

MATH 1431 (16679) COURSE SYLLABUS

The information contained in this class syllabus is subject to change without notice. Students are expected to be aware of any additional course policies presented by the instructor during the course.

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Instructor: Rebecca George, 218C PGH, rageorge@central.uh.edu

Office Hours: in 218C PGH: Tuesdays & Thursdays 11:45-12:45 and by appointment

Course Homepage: <http://www.casa.uh.edu>

Learning Objectives

Upon successful completion of this course, students will understand and be able to apply the ideas of differential and integral calculus to problems involving instantaneous rates of change, properties of curves, areas bounded by curves, and motions of accelerated bodies. They will develop proficiency in the rules and techniques of single-variable calculus, including derivatives of various combinations of functions, the chain rule, substitution, the mean value theorems, and the fundamental theorem of calculus. Students will be able to use graphical information and symbolic expression simultaneously in solving mathematical problems. They will be able to translate ordinary language descriptions of problems into mathematical expression, derive solutions by rigorous mathematical methods, interpret their results, and explain them.

This course has a corresponding recitation that does not have a separate grade. Lecture is 3 hours per week and Lab (recitation) is also 3 hours. The lab hours are an extension of lecture and an opportunity to work on homework and practice extra problems to prepare you for exam day. These lab sessions are mandatory and are a portion of your overall grade calculation.

COMMUNICATION via EMAIL

Your instructor will be sending class emails using PeopleSoft; you are responsible for checking your UH email. 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 a professional email address 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](#)

HONOR PRINCIPLE

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 receive sanctions as explained on these documents and will be reported to the department for further disciplinary action. 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.

Major Assignments/Exams

ASSESSMENTS

- Test 1 (online) 3%
- Tests 2, 3, 4 (proctored in CASA) 15% each
- Final exam- 25%
- LAB (recitation) Grade: 15%
- Online Quizzes - 8%
- In-class Poppers and Attendance - 4%

Note: The percentage grade on the final exam can be used to replace your lowest test score.

GRADING SCALE

University of Houston standard grading scale will be used to determine your letter grade in this course. If x is your semester numerical score, then your grade will be:

A	$x \geq 93$	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

It is the student's responsibility to withdraw from the course. Your instructor cannot do this for you. You are **STRONGLY** encouraged to talk with your advisor, your TA and your instructor **prior** to withdrawal.

INSTRUCTIONS FOR POPPERS

- For each lecture starting on the third week of classes you will be asked a series of problems that will have to do with the lecture.
- This requires a buying a poppers package from the bookstore. Make sure that the package is for section 1431 – 16679
- You are required to fill in your id number, popper number and blacken the correct circles. Make sure that your id number and popper number are correct before turning in the popper at the end of the lecture. If these are not filled out correctly or if the darken circles are too light you will not get credit for that day's lecture even if you attended. Popper grades **will not be adjusted** after form submission, so be sure to pay close attention when filling in your daily popper.
- Completing poppers for another student is in violation of the University's Academic Policy. Violations are reported to the DHO (the departmental hearing officer for the Honor Board).
- The total number of questions for the course will be counted, 85% of the total number of questions will be the 100%. For example, *if* there are 5 questions each class for 24 classes, which is 120 questions. Your grade will be calculated out of $120(.85) = 102$ points.

INSTRUCTIONS FOR ONLINE QUIZZES

- 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.
- One of the lowest quizzes will be dropped.
- You have 20 times to take each quiz.
- There is a 60 minute time limit for each quiz.

HOMEWORK:

- Written homework can be found on your instructor's CASA page and will contain problems from the textbook and / or assigned problems according to the instructor and turned in during your recitation. Written homework must be turned in on appropriate form with all work shown in the space provided for full credit.
- You must turn in your homework – another student may not do so for you. Failure to comply will result in zeros for all persons involved.
- Late homework will not be accepted.**
- Electronic multiple-choice problems **may be** assigned by your instructor and entered on CourseWare under the EMCF tab.
- One of the lowest homework scores will be dropped.

