-5:20pm		
Discussion Session:	2 hours each week, leaded by teaching assistant(s)		
Total Contact Hours:	66 contact hours (1 contact hour = 45 mins, 3000 mins in total)		
Required Texts (w/ ISBN):	Thomas Calculus: Early Transcendentals (13th edition), Weir and Hass, Pearson. http://www.coursesmart.com/thomas-calculus-early-transcendentals-thirteenth/georgeb-thomas-maurice-d-weir-joel-hass/dp/9780321884138		
Prerequisite:	N/A		



Course Overview

The course emphasizes the understanding of functions of several variables which are both real valued and vector valued. Topics in differentiation (partial differentiation) and integration (multiple integrals) are covered including the theorems of Gauss, Green, and Stokes.

Grading Policy

In this course, grading will be based on the following:

Five quizzes (15 minute)	20%
Midterm Exam	40 %
Final Exam	40 %

Your letter grade will be assigned according the following scale:

Number grade	Letter grade	GPA
90-100	A	4.0
85-89	A-	3.7
80-84	B+	3.3
75-79	B	3.0
70-74	B-	2.7
67-69	C+	2.3
65-66	C	2.0
62-64	C-	1.7
60-61	D	1.0
≤59	F (Failure)	0

General expectations

Students are expected to:

- ✧ Attend all classes and be responsible for all material covered in class and otherwise assigned. Any unexcused absence may impact a student's grade. Moreover, SJTU policy is that a student who has missed more than 1/3 classes of a course will fail the course
- ✧ Complete the day's required reading and assignments before class
- ✧ Participate in group discussions and project
- ✧ Refrain from texting, phoning or engaging in computer activities unrelated to class during class
- ✧ Participate in class discussions and complete required written work on time

Homework

Homework will be assigned after each lecture, and quiz problems will be based on homework problems. Test problems will be similar to homework problems or examples given in class.



Course Schedule

Content	Chapters
Week 1 (28-31 May)	
Vectors, dot product, cross product, lines and planes in space, cylinders and quadratic surfaces; vector-valued functions, vector calculus and tangents.	Chapter 12-13
Week 2 (4-7 June)	
Arc length and motion in space; functions of several variables, partial derivatives,	Chapter 13-14
Week 3 (11-14 June)	
gradients, extreme values, Lagrange multipliers, Taylor's theorem in two variables. Midterm will be on Wednesday.	Chapter 14
Week 4 (18-21 June)	
Double and triple integrals, techniques and applications.	Chapter 15
Week 5 (25-28 June)	
Line integrals, surface integrals, and the theorems of Green and Stokes. Final exam will be on Thursday.	Chapter 16