

**This syllabus is subject to change in unforeseen circumstances**

**Calculus I (MATH 101)**  
**Sabancı University, Fall 2021-2022**

**Section A Lecturer:** Ayesha Asloob Qureshi  
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**Office Hours:** Wed 13:40-14:30 or by appointment

**Section B Lecturer:** Kağan Kurşungöz  
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**Section C Lecturer and Coordinator:** Şirin Kaya  
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**Office Hours:** Mon 18:00-19:00

**Coordinator:** Gamze Kuruk  
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**Office Hours:** by appointment

**Class Hours and Lecture Format:** Lectures will be in-class and simultaneously live-streamed via Zoom. For those of you who wish to follow online, the Zoom links will be posted on SUCourse+. In order to have access to them, you must be logged in to Zoom with your Sabancı account.

The lecture recordings will be made available afterwards, so that you can also watch them at a later time. They are going to be posted on SUCourse+.

**Lecture Hours:** Section A: Mondays 11:40-13:30 (FENS G077) and Tuesdays 15:40-16:30 (FENS G077).  
Section B: Mondays 13:40-15:30 (FENS G077) and Tuesdays 08:40-09:30 (PAC - SGM).  
Section C: Mondays 15:40-17:30 (PAC - SGM) and Tuesdays 11:40-12:30 (PAC - SGM).

**Recitation Hours:** Fridays 08:40-10:30, 10:40-12:30 and 13:40-15:30.

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

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

- Functions and graphs,
- Limits and the derivative, differentiation rules,
- Applications of derivatives such as graph sketching, optimization, relative rates,
- The area problem and the definite integral,
- Computing definite or indefinite integrals,
- Applications of single-variable integrals as time allows.

For the entire course, we will work on single-variable functions. 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. Understand and use basic properties of elementary functions
2. Understand the idea of limit analytically/graphically, and evaluate limits
3. Understand the definition of derivative and its geometric meaning
4. Compute derivatives using standard differentiation techniques
5. Apply the notion of derivative graphing and optimization problems
6. Understand the definition of definite integral and its geometric meaning
7. Compute integrals using standard integration techniques
8. Understand the idea of integration over unbounded intervals and compute them.

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

**Recitations:** Recitations will be conducted online, via Zoom. They will consist of three parts: TA/LA solving problems, discussing the worksheet with the TA and LA and the quiz.

- **Problem Solving:** The TA/LA will solve a few questions from the textbook at the beginning of the recitation.
- **Worksheets:** Some worksheet problems will be published on SUCourse+ on Thursdays. You are supposed to work on the problems, discuss them with your peers and assistants during the recitations and then upload your own solutions on Friday evenings. We will review your solutions and provide feedback individually.
- **Quizzes:** There will be short quizzes at the end of almost all recitations.

**Grading:** Your grade exclusively depends on the following listed items. The details of each item are below.

Midterm (date TBD)	35%
Final Exam (date TBD)	35%
Recitation Attendance	5%
Recitation Worksheets	10%
Recitation Quizzes	15%
Online Homework (requires Pearson MyLab account)	5% (bonus)

There will be no other extra-credit opportunities.

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**IMPORTANT:**

Every document that requires a student submission, needs to be in *pdf* format, hand-written and to have name, surname, student ID, and signature on the top left corner of the document, on each page submitted (note: if you write on the two sides of a piece of paper, write the information on both sides).

Any page missing any of these information will be completely ignored.

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**Midterm:** The midterm exam will be given in-person, on campus. The date will be announced later. More details will be announced on SUCourse+ in due time.

**Final Exam:** The final exam will be given in-person, on campus, during the finals period. The date and time of the final exam is determined by Student Resources and the instructors cannot change it. More details will be announced on SUCourse+ in due time.

If you miss the midterm or the final and have a valid excuse, **and** contact us immediately explaining your situation, we will arrange for an in-person or online oral makeup exam.

**Recitation Worksheets:** The worksheets of the week will be published on SUCourse+ on Thursdays. In order to get points for any particular question, at least half of the solution must be correct. The best 8 of your worksheet scores will determine the Worksheet grade. More details will be announced on SUCourse+.

**Recitation Quizzes:** During the recitation time, we will assign a quiz on SUCourse+. You are required to write down your own solution and upload a picture of it on SUCourse+ in *pdf* format before the deadline. Other filetypes will be disregarded. Emailed submissions will also be disregarded. There will be absolutely no make-up for missed quizzes. The best 8 of your quiz scores will determine the quiz grade. More details will be announced on SUCourse+.

**The quizzes will be online proctored and recorded.** This means you must be on Zoom and your camera should be on during the quiz. In the case of non-compliance with this and other declared quiz procedures, your quiz will be void.

**Recitation Attendance:** Attendance during the recitations will be taken via the quiz uploads. In order to be counted as present in the recitations, you must upload your handwritten solution to the quiz question on SUCourse+ before the deadline and you must be on Zoom during the quiz time.

You must attend the synchronous Zoom lectures and recitations with your SU email account.

**NA Policy:** If you miss both the midterm and the final exam without valid excuses, you may get NA.

**Online Homework:** Detailed instructions on how to register to Pearson MyLab will be given on SUCourse+. The online homework will be assigned on the weekend and will be due on Thursday at 23:45. To do the homework, after logging into their personal MyLab account, each student will receive a random set of questions. There will be no make-up for any online homeworks if you miss the deadline.

**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. Students are not allowed to give or receive outside help. 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.

In quizzes or exams, if we suspect any breach of academic integrity, we may ask for an oral validation of the quiz/exam. In this case the student will be invited to an oral interview and will be given the opportunity

to explain their solution. If the student cannot provide sufficient explanations, or does not show up to the interview, their quiz/exam grade will be replaced with zero (0).

**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 disrupts the online activities is unacceptable. Repeated violations of the above common sense rules may cause a student to be counted as absent for a lecture or a recitation.

Attention must be taken regarding COVID-19 spread prevention. Students attending classes must comply with the rules list at <https://mysu.sabanciuniv.edu/en/covid-19-rules>, especially those regarding “OPEN AND CLOSED AREAS”. The maximum capacity of the classrooms will always be respected and students are required to correctly wear a mask and sit only in the designated seats at all time. The class may not start, or may be suspended, otherwise.

**Suggestions:**

- Feel free to ask us and your assistants questions via e-mail.
- *Always* attend the lectures and recitations with a notebook and a pen.
- 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.
- 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 are welcome to use it for your self-study.

Below is a tentative breakdown of topics. The order in the tentative schedule might be altered. It is your responsibility to follow the lecture notes posted on SUCourse+.

Lecture	Date	Topic (Sections from the textbook)
Week 1	Sep 27-28	1.1 - 1.3
Week 2	Oct 4-5	1.4, 2.1, 2.2
Week 3	Oct 11-12	2.3 - 2.5
Week 4	Oct 18-19	2.6, 3.1, 3.2
Week 5	Oct 25-26	3.3 - 3.6
Week 6	Nov 1-2	3.7 - 3.10
Week 7	Nov 8-9	3.11, 4.1
Week 8	Nov 15-16	4.2 - 4.4
Week 9	Nov 22-23	4.5 - 4.7
Week 10	Nov 29-30	4.9, 5.1 - 5.3
Week 11	Dec 6-7	5.4, 5.5, 7.1
Week 12	Dec 13-14	7.2 - 7.4
Week 13	Dec 20-21	7.5, 7.8
Week 14	Dec 27-28	Review, 6.2, 6.3