RECITATION (LAB):

- Attendance is mandatory for all labs.
- Perpetual Tardiness will not be tolerated and may affect your grade.
- Lab work may be assigned for attendance.
- Lab quizzes are given weekly.
- See your TA's syllabus for how your lab (recitation) grade will be calculated. Your lab information is on CourseWare under MLAB 1431.
- If student is absent from lab, any assignments / quizzes missed **cannot be made up.****

LATE ASSIGNMENT, MAKE-UP AND INCOMPLETE POLICIES

- This course is a cumulative course. You as a student need to keep up with the reading, quizzes, homework assignments and exams. Thus, late work or make-ups will not be accepted. ****In case of late enrollment or re-registration after being dropped:** No make ups will be provided for assignments missed during the "no access to the course" period due to late enrollment or being dropped. Similarly, if students lose access to CASA for not entering access code by the deadline, there will be no make ups for the assignments they missed during that period.
- The temporary grade of I (incomplete) is a conditional and temporary grade assigned when students for non-academic reasons beyond their control have not completed a relatively small part of all requirements for a course. The student must:
 - be currently passing the course or have a reasonable chance of passing the course, in the judgment of the instructor;
 - contact the instructor immediately regarding the reasons that prevent the student from completing the course, final assignment and/or final examination;
 - initiate the request for an I grade within 90 days of the posting of the course grade;
 - make arrangements with the instructor to complete the course requirements, if assigned;
 - understand that the only way to have an I grade changed to a passing grade is to fulfill course requirements in accordance with the conditions specified by the instructor;
 - understand that the grade of I may be changed only to another letter grade. If the student does not complete the course requirements in the time allotted (a maximum of one year) the I grade will convert to an F grade and will be noted as a lapsed incomplete on the student's transcript. An I grade once lapsed to an F grade may not be changed to a grade of W; and
 - not re-enroll (re-register) for the courses in which their grade is currently recorded as an I. Even when the conditions for fulfilling the course requirements include participation in all or part of the same course in another semester, the student must not re-enroll (re-register) for the course.

****NOTE:** Exception may be made per the [Student Academic Adjustments/Auxiliary Aids Policy](#) for students with approved CSD accommodations, as well as for students with an official excused absence as recognized by University of Houston in accordance with federal and state law.

EXAM INFORMATION

Midterm testing dates:

Test 1: (online) Opens August 19th and closes August 29th

Test 2: September 14th to September 18th

Test 3: October 14th to October 17th

Test 4: November 8th to November 12th

Final Exam: Covers chapters 1 through 6 (comprehensive) **December 5th to 8th**

- The tests will be given in CASA located on the second floor of Garrison or in CBB or in AH, see the exam scheduler for details.
- You can access the scheduler for these exams by logging into Courseware.
- The exams given in CASA will consist of both multiple choice and written questions.
- The multiple-choice questions will be machine graded.
- The written questions (free response) will be graded by the instructors and teaching assistants.
- There will be a practice test on Courseware for each exam. 5% of your practice test score will be added to your exam score as bonus. The due date for practice exams is the day before the exam period begins.
- The scheduler will be available approximately 2 weeks prior to the start of the exam cycle. Exam dates are listed above.

REQUIRED READING

- Course webpage: <http://www.casa.uh.edu>
- The textbook, online quizzes, and additional help materials will be made available by logging into CourseWare at <http://www.casa.uh.edu>. The first portion of these materials are freely available for the first two weeks of class. All students must purchase a Course Access Code and enter it on CourseWare by the end of the second week of class to continue accessing the course learning materials. A Course Access Code must be purchased for \$50 from the University Bookstore.

