

MATH 20C, Calculus & Analytic Geometry For Science & Engineering

UC San Diego

COURSE SYLLABUS, SPRING 2022

Credit Hours: 4

Prerequisites: AP Calculus BC score of 4 or 5, or MATH 20B with a grade of C– or better.

Catalog Description: Vector geometry, vector functions and their derivatives. Partial differentiation. Maxima and minima. Double integration. (Two units of credit given if taken after MATH10C. Credit not offered for both MATH 20C and 31BH. Formerly numbered MATH 21C.)

Textbook: Calculus Early Transcendentals: Multivariable with Achieve, Rogawski, 4th edition.

- We will cover parts of Chapters 12, 13, 14, and 15 of the text.

Reading: Reading the sections of the textbook corresponding to the assigned homework is considered part of the homework assignment. It will be expected that you read the assigned material in advance of each lecture.

Announcements: The announcements page on Canvas will be my regular means of communication with the class. It is your responsibility to check this regularly and you may want to adjust your Canvas notification settings (under your Account) in order to receive notifications that you may be missing. Some students choose to have announcements emailed to them and that is fine, but you should refer to the version up on Canvas for the most up-to-date information.

Exams: There will be two midterm exams and one final exam. Midterm1 is scheduled **Friday 4/22** in person during class and Midterm2 is **Friday 5/20 during your scheduled class time** (for now, these may change due to the pandemic). Check the Schedule of Classes for the most up to date information on the location of the final exam. **The final is Monday 6/6 8am - 11am.** You can use one 8.5 x 11 inch sheet of handwritten notes (both sides). Unless otherwise permitted explicitly in the instructions, you may not use any other notes or any electronic devices.

It is your responsibility to ensure that you do not have a schedule conflict involving the final examination. Please be aware that we will not offer make-up exams for the final exam, nor will we offer the exam at a time outside of the stated time. *You should not enroll in this class if you cannot sit for the final examination at its scheduled time.*

Homework: Homework is a very important part of the course, and in order to fully master the topics, it is essential that you work carefully on every assignment and try your best to complete every problem. We will have two different kinds of homework assignments in this class: online homework (which will be graded) and textbook homework (which will not be graded).

- Online homework will be done through Achieve. There will be a homework assignment for each of the 20 textbook sections covered. The homework assignments will be due certain Wednesdays at 11:59pm. If, for any reason, you cannot turn in a homework assignment, keep in mind that the lowest 3 out of 20 homework assignment scores will be dropped. **Note:** For each homework assignment, late submissions are automatically enabled for 3 days after the original due date, for a flat penalty of 20 %.

- The textbook homework assignments will be posted in canvas. These assignments will not be turned in and will be not graded; however, understanding the solutions to these problems should help you perform better on the final exam.

Discussion: Discussion is recommended, but not required.

Electronic Computing Devices: A scientific calculator is allowed for HW, but not a graphing calculator. Calculators are not allowed on exams.

Grading: Your final score will be computed using the following scheme: 20% Homework + 35% Best Midterm+ 45% Final Exam.

In addition, you must earn a passing grade on the final exam in order to pass the course ie score > 59%.

Letter grades: Letter grades will be assigned according to the following grading scale, which is the standard scale for UC San Diego:

A+	A	A-	B+	B	B-	C+	C	C-	D	F
[99,100]	[93,99)	[90,93)	[87,90)	[83,87)	[80,83)	[77,80)	[73,77)	[70,73)	[60,70)	[0,60)

The letter grades are assigned by Canvas automatically based on the numerical score. Letter grades are not negotiable. Please notice that outside factors, including the need for a certain grade for admission/retention in any academic program, scholarship or transfer credit, graduation requirements or personal desire for a specific grade DO NOT appear in the above calculations, and thus are not considered in any way in the determination of your course grade. Effort, improvement, class attendance and participation will all dramatically improve your grade in the course in that they will allow you to do well on the final exam. They will not, however, actively participate in the calculation of your course grade.

Regrades: Regrade requests will be made using the built-in regrade request feature in Gradescope. There will be a limited window of time after your graded work is made available during which the regrade request feature will be active. This time window will be announced when the scores are released to the students. Please be advised that the regrade request window is usually brief, and if you want to request a regrade, it is your responsibility to make the request during the allowed time. Please understand that while we will correct errors in the grading, we will not modify the grading rubric or negotiate over partial credit after graded papers are returned to students.

