
YEAR COURSE OFFERED: 2022-2023
SEMESTER COURSE OFFERED: Spring
DEPARTMENT: MATH
COURSE NUMBER: 2413 (Section: 18226)
NAME OF COURSE: Calculus I
NAME OF INSTRUCTOR: Dr. Melahat Almus

Instructor Information

- Office: 212 PGH
- Office Hours: See CASA for detailed information
- Email: malmus@uh.edu
- Instructor website: <http://math.uh.edu/~almus>

Important: Course materials are posted on CASA (casa.uh.edu) - not Blackboard.

The information contained in this class syllabus is subject to change; the instructor reserves the right to make changes. Any changes will be announced on CASA or in class. Students are expected to be aware of any additional course policies presented by the instructor during the course.

Pre-requisites: Credit for MATH 2312 (Pre-Calculus) or a satisfactory passing score on a placement exam.

COVID-19 Information

Students are encouraged to visit the University’s **COVID-19** website for important information including diagnosis and symptom protocols, testing, vaccine information, and post-exposure guidance. Please check the website throughout the semester for updates. Consult the (select: **Undergraduate Excused Absence Policy** or **Graduate Excused Absence Policy**) for information regarding excused absences due to medical reasons.

Reasonable Academic Adjustments/Auxiliary Aids

The University of Houston complies with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, pertaining to the provision of reasonable academic adjustments/auxiliary aids for disabled students. In accordance with Section 504 and ADA

guidelines, UH strives to provide reasonable academic adjustments/auxiliary aids to students who request and require them. If you believe that you have a disability requiring an academic adjustments/auxiliary aid, please contact **the Justin Dart Jr. Student Accessibility Center** (formerly the Justin Dart, Jr. Center for Students with DisABILITIES).

Excused Absence Policy

Regular class attendance, participation, and engagement in coursework are important contributors to student success. Absences may be excused as provided in the University of Houston **Undergraduate Excused Absence Policy** and **Graduate Excused Absence Policy** for reasons including: medical illness of student or close relative, death of a close family member, legal or government proceeding that a student is obligated to attend, recognized professional and educational activities where the student is presenting, and University-sponsored activity or athletic competition. Under these policies, students with excused absences will be provided with an opportunity to make up any quiz, exam or other work that contributes to the course grade or a satisfactory alternative. Please read the full policy for details regarding reasons for excused absences, the approval process, and extended absences. Additional policies address absences related to **military service, religious holy days, pregnancy and related conditions**, and **disability**.

Recording of Class

Students may not record all or part of class, livestream all or part of class, or make/distribute screen captures, without advanced written consent of the instructor. If you have or think you may have a disability such that you need to record class-related activities, please contact the **Justin Dart, Jr. Student Accessibility Center**. If you have an accommodation to record class-related activities, those recordings may not be shared with any other student, whether in this course or not, or with any other person or on any other platform. Classes may be recorded by the instructor. Students may use instructor's recordings for their own studying and notetaking. Instructor's recordings are not authorized to be shared with *anyone* without the prior written approval of the instructor. Failure to comply with requirements regarding recordings will result in a disciplinary referral to the Dean of Students Office and may result in disciplinary action.

Resources for Online Learning

The University of Houston is committed to student success, and provides information to optimize the online learning experience through our **Power-On** website. Please visit this website for a comprehensive set of resources, tools, and tips including: obtaining access to the internet, AccessUH, Blackboard, and Canvas; using your smartphone as a webcam; and downloading Microsoft Office 365 at no cost. For questions or assistance contact **UHOnline@uh.edu**.

UH Email

Please check and use your Cougarnet email for communications related to this course. To access this email, **login** to your Microsoft 365 account with your Cougarnet credentials.

