

Course Syllabus

Course Number and Section: MATH 2433, 13127

Course Name: Calculus III

Instructor: James West, jdwest@uh.edu

Office Hours: MWF 10 – 11 a.m. and by appointment

Course Homepage: www.casa.uh.edu and [Microsoft Teams](#)

Note about Copyrights: 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).

Textbook Sections Covered:

Chapter 11. Vectors

Section 11.1 Cartesian Space Coordinates

Section 11.2 Vectors

Section 11.3 The Dot Product

Section 11.4 The Cross Product

Section 11.5 Lines

Section 11.6 Planes

Chapter 12. Vector Calculus

Section 12.1 Vector Functions

Section 12.2 Differentiation Formulas

Section 12.3 Curves

Section 12.4 Arc Length

Section 12.5 Curvilinear Motion; Curvature

Chapter 13. Functions of Several Variables

Section 13.1 Basic Terms and Examples

Section 13.2 Graphs; Level Curves and Level surfaces

Section 13.3 Limits and Continuity

Section 13.4 Partial Derivatives

Chapter 14. Gradients; Extreme Values; Differentials

- Section 14.1 Differentiability and Gradient
- Section 14.2 Gradients and Directional Derivatives
- Section 14.3 The Mean-Value Theorem; Chain Rules
- Section 14.4 The Gradient as a Normal; Tangent Lines and Tangent Planes
- Section 14.5 Local Extreme Values
- Section 14.6 Absolute Extreme Values
- Section 14.7 LaGrange Multipliers; Maxima and Minima with Side Conditions
- Section 14.8 Increments and Differentials
- Section 14.9 Reconstructing a Function from its Gradient

Chapter 15. Double and Triple Integrals

- Section 15.1 Double Integrals
- Section 15.2 The Evaluation of Double Integrals by Repeated Integrals
- Section 15.3 Evaluating Double Integrals Using Polar Coordinates
- Section 15.4 Some Applications of Double Integration
- Section 15.5 Triple Integrals
- Section 15.6 Reduction to Repeated Integrals
- Section 15.7 Cylindrical Coordinates
- Section 15.8 Spherical Coordinates
- Section 15.9 Jacobians; Changing Variables in Multiple Integration

Chapter 16. LINE INTEGRALS AND SURFACE INTEGRALS

- Section 16.1 Line Integrals
- Section 16.2 The Fundamental Theorem for Line Integrals
- Section 16.3 Green's Theorem
- Section 16.4 Parameterized Surfaces; Surface Area
- Section 16.5 Surface Integrals
- Section 16.6 The Vector Differential Operator
- Section 16.7 The Divergence Theorem
- Section 16.8 Stokes' Theorem

Email Policy: In order to make sure I see class related emails, I require that students **include** “MATH 2433 Section 13127” as well as a **searchable description** of the issue in the subject line for **ALL** course-related email correspondence. I repeat, **I am not responsible for addressing any email which does not conform to this policy**. This is especially important when you have a special or urgent issue or request. If you do not receive a timely response to an important email, it is your responsibility to send a follow-up email. If I not respond to your email within one working day, please resend the email. If you again do not hear from me within one more working day, it is likely that your email is not coming through and you should come to office hours or speak with me before or after class. It is your responsibility to ensure that I am aware of issues you may have with the course; failure to effectively initiate timely communication is not a valid basis for a grade grievance and cannot be used as such.

Recorded Lectures: Lectures containing new course material will be given as prerecorded lectures. Students are responsible for watching these and answering “popper” questions to demonstrate that the video has been viewed. These popper questions comprise 3% of the course grade.

Live Help Sessions: Tuesday and Thursday 5:30 – 7 p.m. Live meetings hosted by your instructor, James West, will be offered twice weekly via Microsoft Teams and will have links posted on the CASA Calendar Page and on Teams. These sessions will consist of extra examples and discussions from lecture videos, as well as student questions.

Recitation (lab): Various times. There is no separate recitation grade. You have signed up for the lecture section and recitation (lab) section. The two sections are interwoven in the course, and a grade will be given for the lecture course, representing the work in the combined classes. The lab session is a problem working session that will be offered multiple times each week online at the published times.

CASA Website: THIS CLASS DOES NOT USE UH BLACKBOARD! All course materials will be posted on the course calendar available on the class homepage at www.casa.uh.edu. The software for this website is known as CourseWare but I will frequently refer to it as the CASA website.

