Math 22 - Multivariable Calculus - Summer 2017 - Session 1

Instructor: Suzana Milea (smilea@ucsc.edu)

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Office: McHenry 4117.
Office hours: Tuesday 12-1PM and Thursday 9-10AM in McHenry 4117.

Lectures: MWF 9-11:30AM in N. Sci Annex 101.

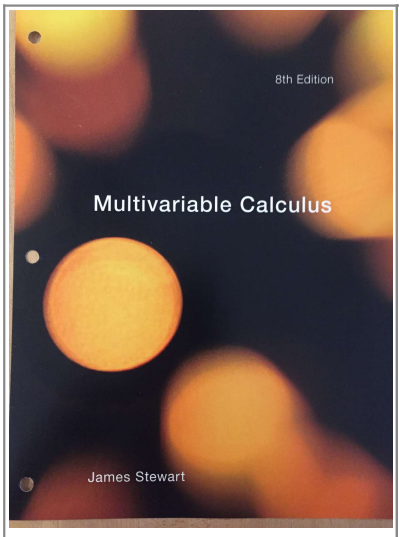
Discussion sections: See the list below.
Teaching Assistant: Zheng Zhou (zzho18@ucsc.edu).
TA's office hours: Thursday 12-1:30PM in McHenry 4112.

Section enrollment/changes are performed through MyUCSC.

Announcements

- **(7/12)** I have returned the midterm exams today during lecture. The grade distribution was the following: <=72 (C-) 16 students, 73-79 (C, C+) 6 students, 80-89 (B-,B,B+) 18 students and 90-99 (A-,A) 16 students and 100 (A+) 1 student. As I mentioned today in class, if you will get a higher score on the final exam than the one you got on the midterm, your final exam score will count as 70% of your grade.
- **(6/30)** I have updated the Course Outline. Note that the Midterm Exam is next Friday and covers Ch. 12 and Ch. 13. Next week I will hold office hours on **Wednesday 2-3pm** and Thursday 9-10am in McHenry 4117.
- **(6/26)** Welcome to Math 22!

Textbook



The textbook for this course is: *Multivariable Calculus, UCSC custom edition based on 8th edition*, by James Stewart.

This is a custom edition containing only chapters 12-16 of Stewart's "Calculus: Early Transcendentals", 8th edition. It is available at the Bay Tree Bookstore and it comes with an Webassign access code. Note that you will have **access to the eBook through WebAssign.**

Grading and course policy

Online homework 20%, two written homework assignments 10%; one midterm 30%; final exam 40%. There will be **no make-up exams**.

Homework

You'll have homework assigned and submitted online through Webassign. You will need to register for the course on this site: the class key is **ucsc 7130 2089**. In addition, an activation code is required for this site *. If you did not purchase your textbook at the bookstore or if you bought a used text, you will need to purchase an activation code. In this case you could either purchase an access code card separately at your bookstore, and enter the code after logging into WebAssign **or** purchase an access code online after logging into your WebAssign account.

Deadlines and point values for each assignment will be posted in your class account when you login.

* WebAssign gives you a 14-day grace period to view and complete your homework without an access code. After 14 days, you will need a valid access code or you will be locked out of the course in WebAssign.

In addition to the online homework you will have **two written homework assignments**; they will be posted here.

- Written Homework 1 (due Monday 7/3) and solutions (updated 7/5/2017) .
- Written Homework 2 (due Monday 7/24) and solutions (updated 7/26/2017).

Exams

Exams and solutions will be posted here.

- Midterm and solutions (updated 7/11/2017).
- Final Exam and answers (updated 7/31/2017) .

Course Outline (updated 7/21/2017)

Date	Topics	Book
Mon 6/26	Vectors, dot product	§ 12.1,12.2,12.3
Wed 6/28	Determinants and cross product, equations of lines and planes	§ 12.4, 12.5
Fri 6/30	Cylinders and quadric surfaces, vector functions	§ 12.6, 13.1
Mon 7/3	Arc length, velocity and acceleration	§ 13.2,13.3,13.4
Wed 7/5	Functions of several variable; Review	§ 14.1
Fri 7/7	MIDTERM	Ch. 12 and Ch. 13
Mon 7/10	Limits and continuity, partial derivatives	§ 14.2, 14.3

Wed 7/12	Tangent planes and linear approximations, chain rule	§ 14.4, 14.5
Fri 7/14	Directional derivatives and the gradient vector	§ 14.6
Mon 7/17	Maximum and minimum values	§ 14.7
Wed 7/19	Lagrange multipliers, double integrals over rectangles	§ 14.8,15.1
Fri 7/21	Double integrals over general regions and double integrals in polar coordinates	§ 15.2,15.3
Mon 7/24	Surface area, triple integrals and triple integrals in cylindrical coordinates	§ 15.5,15.6,15.7
Wed 7/26	Triple integrals in spherical coordinates, change of variables in double integrals; Review	§ 15.8, 15.9
Fri 7/28	FINAL EXAM	

Additional resources

- **Class notes:** Chapter 12, Chapter 13, Chapter 14 (14.1-14.4), Chapter 14 (14.5-14.8), Chapter 15 (15.1-15.3,15.5).

- **Important Deadlines:** See the 2017 Summer Session Calendar.

- **Tutoring Support:** All UCSC students are eligible for up to 2 hours of **free** tutoring per week and may sign-up for tutoring at https://eop.sa.ucsc.edu/OTSS/tutorsignup/ beginning Tuesday, June 27th. **Abiodun Oseni** (aoseni@ucsc.edu) will be the tutor for your class this upcoming summer session.

- **Student Disabilities Policy:** UC Santa Cruz is committed to creating an academic environment thatsupports its diverse student body. If you are a student with a disability who requires accommodations to achieve equal access in this course, please submit your Accommodation Authorization Letter from the Disability Resource Center (DRC) to me privately during my office hours or by appointment, preferably within the first week of the Summer quarter. At this time, I would also like us to discuss ways we can ensure your full participation in the course. I encourage all students who may benefit from learning more about DRC services to contact DRC by phone at 831-459-2089 or by email at drc@ucsc.edu.

- **Video Lectures:** MIT's OpenCourseWare project has a nice set of video lectures for MIT's multivariable calculus class, taught by Professor Denis Auroux.

Discussion sections

Section	Time	Room	Teaching Assistant
01A	Tu 01:00PM-02:30PM	Loc: Soc Sci 1 145	Zheng Zhou
01B	W 12:00PM-01:30PM	Loc: Soc Sci 1 153	Zheng Zhou