Academic Honesty Policy

High ethical standards are critical to the integrity of any institution, and bear directly on the ultimate value of conferred degrees. All UH community members are expected to contribute to an atmosphere of the highest possible ethical standards. Maintaining such an atmosphere requires that any instances of academic dishonesty be recognized and addressed. The **UH Academic Honesty Policy** is designed to handle those instances with fairness to all parties involved: the students, the instructors, and the University itself. All students and faculty of the University of Houston are responsible for being familiar with this policy.

Title IX/Sexual Misconduct

Per the UHS Sexual Misconduct Policy, your instructor is a “responsible employee” for reporting purposes under Title IX regulations and state law and must report incidents of sexual misconduct (sexual harassment, non-consensual sexual contact, sexual assault, sexual exploitation, sexual intimidation, intimate partner violence, or stalking) about which they become aware to the Title IX office. Please know there are places on campus where you can make a report in confidence. You can find more information about resources on the Title IX website at <https://uh.edu/equal-opportunity/title-ix-sexual-misconduct/resources/>.

Security Escorts and Cougar Ride

UHPD continually works with the University community to make the campus a safe place to learn, work, and live. Our Security escort service is designed for the community members who have safety concerns and would like to have a Security Officer walk with them, for their safety, as they make their way across campus. Based on availability either a UHPD Security Officer or Police Officer will escort students, faculty, and staff to locations beginning and ending on campus. If you feel that you need a Security Officer to walk with you for your safety please call **713-743-3333**. Arrangements may be made for special needs.

Parking and Transportation Services also offers a late-night, on-demand shuttle service called Cougar Ride that provides rides to and from all on-campus shuttle stops, as well as the MD Anderson Library, Cougar Village/Moody Towers and the UH Technology Bridge. Rides can be requested through the UH Go app. Days and hours of operation can be found at <https://uh.edu/af-university-services/parking/cougar-ride/>.

Syllabus Changes

Please note that the instructor may need to make modifications to the course syllabus. Notice of such changes will be announced as quickly as possible (in class, or on CASA).

Helpful Information

Coogs Care: <https://uh.edu/dsa/coogscare/>

Student Health Center: <https://www.uh.edu/healthcenter/>

Technology Requirements:

Computer, web camera, and internet access is required for this course.

In summary, students will need:

- a functioning and updated computer (with microphone, speaker or earphones, and webcam)
- reliable internet connection
- PDF viewer
- Ability to log in to CASA for online assignments.
- Ability to watch mp4 files.
- Ability to access Microsoft TEAMS platform. Note that all UH students have access to MS teams with their cougar ID.

What is this class all about? (Course Description)

First off, welcome to Calculus! This subject is all about *change*, and since so many phenomena studied in other fields involve things that change, the language and tools developed in our course are bound to help you succeed there, too. This class is also an excellent introduction to Mathematics in general, providing students with opportunities to learn how mathematicians think about the world around them as well as worlds beyond all of us.

Upon successful completion of this course, you will:

- Understand and apply tools to solve various problems about
 - Instantaneous rates of change
 - Properties of curves
 - Areas of regions bounded by curves
 - Motions of accelerated bodies
- Develop proficiency in calculation-based skills such as
 - Differentiating various combinations of functions
 - Integrating / anti-differentiating elementary functions
- Understand and apply key theorems such as
 - The Intermediate Value Theorem
 - The Mean Value Theorem
 - The Sandwich/Squeeze/Pinching Theorem
 - The Fundamental Theorem(s) of Calculus
- Develop the ability to use graphical information and symbolic expressions when solving mathematical problems
- Develop and practice successful problem-solving strategies that include

- Translating questions written in ordinary, natural languages into mathematical expressions
- Deriving solutions via rigorous mathematical methods
- Interpreting and explaining your results

Note (TCCNS Course Code): If you see any reference to “Math 1431” in your textbook, your instructor’s notes, website or any other course materials, note that Math 1431 is the previous code for Calculus 1 and we will be using the code “Math 2413” starting Fall 2021.