Text: Students need to purchase an *Access Code* from the UH bookstore to access the text and additional electronic learning materials through CourseWare at <http://www.casa.uh.edu>. Students are required to purchase the *Access Code*. This *Access Code* must be purchased immediately. Students will lose access to the course after June 4 if this *Access Code* is not purchased. Please do not think of this as optional, it is impossible to pass this class without purchasing an *Access Code*.

Homework: Homework will be assigned each week. Multiple choice homework assignments will be submitted online using an EMCF on CASA. Written homework will be collected throughout the semester. Students will submit their written homework by scanning their written work and then uploading it using the CASA website. Instructions will be given.

Online Quizzes: Online quizzes will be given during the semester. You can attempt these quizzes up to 20 times, and the highest grade will be used for your score. You can access the quizzes by logging into CourseWare at <http://www.casa.uh.edu>. Students are required to routinely check the quiz schedule for new quizzes. The due dates for quizzes are set at the department level and will not reopen once closed. **Quiz due dates may change without notice; however, this will only be in the event of an extension.**

Exams: Exams will be administered online through CASA. Details on the testing procedure (which is subject to modifications as additional online testing tools become available) will be provided by your instructor during the week preceding each testing period. To review the minimum technology requirements for this course, please refer to the following link: <http://www.uh.edu/online/tech/requirements>. Exams for the Fall 2020 semester will be given on the following dates:

Exam Dates:

Test 1 (Online 50 – 75 mins) 9/19
Test 2 (Online 50 – 75 mins) 10/24
Test 3 (Online 50 – 75 mins) 11/21
Final Exam (Online ~110 mins) 12/12

Grading:

Test 1 – 15%
Test 2 – 15%
Test 3 – 15%
Final – 25%
Online Quizzes – 13%
Homework (Multiple Choice + Written) – 10%
Participation – 7%

90% and above – A
at least 80% and below 90% – B
at least 70% and below 80% – C
at least 60% and below 70% – D
below 60% – F

Now, for some university policies:

Face Covering Policy

To reduce the spread of COVID-19, the University [requires face coverings](#) on campus including classrooms for both faculty and students. Face coverings must cover your mouth and nose and be worn throughout the class session. A mask with a valve is not considered an adequate face covering and should not be used, as it can expel exhaled air, increasing the risk to others. Eating or drinking during class is discouraged and is not an excuse for removing the face covering for any extended length of time. For additional information on the use of face coverings, please see [Face Covering FAQs](#). Failure to comply with the requirement to wear a face covering in class will result in your being asked to leave the classroom immediately and a disciplinary referral through the Dean of Students Office. Requests for accommodations relating to the face covering policy may be directed to the [Center for Students with DisABILITIES \(CSD\)](#).

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. Additional policies address absences related to [military service](#), [religious holy days](#), [pregnancy and related conditions](#), and [disability](#).

Interim Undergraduate Grading Policy (required for undergraduate courses)

Due to the unique and unprecedented challenges associated with the COVID-19 pandemic, the University of Houston has implemented an [Interim Undergraduate Grade Policy](#) for undergraduate grades which applies to all undergraduate students in courses offered in all sessions during fall 2020. Under this policy, students have the option of converting final assigned letter grades to S (Satisfactory, applicable to any letter grade from A to D-) or NCR (No Credit Reported COVID-19, applicable to grades of F) on their transcripts. Please visit [FAQs](#) for additional information.

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 [Center for Students with DisABILITIES](#). 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.

Syllabus Changes

Due to the changing nature of the COVID-19 pandemic, please note that the instructor may need to make modifications to the course syllabus and may do so at any time. Notice of such changes will be announced as quickly as possible through email.

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, and Blackboard; requesting a laptop through the Laptop Loaner Program; using your smartphone as a webcam; and downloading Microsoft Office 365 at no cost. For questions or assistance contact UHOnline@uh.edu.

UH 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.

Webcams

Access to a webcam is required for students participating remotely in this course. Webcams must be turned on during exams to ensure the academic integrity of exam administration. A webcam will also be needed to verify identity in the event we meet privately to discuss your grades.

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."

