Syllabus for SQ2016 MAT 21C
Calculus: Partial Derivatives and Series

Quarter:	Spring 2016	**Instructor:**	Mimi Tsuruga
Time:	MWF 4:10 PM–5:00 PM	**E-mail:**	mtsuruga@math.ucdavis.edu
Room:	Young 198	**Office:**	MSB 2149
Credits:	4.0		

Office Hours: W 1:00 PM–3:00 PM – Location to be announced each Monday.

Course Description: Continuation of course 21B. Sequences, series, tests for convergence, Taylor expansions. Vector algebra, vector calculus, scalar and vector fields. Partial derivitives, total differentials. Applications to maximum and minimum problems in two or more variables. Applications to physical systems. See math department webpage and department's course syllabus for more information.

Prerequisites: Completion of course MAT 16C, 17C, 21B or MAT 21BH; Must earn a C- or better in course MAT 16C, 17C, 21B or MAT 21BH to enroll.

Important Links

Course Webpage	http://www.math.ucdavis.edu/~mtsuruga/teaching/SQ2016_21C.html
SmartSite	https://smartsite.ucdavis.edu/portal/site/mtsuruga_spr16_mat21c
MyMathLab	http://mymathlab.com Course ID code: tsuruga40955

MyMathLab, e-Text & Inclusive Access

In an effort to reduce overall student costs, this course is participating in the UC Davis Inclusive Access program. All enrolled and waitlisted students have automatic access to the e-text and an interactive study platform for the required course material at a discounted rate negotiated for the campus.

Students will have free access for 10 class days (until **April 8**), after which the access fee of **$90.00** will be billed to their student account. Students may opt-out of the digital access during the 10-day period, prior to billing. If they opt out, their online access will be turned off and they will pay nothing. Students who drop the course before the opt out deadline are automatically opted out and will not be charged. Those who drop the course after the first 10 days will have 5 days to request a refund with documentation of the drop.

All students will be provided with an access code to register for MyMathLab.com, an interactive learning platform embedded with the e-text for the course, Thomass Calculus Early Transcendentals, Thirteenth Edition. Students should have been sent an email directing them to the Inclusive Access website with a short explanation of the program, along with instructions to register for the course. Students who did not receive such an email should contact inclusiveaccess@ucdavis.edu.

The course ID code for this course is: tsuruga40955

For more information, please visit http://inclusiveaccess.ucdavis.edu.

Class Policies

- **READ THIS SYLLABUS!** This syllabus contains all essential information for successful completion of this course. Students enrolled in this course are presumed to agree to all aspects of the course plan, design, and policies as set forth in this syllabus.
- Regularly check the course webpage for updated information and announcements.
- See attached Reading Schedule for the course outline. The listed sections from the e-text are expected to have been read *before* the indicated date.
- There will be no make-up exams. There will be no partial credit on homework problem sets or quizzes. There will be no curve.

- Students are encouraged and expected to work together on homework problems, study together, and use any resource they can get their hands on including, but not limited to, mathematical software (such as SageMath, Matlab, or Maple—see Help & Suggestions), other texts, online videos or free courses (such as Khan Academy). **HOWEVER**, all in-class exams will be closed-book; discussion, sharing of solutions, and use of electronic devices (such as calculators, smart phones, tablets, or laptops) are strictly prohibited during exams.
- The instructor will be available to answer questions and discuss problems during weekly office hours. The TAs will be available during their Calculus Room hours. Also learn about tutoring and advising services provided by various UC Davis programs (see Help & Suggestions).
- Attendance will not be taken. However, students who attend lectures will have a strong advantage as the lectures will almost always include hints about approaching exams.

Grading Policy

HW (20%)

A total of 10 homework problem sets are assigned during the quarter. Some are online and some are to be handed in. All problems will be made available online from the first day of class. **Late homework will not be accepted for any reason.**

Online: The online homework problems can be found on MyMathLab.com. There are 7 online homework problem sets and labeled HW1–HW7 (see Important Dates calendar attached).

- Online homework problem sets are due *before* noon on the indicated Friday.
- Exactly **1 point** will be added to the **final grade** for each completed problem set for up to a **total of 5 points**.
- Partial credit will not be given. Homework problem sets completed after the indicated deadline will not be credited.
- The problems are typically individualized for each student, but students may and are encouraged to work together.