CASA CourseWare - TEXTBOOK

The textbook, online quizzes, and additional help materials will be made available by logging into CourseWare (CASA) at <http://www.casa.uh.edu>. Students pay for access to CASA as part of their fee bill via CTAP. If one opts out of the CTAP, they can purchase an access code for this course at UH Bookstore. In this case, if the code is not entered by the deadline specified on CASA, students will lose access to CASA. No make ups will be given for assignments missed during the no-access period. More information on the Cougar Textbook Access Program (CTAP):

<https://uh.edu/af-auxiliary-services/ctap/>

<https://uh.edu/af-auxiliary-services/ctap/ctap-faqs/>

What work will I be turning in for this course? (Major Assessments)

A student in this class is expected to complete the following assignments:

- 1) Course Policy Quiz
- 2) 3 Regular Exams
- 3) Final Exam
- 4) Online Quizzes
- 5) Homework
- 6) Attendance

Here is how these components will contribute to your final course grade:

Components and Weights of Semester Assignments:

Test 1	16
Test 2	16
Test 3	16
Final	22
Online Quizzes	13
Lab Quizzes	5
Homework (WHW and EHW)	7
Attendance	5
Total:	100

Note: The percentage grade on the final exam (without extra credit) can be used to replace your lowest test score if it is better than your lowest test grade. Also note that the grade calculator does NOT round grades.

Grading Scale: If “x” is your average, letter grades will be assigned as follows:

A	$93 \leq x$	B-	$80 \leq x < 83$	D+	$67 \leq x < 70$
A-	$90 \leq x < 93$	C+	$77 \leq x < 80$	D	$63 \leq x < 67$
B+	$87 \leq x < 90$	C	$73 \leq x < 77$	D-	$60 \leq x < 63$
B	$83 \leq x < 87$	C-	$70 \leq x < 73$	F	below 60

Course Policy Quiz

The course policy quiz can be found on CASA under “online assignments” tab. Students need to make 100% on this quiz in order to have access to other online assignments (quizzes, tests, etc.). Read the syllabus before taking this quiz.

Online Quizzes

NOTE: QUIZ 0 is over the pre-requisite material (PreCalculus). It can be found under the “online assignments” tab at CASA. The main objective of this quiz is to see if you have the necessary background and skills needed to be successful in this course.

You can review basic algebra and precalculus topics to prepare for this quiz. You can find help videos for these topics here: <https://online.math.uh.edu/courses/placement/Modules.html>)

IMPORTANT: If you score low on QUIZ 0 on your first attempt (below 60); you may consider dropping this course to take Math 2312 to prepare for this course. If not, we strongly recommend that you enroll in an SEP WORKSHOP designed for Math 2413 students; you can add a workshop in your

PS account before the last day to add. If you have questions regarding how to add this course, contact your instructor. The workshop counts as a 1-credit course. SEE SEP WORKSHOP SCHEDULE here: <https://uh.edu/nsm/scholar-enrichment/workshops/sep-workshop-schedule.pdf>

Online quizzes will be given regularly in this course.

- Students need to score 100 on the Course Policy Quiz in order to see the other online assignments.
- The quizzes are located in the CASA CourseWare course website under the “Online Assignments” tab.
- The quizzes will close on the due dates given on CourseWare at 11:59 pm and will not re-open. If the quiz is still open when the time expires, your work will not be saved; you must **submit** any online assignment before 11:59pm.
- **Two lowest** quiz scores will be dropped. The primary reason for this policy is to offset the impact of zero/low quiz scores due to emergencies on a student’s final course grade.
- You have **10 times** to take each quiz.
- Quiz topics will be specified on the quiz description; can be seen on CASA.
- There is a 60 minute time limit for most quizzes. Some quizzes might be shorter or longer.
- There may be 2 or more quizzes due every week; check the due dates carefully.