TUTORING OPTIONS

- For help with any pre-requisite materials, you can log on to your CASA account, then choose MATH PLACEMENT from your course listing and then choose Help Videos
- SEP [workshop schedule](#)
- CASA [Tutoring Center](#)
- LAUNCH [Website](#)
- ONLINE Tutoring: Information is on the course webpage

Student Success Program

This course is part of a Student Success Program which includes activities beyond the traditional lecture and recitation study groups. This program will provide early assistance to students who are having academic difficulties in the course and offer worthwhile enrichment opportunities for all students. Currently, this program is supported by a Howard Hughes Medical Institute (HHMI) Undergraduate Science Education Grant. For more info: <http://www.uh.edu/nsm/scholar-enrichment/>

List of discussion/lecture topics

Chapter 1 Limits and Continuity

- 1.1 A Review of Functions
- 1.2 An Intuitive Introduction to Limits
- 1.3 Definition of Limit and Arithmetic Rules
- 1.4 Continuity
- 1.5 The Intermediate Value Theorem
- 1.6 Limits of Trigonometric Functions and the Pinching Theorem

Chapter 2 Differentiation

- 2.1 The Definition of the Derivative
- 2.2 Derivatives of Polynomials and Trigonometric Functions
- 2.3 Differentiation Rules
- 2.4 Implicit Differentiation

Chapter 3 Applications of the Derivative

- 3.1 Related Rates
- 3.2 The Mean-Value Theorem
- 3.3 Intervals of Increase and Decrease
- 3.4 Extreme Values
- 3.5 Concavity and Points of Inflection
- 3.6 Curve Sketching

Chapter 4 The Transcendental Functions

- 4.1 Inverse Functions
- 4.2 The Exponential Function
- 4.3 Natural Logarithm Function
- 4.4 Inverse Trigonometric Functions
- 4.5 Hyperbolic Functions

Chapter 5 Further Applications of the Derivative

- 5.1 Optimization
- 5.2 Differentials
- 5.3 L'Hospital's Rule

Chapter 6 Integration

- 6.1 The Definite Integral
- 6.2 The Fundamental Theorem of Calculus
- 6.3 Basic Integration Rules
- 6.4 Integration by Substitution

STUDENT DISSABILITY ACCOMMODATIONS AND SERVICES

The University of Houston System 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 students who have a disability. In accordance with Section 504 and ADA guidelines, University of Houston 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 visit The [Center for Students with DisABILITIES \(CSD\)](http://www.uh.edu/csd/) website at <http://www.uh.edu/csd/> for more information.

Academic Adjustments/Auxiliary Aids: The University of Houston System 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 students who have a disability. In accordance with Section 504 and ADA guidelines, University of Houston 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 visit The [Center for Students with DisABILITIES \(CSD\)](http://www.uh.edu/csd/) website at <http://www.uh.edu/csd/> for more information.

Accommodation Forms: Students seeking academic adjustments/auxiliary aids must, in a timely manner (usually at the beginning of the semester), provide their instructor with an approved current Student Accommodation Form (paper copy or [online version](#), as appropriate) before an approved accommodation can be implemented.

Details of this policy, and the corresponding responsibilities of the student are outlined in [The Student Academic Adjustments/Auxiliary Aids Policy \(01.D.09\)](#) document under *[STEP 4: Student Submission (5.4.1 & 5.4.2), Page 6]*. For more information please visit the Center for Students with Disabilities [FAQs](#) page.

Additionally, if a student is requesting a (CSD approved) testing accommodation, then the student will also complete a Request for Individualized Testing Accommodations (RITA) paper form to arrange for tests to be administered at the CSD office. CSD suggests that the student meet with their instructor during office hours and/or make an appointment to complete the RITA form to ensure confidentiality.

*Note: RITA forms must be completed at least 48 hours in advance of the original test date. Please consult your [counselor](#) ahead of time to ensure that your tests are scheduled in a timely manner. Please keep in mind that if you run over the agreed upon time limit for your exam, you will be penalized in proportion to the amount of extra time taken.

UH CAPS Statement

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.

http://www.uh.edu/caps/outreach/lets_talk.html