Hand-in: The hand-in homework problems can be found on the course webpage. There are 3 hand-in homework problem sets and labeled HW G1–HW G3 (see Important Dates calendar attached).

- Students **MUST** work in groups of 3-5 students. Groups consisting of only 1 or 2 students are not permitted. Students are free to choose their own groups and can change groups during the quarter. Different groups may (and are encouraged to) work together. One solution set is to be submitted per group.
- The solution sets are to be handed in at the beginning of the discussion session for the section. Students in different sections may work in the same group.
- Each hand-in homework problem set will contain 5 problems worth **1 point each** for a total of 5 points. Partial credit will not be given.
- All solutions must show work. If the shown work is correct and the final solution is wrong, the problem will be marked as correct. If the shown work is wrong and the final solution is correct, the problem will be marked as incorrect.
- Solutions must be written or printed on (lined or unlined) US letter-sized paper. The **Section Number AND Student ID Number** of each student in the group must be written on the **top right corner** of **EVERY** submitted page. Clearly print the problem number being solved on each page. Do NOT staple pages together.
- Each sheet (front and back) of the solution set may contain the solution and/or work of at most 1 problem. The solution and work for 1 problem may take up more than 1 sheet.
- The graded solution sets can be collected ONLY during the instructor's office hours. Grades will be posted on SmartSite.

EXAMS

Quiz 1-4 (20%) APRIL 5, APRIL 12, MAY 3, MAY 24

- Quizzes will take place in the last 20-30 mins of discussion sessions.
- Each quiz problem is worth 1 point. Partial credit will not be given.
- Quizzes are based on online homework. That is, the quiz problems will be some variation of the online homework problems assigned from the previous week. (Hint: Take a look at nearby problems in the e-text.)
- Students are expected to work alone. The use of calculators, notes, or books will not be allowed. See UC Davis Code of Academic Conduct.
- Quizzes cannot be retaken or rescheduled.
- All solutions must show work. If the shown work is correct and the final solution is wrong, the problem will be marked as correct. If the shown work is wrong and the final solution is correct, the problem will be marked as incorrect.
- Graded quizzes can be collected during discussion session in the following week. Grades will be posted on SmartSite.

Midterm 1 (10%) APRIL 20

Midterm 2 (20%) MAY 11

Final (30%) TUESDAY, JUNE 7, 6:00 PM – YOUNG 198

- The midterms are full-period exams. The final exam has been scheduled by the registrar.
- The content of the midterms and final will be cumulative. The problems will be similar to problems found in all previous homework problem sets and exams.
- Graded midterms can be collected during discussion session in the following week. Grades will be posted on SmartSite.
- It is Department policy that all completed mathematics final exams are the property of the Department. Students may look over their exams, but may not keep them.
- Students are expected to work alone. The use of calculators, notes, or books will not be allowed. See UC Davis Code of Academic Conduct.

Letter Grades

A curve will only be applied in extreme circumstances and only when requested to do so directly by the department. Non-zero decimals will be rounded up to the nearest integer. See General Catalog for university grade policies.

F		D		C		C^+	B^-		B		B^+	A^-		A		A^+	
0		60	70		77	80	83		87	90	93		97	100	
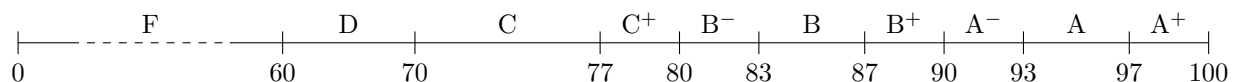
Help & Suggestions

- For every hour spent in class, expect to spend (at least!) 2 hours studying.
- Contrary to popular belief, mathematics is rarely—if ever—done in isolation. Ask questions and talk to many different people.
- Visit https://cloud.sagemath.com to try SageMath online for free. Sage is easy to learn and may be used to find many of the solutions to the homework problems.
- Students enrolled in this course will have the possibility to create temporary accounts in the mathematics department to use the computers and mathematical software available in the computer labs in MSB 2118. Set up your accounts at https://www.math.ucdavis.edu/courses/class-accounts/.
- The lectures will often demonstrate examples using mathematical software such as Sage or Matlab. If enough students show interest in learning more about using these or similar programs, the instructor will consider adding extra office hours to tutor students.