Once a quiz closes, then it is over for the semester. Neither I, nor the Department of Mathematics, is responsible for any difficulty that you have in accessing the quizzes. Please do not delay taking quizzes – there are times during the week when CourseWare is slow or overloaded. There is no amnesty period for the quizzes; the quizzes will NOT be reopened at the end of the semester.

Please contact CourseWare tech support directly if you are having technical problems with your account or an assignment. The email link is on the CASA homepage.

Homework

- There are weekly homework assignments. The homework problems and due dates will be posted on CASA. Some weeks, there might be more than one assignment.
- For multiple choice homework (EHW): You will submit your answers using “EMCF” or “Assignments” tab at CASA before the due date. Check your CASA class page for detailed instructions.
- For Written Homework (WHW): The files will be posted on CASA. Students will turn in their completed WHW in labs on the due dates. Follow the instructions on the cover sheet. WHW grades will be posted on CASA (out of 100pts). Graded WHW will not be returned to students; make a copy of it before turning it in.
- Late Homework will not be accepted.

- One of the lowest homework assignment scores will be dropped. The primary reason for this policy is to offset the impact of zero/low HW scores due to emergencies on a student's final course grade.
- Your initial score on the multiple-choice homework is the number of correct answers out of the total number of questions and will be converted to be out of 100 in about a week after grading.
- Students are expected to check the calendar on CASA often (to see the due dates for HW and quizzes) and to plan ahead and work on the assignments in a timely manner.

Attendance

Attending lectures and labs is very important for your learning experience. Try your best to attend all lectures and labs. See "presence in class" item in this document.

Your instructor will explain how attendance will be taken. Bring a smart phone or another device (tablet, laptop, etc.) to class so that you can answer questions given by your instructor on CASA while you are in class.

Attendance questions can be given at any time during the lecture; those students who are late to class will not be given a chance to see the previous questions. Earlier questions may be locked as the lecture progresses. Last questions will be due by the end of the lecture. Make sure you submit your answers before you leave the classroom.

Sharing the answers to attendance questions with students who are not present in class is considered a violation of Academic Honesty policies and might have consequences as explained on that item in this syllabus (see below).

Attendance is for attending class; no make ups will be given for any reason. To cover for emergencies or medical issues, your instructor will excuse 3-4 missed lectures by dropping a certain number of attendance items.

RECITATIONS (LABS)

This course is a 4-credit course because of the lab component. All students are expected to attend the labs they registered for.

Any student who is registered for this course should also be registered for a lab section. You will not receive a separate grade for the lab section. The lab sessions are led by Teaching Assistants from the mathematics department. Record your TA's name and email. Labs start on the first day of school (even if your lab is scheduled for a time before the lecture, it will start on the first day).

You will turn in written homework assignments, work on class work assignments and take written quizzes in your lab. Your TA will answer questions you bring to the lab.

Your lab TA might take attendance on any lab without prior notification. You will be excused for missing 3 labs. **Attendance is mandatory.** Make sure you attend the lab section you are enrolled for

in PeopleSoft. If you attend the wrong section, your grades may not be recorded in the system. Check your lab time and location in PeopleSoft.

Lab Quizzes:

Weekly lab quizzes will be given in recitations; dates will be announced on CASA calendar. Students must attend labs to take these quizzes; no other format will be available. In general, lab quizzes will cover the previous 3-4 lectures' material. Students are encouraged to study after each lecture to learn the material, bring their questions to the labs and get help as needed to be successful in this course.

Graded lab quizzes will be returned to students (generally the week after).

One lab quiz grade will be dropped to cover for emergencies or unexpected events.

Tests

There will be 3 tests along with a mandatory final exam.

