

**Calculus II (MATH 102)**  
**Sabancı University, Summer 2021-2022**

*This syllabus may be subject to update and change.*

**Lecturer:** Gamze Kuruk  
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**Office:** UC 1083/1089

**Class Hours:** Mon 16:40 - 19:30 (FENS G035)  
Fri 09:40 - 12:30 (FENS L045)  
**Office Hours:** by appointment

**Teaching assistants:** Alireza Tajeddin (tajeddin@sabanciuniv.edu)  
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**Recitation Hours:** Tue 11:40 - 13:30, Fri 14:40 - 16:30

**You are responsible for every announcement made in class or in SUCourse. Not attending the class or not following SUCourse regularly is not an excuse, in case you miss something.**

**Textbook:** Calculus Early Transcendentals 2nd Edition (Global Edition), Briggs, Cochran & Gillett.

**Aim of the Course:** We hope to gain an understanding of:

- Sequences and series, approximation of functions by series,
- Functions of several variables,
- Differentiation of functions of several variables,
- Optimizing functions of several variables,
- Integrating functions of several variables,
- Various coordinate systems if time allows.

You will find a tentative breakdown of material at the end of the syllabus.

**Learning Outcomes:** On completion of this course the student should be able to:

1. Define the notion of convergence of series and use various tests to determine series convergence
2. Find Taylor representations of functions and approximate functions via Taylor polynomials
3. Understand and use the concept of a function of several variables, draw graphs in 3 dimensional spaces
4. Use the properties of vectors and operations with vectors
5. Compute partial derivatives, directional derivatives and write equations of tangent planes to surfaces
6. Apply partial derivatives to find and test local extrema
7. Evaluate double integrals in Cartesian and polar coordinates and triple integrals in Cartesian coordinates

**Recitations:** Recitations will consist of the following activities

**Problem solving** on the white board (TA or students).

**Group-study:** Students will discuss and solve problems from a given worksheet in groups.

**Discussion:** Students are urged to ask questions during recitations.

**Quiz** questions will usually be similar to the problems solved in the recitation or to the problems in group-study worksheets.

**NA Policy:** Students missing both the midterm and the final, without a valid excuse, will receive NA if they also miss the make-up. In general, if you will have serious issues preventing you from regularly following the course, you are required to contact the course instructor. Please see also Class Discipline below.

**Grading:** Your grade exclusively depends on the below listed items. There will be no other extra-credit opportunities.

Midterm	35%
Final	40%
Recitation Quiz	25%

**Exams:** The midterm will be on the below listed date and time. More detailed information will be available in the due course.

Midterm	11.08.2022, Thursday, 19:00
Final	05.09.2022, Monday, 16:00

The university will later announce the final exam date. The final may be given on any day between Sep 3rd - Sep 6th. Student Resources will determine the dates and times for all final exams, and instructors cannot change it. So, do not plan to leave İstanbul before Sep 8th, 2022 (*see also the make-up policy below*). We will not accommodate travel arrangements, or other personal business.

During the exams, the use of books, notes, electronic devices (including cell phones, smart watches, calculators, computers etc.), or any other kind of supporting learning material is **NOT** allowed. A student violating this rule will receive 0 points for that exam.

**Midterm and Final Make-up Policy:** If you miss the midterm or the final and wish to make it up, you must contact the course instructor by mail, and explain your excuse as soon as possible. If it is a health problem you need to bring a doctor's report, which must be given or checked by SU Health Center within 3 days of the date of the report. Make-up for the midterm or the final will be at the end of the semester (after the finals period ends). Only students that had contacted the course instructor with a valid excuse will be informed about the exact time and place. The make-up exam will contain all topics.

**Recitation Quiz:** Quizzes will be given at the end of Tuesday recitations. Questions will cover last Monday and Friday lectures. Students must be present during the second hour of the recitation in order to take the quiz. Quizzes taken in a section different from the assigned one will be voided. The best 5 of quiz scores will determine the quiz grade. There will be no make-up for missed quizzes.

In the section *Resources* of SUCourse, a list of problems will be provided from each section covered in the book. These problems are for self-study and preparation for the recitation quiz. You are not supposed to return their solutions to us.

**Registration Overrides:** Time conflict requests for one lecture hour will be accepted. However, any and all negative outcomes that may result are solely the student's responsibility.

**Academic Integrity:** All university policies on academic integrity apply to our course, and they will be enforced. (more information on <http://www.sabanciuniv.edu/en/academic-integrity-statement>).

In particular, no form of cheating is welcome in the exams or quizzes, such as copying whole or part of each other's answers, using cheat-sheets etc. The action against such violations could range from getting a zero on the particular quiz/exam to explaining the case in front of the Disciplinary Committee.

**Class Discipline:** It is our responsibility to provide students with excellent teaching and learning environments. We are therefore asking you to respect both our responsibility to teach and the right of other students to learn. Any action that disturbs your classmates or interrupts the lecture is unacceptable. The following rules must be followed.

- Classes will start punctually on time. By coming to a class late, you will not only lose important material and announcements, but you will also disturb and distract others in the class, and disrupt the flow of the lecture or discussion.
- Leaving early is unacceptable (unless we are aware ahead of time). If you are unable to attend class, you are responsible to find out what you have missed.
- Turn your mobile off or put it on silent mode and stow it away.

Repeated violations of the above common sense rules may cause a student to be counted as absent for a lecture or a recitation.

**Global suggestions for the semester:**

- *Always* come to lectures and recitations with a notebook and a pen.
- Feel free to ask your instructor and TA questions in and out of class, especially during office hours.
- Remember that you do not have to be a math genius to be successful in this course (although it wouldn't hurt!). Regular study habits are sufficient to get a decent grade.
- Attend the classes and recitation hours regularly. Make sure you attend your own (registered) recitation section.
- Studying out of class for this course should become a routine. Key to success in mathematics is practice.
- Scientific WorkPlace / NoteBook (SWP / SNB) is a math software package available at Information Technology website for download. You must use it for your self-study.

Below is a tentative breakdown of topics.

Week	Date	Topic (Sections from the textbook)
1	July 18	8.1, 8.2, 8.3
	July 22	8.4, 8.5
2	July 25	8.6, 9.1
	July 29	9.2, 9.3
3	Aug 1	9.4, 11.1
	Aug 5	11.2, 11.3
4	Aug 8	11.4, 12.1
	Aug 12	12.2, 12.4
5	Aug 15	12.5, 12.6
	Aug 19	12.7, 12.8
6	Aug 22	13.1
	Aug 26	13.2, 13.3
7	Aug 29	holiday
	Sep 2	13.4, review (if time)