- The Calculus Room has Teaching Assistants available to answer questions for students taking MAT 21ABCD. Located in the ground floor of the Mathematical Science Building (MSB 1118), the Calculus Room is staffed with 21ABCD TAs from 1-7 PM Monday to Friday.
- The section TAs for this course will not hold office hours in their offices. The TAs will be available for help and consultation during their Calculus Room hours.
- Student Academic Success Center, located on the second floor of Dutton Hall, offers many services for students in mathematics courses. These include workshops for the Math 16 and some classes in the Math 21 series, drop-in tutoring, self-paced programs, an exam file, and classes coordinated with the Math 16 and 21 series for students with special needs.
- A list of tutors available for hire is maintained by the Student Services Office on the department's website. Some student organizations, such as the Math Café, provide tutoring services. Students also have academic advising services available through the First Resort, the Mathematics Academic Peer Advisor, and academic counselors in their Deans' offices.
- To contact or set up a private appointment with the instructor, send an email to

<p align="center">mtsuruga@math.ucdavis.edu</p>

and cc the section TA. The email subject line must include (a) the course name: SQ2016 MAT 21C; (b) the Section code; and (c) student ID number. For example,

```
      to: mtsuruga@math.ucdavis.edu
      cc:  [my_ta]@math.ucdavis.edu
 subject: SQ2016 MAT 21C E01 912345678
 message: [say something ...]
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Otherwise, the email may be mistakenly sorted or deleted. Allow the instructor and TAs at least 48 hours to respond.

Important Dates

	M	T	W	T	F
March	28	29	30	31	1 HW1 due
April	4	5 QUIZ 1	6	7	8 HW2 due 10-day-drop
	11	12 QUIZ 2 last day to add	13	14	15 HW3 due
	18	19 HW G1 due	20 MIDTERM 1	21	22 20-day-drop
	25	26	27	28	29 HW4 due
May	2	3 QUIZ 3	4	5	6 HW5 due
	9	10 HW G2 due	11 MIDTERM 2	12	13
	16	17	18	19	20 HW6 due
	23	24 QUIZ 4	25	26	27 HW7 due
	30	31 HW G3 due	1	2	3
June	6	7 FINAL	8	9	10

Reading Schedule

	M	**T**	**W**	**T**	**F**
March	28 10.1	29	30 10.2	31	1 10.3
April	4 10.4	5	6 10.5	7	8 10.6
	11 10.7	12	13 10.8	14	15 10.9
	18 10.10	19	20 MIDTERM 1	21	22 12.1, 12.2
	25 12.3	26	27 12.4	28	29 12.5
May	2 13.1	3	4 13.2	5	6 14.1
	9 14.2	10	11 MIDTERM 2	12	13 14.3
	16 14.4	17	18 14.5	19	20 14.6
	23 14.7	24	25 14.8	26	27
	30	31	1	2	3
June	6	7 FINAL	8	9	10

Grading Worksheet

HW

MyMathLab homework problem sets: Check box if completed by due date.

☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐
HW1 | HW2 | HW3 | HW4 | HW5 | HW6 | HW7
due 4/1 | due 4/8 | due 4/15 | due 4/29 | due 5/6 | due 5/20 | due 5/27

Count number of check marks.
If 5 or more, write 5. ⟶

Online HW
☐

out of 5
☐ + out of 5 ☐ + out of 5 ☐ =
HW G1   HW G2   HW G3
due 4/19   due 5/10   due 5/31

Hand-in HW
☐

EXAMS

out of 5
☐ + out of 5 ☐ + out of 5 ☐ + out of 5 ☐ =
QUIZ 1   QUIZ 2   QUIZ 3   QUIZ 4
4/5   4/12   5/3   5/24

Quiz Total
☐

out of 100
☐   × 0.10 =   ☐
MIDTERM 1
4/20

out of 100
☐   × 0.20 =   ☐
MIDTERM 2
5/11

out of 100
☐   × 0.30 =   ☐
FINAL
6/7

TOTAL

Add up values in right most column (then round-up) for course grade. ⟶