- Tests 1,2,3 and final exam will be taken at CASA Testing Center by reservation.
- **IMPORTANT:** Tests will be taken with reservation; **you must make a reservation to take a test prior to the first testing day. Students are responsible for scheduling their exam before the testing window begins.** Once the testing window begins, CASA does not guarantee having available seats. Follow the instructions on CASA to reserve a time for your tests; print out the webpage showing your reservation time for your records and proof of your reservation. Reservations are made on a first come first served basis; schedule your exams as soon as the scheduler opens up.
- If you miss your reserved time, log in to your account to see if there are any other time slots available and if so, make a new reservation. Your instructor does not control the scheduler.
- You have 1 attempt on all tests.
- You can NOT use calculators during any of the exams; study accordingly.

Exam topics: *(Any changes on the exam topics or dates will be announced on the course website or in the CASA calendar)*

Test 1	Chapters 1 and 2	23 Feb – 25 Feb
Test 2	Chapter 3	23 Mar – 25 Mar
Test 3	Chapters 4 and 5	20 Apr - 22 Apr
Final	Comprehensive (covers all chapters)	8 May-10 May, 2023.

Final Exam

Final is comprehensive and mandatory for **ALL** students. **There is no “exemption” or “opt-out” from the final.** Reserve a seat for it when reservation begins. Reservations are made online at CASA on a first come first serve basis. **Make your travel plans so that you are available during the testing period.**

Your raw score on the final will be used to replace the lowest test score if it is better. The primary reason for this policy is to offset the impact of zero scores due to emergencies (medical, personal, or otherwise) on a student’s final course grade.

Grade Appeals

Grade appeals on any assignments should be made within five business days of the posting of the assignment grade.

Extra Credit

There are practice tests and a practice final on Courseware. If you take the practice test, then 5% of the highest score you earn will be applied to the relevant test as extra credit on the corresponding exam. You can take the practice tests several times (up to 10 times) and we only take your best score. Pay attention to the “end” dates on these. In general, practice tests end the night before the exam starts. Practice tests will not be reopened for any reason; make sure you take them on time.

In general, practice tests end before the exam starts. Your instructor might post a new assignment titled “Practice Test # (NC)” to give you a chance to keep practicing during the testing period. These assignments are not for credit. Any assignment that is titled “... (NC)” will not be counted toward your grade; “(NC)” stands for “not for credit”. To receive extra credit, students should take the items titled “Practice Test #” before they close.

Late Assignments and Make-up Policy

This course is a cumulative course. You as a student need to keep up with the reading, quizzes, homework assignments and exams. Students are expected to check the calendar on CASA several times a week and plan ahead so that they do not miss assignments. We drop some assignments primarily to offset the impact of zero/low scores due to emergencies on a student’s final course grade. Hence, students should not expect to have an option to make up missed assignments unless in the case of an excused absence (See: Excused absence policy below).

If you miss a test, it may be possible to reschedule a test appointment during the testing period (depending on space availability) by using the online scheduler. Rescheduling must be made online in your account; your instructor is not responsible for finding seats or making reservations for you. Your

final exam score will replace your lowest midterm exam score if the former is higher. A missed test will result in a score of zero. If you miss two or more exams, only one of those scores will be replaced. The primary reason for this policy is to offset the impact of zero/low test scores due to emergencies on a student's final course grade.

If requesting make up work (assignment or test) due to an excused absence: the student needs to contact the instructor in writing before the next class meeting (or as soon as possible afterwards with an explanation regarding why the notice could not be sent before the next class meeting). Read the **Undergraduate Excused Absence Policy to see a list of documentations to support your request; follow the guidelines provided on this document to make your request. Your instructor will inform you of the decision in writing (via email).**

Note: If students lose access to CASA temporarily due to not entering access code by the deadline, or being temporarily dropped from the course for non-payment, then they are responsible for any assignment deadlines that are missed.

How does this class work? (Course Structure and Delivery Format)

This course features a corresponding recitation that does not have a separate grade. Regular class time (or "lecture") comprises three hours a week and lab time ("recitation") is also three hours. Graduate teaching assistants conduct these lab sessions, and they are designed to provide you the opportunity to work on practice problems and collaborate with other students in a smaller, student-focused setting.