Piazza: The TAs will be offering help on Piazza Monday-Friday. Only comments/questions pertaining to the mathematical content/logistics of the course are allowed. Any postings that do not meet this criteria will be deleted and Piazza privileges may be removed. As a diverse community of learners, students must strive to work together in a setting of civility, tolerance, and respect for each other and for the instructor! Conflicting opinions among members of a class are to be respected and responded to in a professional manner.

Collaboration: You are allowed to discuss homework problems with your classmates. However, the final write-up of solutions should be your own work and reflect your own understanding of the problems. Copying

or paraphrasing part of the solution to a homework problem from a classmate or from the internet is considered academic dishonesty.

Academic Integrity: According to the UCSD Policy on Integrity of Scholarship (<http://senate.ucsd.edu/Operating-Procedures/Senate-Manual/Appendices/2>), “no student shall engage in an activity that undermines academic integrity or facilitates academic integrity violations by others”. According to the policy, you are not allowed to:

- Complete, in part or in total, any assignment for another person.
- Have any of your course work be completed, in part or in total, by someone else.
- Plagiarize or copy even part of the work of another person or source and submit it as your own work.
- Employ aids excluded by the instructor in completing any assignment.
- Alter graded class assignments, then resubmit them for re-grading;
- Submit substantially the same material in more than one course without prior authorization; and misrepresent, to your instructor, any aspect of your academic work

Students caught cheating will face an administrative sanction which may include suspension or expulsion from the university.

Name and Gender Pronouns: UC San Diego is committed to supporting its students’ name and gender preferences. Class rosters provided to your instructor and TAs have students’ legal names, but we will strive to honor your request to be addressed using a preferred name or gender pronoun. Please let your instructor and TA know your preferences so that we can make changes to our records. (Certain university records may be beyond our ability to change, however.)

Equity, Inclusion, and Respect: We are committed to the UC San Diego Principles of Community (see <https://ucsd.edu/about/principles.html>). “To foster the best possible working and learning environment, UC San Diego strives to maintain a climate of fairness, cooperation, and professionalism. These principles of community are vital to the success of the University and the well being of its constituents.” The principles of community include (but are not limited to):

“We affirm each individual’s right to dignity and strive to maintain a climate of justice marked by mutual respect for each other.” “We reject acts of discrimination based on race, ethnicity, sex, gender identity, age, disability, sexual orientation, religion, and political beliefs, and, we will confront and appropriately respond to such acts.” “We promote open expression of our individuality and our diversity within the bounds of courtesy, sensitivity, confidentiality, and respect.” “We are committed to promoting and supporting a community where all people can work and learn together in an atmosphere free of abusive or demeaning treatment.” Visit the Office for Equity, Diversity, and Inclusion (at <https://diversity.ucsd.edu>) for more information.

Instructor and Contact Information

Instructor: Kisun Lee

Office Hours: MWF 11:00 - 11:50 am in AP&M 5829

E-mail: kisunlee@ucsd.edu

Course Websites

Course Information: <http://canvas.ucsd.edu>

On-line Discussions:

Course Meeting Times: In-person lectures will be given on regular lecture times (**MWF 10:00-10:50 am**). Students are encouraged to take part in this and ask questions to the instructor.

Teaching Assistants, Office Hours, and Meeting Locations:

<i>Section</i>	<i>TA</i>	<i>Email Address</i>	<i>Recitation Location</i>	<i>Office Hours</i>
B01	Xiaxin Li	xil095@ucsd.edu	APM 2402, Tu 5pm	M 1:00 - 2:30 pm
B02			APM 2402, Tu 6pm	
B03	Zongze Liu	zol013@ucsd.edu	HSS 1128A, Tu 5pm	W Th 5:30 - 7:00 pm
B04			HSS 1128A, Tu 6pm	
B05			HSS 1128A, Tu 7pm	
B06			HSS 1128A, Tu 8pm	

Tentative Course Schedule

Please use this as an approximate class schedule; section coverage may change depending on the flow of the course.

Week	Monday	Tuesday	Wednesday	Thursday	Friday
1	Mar. 28 12.1		12.2		12.3
2	Apr. 4 12.4	Discussion	12.5 HW due		13.1
3	Apr. 11 13.2	Discussion	13.2 HW due		13.3
4	Apr. 18 13.5	Discussion	Review HW due		Midterm 1
5	Apr. 25 14.1	Discussion	14.2 HW due		14.3
6	May. 2 14.4	Discussion	14.5 HW due		14.5
7	May. 9 14.6	Discussion	14.7 HW due		14.7
8	May. 16 14.8	Discussion	Review HW due		Midterm 2
9	May. 23 15.1	Discussion	15.1 HW due		15.2
10	May. 30 Memorial Day Observance (no class)	Discussion	15.2		Review HW due