Course Delivery Format

This course is being offered in the face-to-face format. This course is not self-paced. Students are expected to follow assignment due dates as specified on CASA calendar. **Live meetings** (lectures and labs) for this course will take place according to the class schedule. This is a face-to-face class and by signing up for this class, students agree that they are available during the lecture and lab meeting times.

Due to the changing nature of the pandemic, a team for this class will be created and available on MS TEAMS. No code needed, all students enrolled in this course will be added to the team automatically.

- Make sure you are a member of the team: H_20231_MATH_2413_18226
- **Make sure your notifications are on; your instructor will post messages and announcements on the discussion channel in your team.**
- If we move to the online setting: Students are expected to behave professionally during live meetings. Any students who do not follow the university's code of conduct might be removed from the meeting. Turn off your webcam and microphone before joining the meeting. By joining a live meeting, students give consent to be recorded on the live meeting video.
- Use the discussion channel on this team to ask general questions.

STUDYING FOR THIS COURSE; TUTORING OPTIONS

Note that that this course is a 4-credit course; students are expected to attend lecture and labs. **Every week**, we recommend planning to spend **at least 12 hours of outside of lecture time** to study for this course (the general principle is at least 3 hours per credit every week). In order to be successful in this course, students should study regularly, plan ahead to work on the assignments, get help when needed. A consistent effort is essential to getting a good grade.

You can get help by:

- Attending labs
- Attending your instructor's office hours
- Visiting **CASA tutoring center**
- Visiting **LAUNCH** tutoring center.

Tips for Success:

- Attend class and ask questions.
- Study after each lecture.
- Come prepared; understand the material presented on the previous lecture.
- Attend lab and ask questions.
- Work on your HW and take online quizzes after the material is covered in class. Do not wait until the due dates so that you can get help.
- Practice is key: retake your quizzes.
- Studying for your exams:
 - Learn the material every week; take care of your assignments every week.
 - As you study, make a note of those topics you do not quite understand and visit your instructor during office hours or bring them to your recitation session with the teaching assistants for clarification of these concepts.
 - During the week prior to a test; work on the review sheet, take and retake the practice tests.
 - Review corresponding Homework assignments as you prepare for the upcoming tests.
 - Attend lab and tutoring services to get help.
- Eat and sleep well!

Office Hours:

My office hour information is posted on CASA. You can walk in during those hours; no appointment needed. Please check your CASA class page for more information.

Communication via Email

Email communications related to this course will be sent to your **Exchange email account** which each University of Houston student receives. The Exchange mail server can be accessed via Outlook, which provides a single location for organizing and managing day-to-day information, from email and calendars to contacts and task lists. Exchange email accounts can be accessed by logging into Office 365 with your CougarNet credentials or through Access UH. They can also be configured on **IOS** and **Android** mobile devices. Additional assistance can be found at the **Get Help** page.

Per UH Policy, notices properly addressed and so sent (for example, via PeopleSoft) shall be presumed to have been received by the student. Thus, you are responsible for the content in emails sent to your UH account, regardless if your external (non-UH) email provider filters or blocks them.

When emailing your instructor, it is recommended that you use your COUGARNET email and include the course name on the subject line so that your instructor can address your questions accordingly. Please read this link for more on communication via email: **EMAIL ETIQUETTE** (<https://www.math.uh.edu/~tomforde/Email-Etiquette.html>). **If you do not send the email from your COUGARNET account, it might be automatically sent to junk mail and your instructor might not receive the email.**

IMPORTANT: Note that your instructor will communicate with you via email. **Your instructor will not reply to chat messages via MS TEAMS outside of class times.** Calls from MS TEAMS will not be responded to unless they are made by appointment. If you leave a voice mail at your instructor's office phone, he/she might not receive it. **The best way of communication with your instructor outside of class times is via email.**

Academic Honesty Policy

University of Houston students are expected to adhere to the Academic Honesty Policy as described in the UH Undergraduate Catalog. "Academic dishonesty" means employing a method or technique or engaging in conduct in an academic endeavor that contravenes the standards of ethical integrity expected at the University of Houston or by a course instructor to fulfill any and all academic requirements. Academic dishonesty includes, but is not limited to, the following: *Plagiarism; Cheating and Unauthorized Group Work; Fabrication, Falsification, and Misrepresentation; Stealing and Abuse of Academic Materials; Complicity in Academic Dishonesty; Academic Misconduct.* Refer to **UH Academic Honesty website** and the UH Student Catalog for the definition of these terms and university's policy on Academic Dishonesty. Anyone caught cheating will be reported to the department for further disciplinary actions, receive sanctions as explained on these documents, and will have an academic dishonesty record at the Provosts office. The sanctions for confirmed violations of this policy

shall be commensurate with the nature of the offense and with the record of the student regarding any previous infractions. Sanctions may include, but are not limited to: a lowered grade, failure on the examination or assignment in question, failure in the course, probation, suspension, or expulsion from the University of Houston, or a combination of these. Students may not receive a W for courses in which they have been found in violation of the Academic Honesty Policy. If a W is received prior to a finding of policy violation, the student will become liable for the Academic Honesty penalty, including F grades.

Posting answers for attendance questions (poppers) or Homework questions online (at group chats or other online tools) is considered an academic honesty violation. Students are expected to know the difference between “getting/giving HELP on a problem” and “getting/giving answers to a problem”. If a student is caught sharing answers (in person or online), he/she might be reported to the departmental hearing officer for an academic honesty violation. If a student becomes aware of cheating or any other violations, that student is responsible for informing the instructor.

Honor Code Statement

Students may be asked to sign an honor code statement as part of their submission of any graded work including but not limited to projects, quizzes, and exams: *“I understand and agree to abide by the provisions in the University of Houston Undergraduate Academic Honesty Policy. I understand that academic honesty is taken very seriously and, in the cases of violations, penalties may include suspension or expulsion from the University of Houston.”*

Copyright

The materials provided by the instructor in this course are for the use of the students enrolled in the course only. Copyrighted course materials may not be further disseminated without instructor permission. This includes sharing content to commercial course material suppliers such as Course Hero or Chegg. Students are also prohibited from sharing materials derived from the instructor’s content (e.g., a student’s lecture notes).

UH CAPS

Counseling and Psychological Services (CAPS) can help students who are having difficulties managing stress, adjusting to college, or feeling sad and hopeless. You can reach CAPS (www.uh.edu/caps) by calling 713-743-5454 during and after business hours for routine appointments or if you or someone you know is in crisis. No appointment is necessary for the "Let's Talk" program, a drop-in consultation service at convenient locations and hours around campus.

<https://uh.edu/caps/outreach/lets-talk/>

List of Topics

Functions and Their Limits (Chapter 1)

- Concept and definition of a limit
- Visualizing and computing limits
- Continuity and types of discontinuities
- The Intermediate Value Theorem
- Squeeze Theorem and Special Limits

Differentiation (Chapter 2)

- The limit definition of the derivative
- Derivatives of Polynomials and Trig Functions
- Differentiation Rules (Product, Quotient, Chain)
- Implicit Differentiation

Applications (Chapters 3 and 5)

- Related Rates
- The Mean-Value Theorem
- Local and absolute extrema
- Concavity and Points of Inflection
- Curve Sketching
- Optimization
- Differentials / Tangent Line Equations
- L'Hospital's Rule

Transcendental Functions (Chapter 4)

- Inverse Functions
- Exponential Functions
- Logarithmic Functions
- Inverse Trigonometric Functions
- Hyperbolic Functions

Integration (Chapter 6)

- The Definite Integral
- The Fundamental Theorems of Calculus
- Rules of Integration
- Integration by Substitution