Helpful Information:

COVID-19 Updates: <https://uh.edu/covid-19/>

Coogs Care: <https://www.uh.edu/dsaes/coogscare/>

Laptop Checkout Requests: <https://www.uh.edu/infotech/about/planning/off-campus/index.php#do-you-need-a-laptop>

Health FAQs: <https://uh.edu/covid-19/faq/health-wellness-prevention-faqs/>

Student Health Center: <https://uh.edu/class/english/lcc/current-students/student-health-center/index.php>

Undergraduate Excused Absence Policy

Regular class attendance, participation, and engagement in coursework are important contributors to student success and consistent with expectations outlined in the [Class Attendance Policy](#). Absences will be excused as provided in the University of Houston Undergraduate Excused Absence Policy which applies to all undergraduate courses in all delivery modes.

1. EXCUSED ABSENCES

Absences from class including exams and submission of assignments or other course requirements may be excused for the following reasons:

- a. Medical
 - i. Injury or illness of a student that is too severe or contagious to attend class or participate in course requirements. Students should not come to class or participate in campus activities if they are sick and may be contagious and should contact the [Student Health Center](#) or their health care provider as necessary.
 - ii. Illness of a dependent family member.
 - iii. Serious illness of a close family member (parents, siblings, grandparents, spouse, cohabitating partner, child, cohabitating partner/spouse's child, cohabitating partner/spouse's parents, cohabitating partner/spouse's grandparents, step-parents, step-siblings, step-grandparents, grandchild, step-grandchild, legal guardian, and others as approved by course instructor, college dean, or dean's designee).
- b. Death in Family—Death of a close family member (parents, siblings, grandparents, spouse, cohabitating partner, child, cohabitating partner/spouse's child, cohabitating partner/spouse's parents, cohabitating partner/spouse's grandparents, step-parents, step-siblings, step-grandparents, grandchild, step-grandchild, legal guardian, and others as approved by course instructor, college dean, or dean's designee).
- c. Legal or Government Proceeding—Participation in legal or government proceeding that cannot be rescheduled.

- d. Professional and Educational Activities
 - i. Mandatory interviews for graduate or professional school that cannot be rescheduled.
 - ii. Mandatory interviews for full-time employment or internships that are related to the student's academic program and cannot be rescheduled.
 - iii. Presentation of research or scholarship at a professional conference that is related to the student's academic program.

- e. University Sponsored Activity—As indicated in the [Class Attendance policy](#), absences caused by participation in a campus-sponsored activity are considered official if the sponsor of the activity has received approval from the appropriate university administrator.

- f. Athletic Competition—Mandatory participation as a student athlete in NCAA-sanctioned competition.

- g. Weather Related Events- Dangerous weather conditions in which driving or other means of travel is considered by local authorities to be unsafe.

- h. Other—Additional compelling reasons as approved by instructor or college dean.

2. EXCUSED ABSENCE APPROVAL PROCESS

- a. Notification
 - i. Students are required to submit an excused absence request in writing (email is acceptable) to the instructor(s) of the course(s) in which absences occur. Students should contact their instructor(s) by phone if written or email communication is not possible. Instructor(s) phone numbers can be found in the [Campus Directory](#)
 - ii. Requests for planned absences should be submitted to instructors as soon as the conflict becomes known and no later than 5 business days, if possible, before the anticipated absence.

iii. Unexpected absences should be communicated to the instructor 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.

b. Documentation

i. Documentation to support requests for excused absences may include but is not limited to the following:

- Written confirmation from the student's medical provider if medical professionals are involved in the care of the student. Confirmation should include the date and time of the medical assessment and the date at which the student may return to classes. Students cannot be required to provide detailed medical information.
- Written confirmation from the medical provider involved in the care of the student's close family member or dependent if medical professionals are involved in the care of the family member or dependent. Students cannot be required to provide detailed medical information.
- Death notice, obituary, or death certificate for a student's immediate family member.
- Copy of appropriate documentation related to legal activities.
- Confirmation of mandatory athletic participation from an appropriate Athletics administrator.
- Confirmation of mandatory interviews from employers or appropriate officials at institutions of higher education.
- Conference program including documentation confirming that the student will be a presenter of scholarly work.
- Confirmation of participation in a University sponsored activity from an appropriate administrator.
- A number of reasons for absence are not documentable, and instructors are encouraged to use their best judgment in evaluating student requests.

ii. Providing false information or documentation is unacceptable. Allegations of misconduct will be referred for review and may be

considered as prohibited conduct under the [Student Code of Conduct](#) or an act of academic dishonesty under the [Academic Honesty Policy](#).

c. Verification and Decision

- i. An instructor may verify a student's absence documentation or defer verification and decision, including cases when documentation is not available, to the college dean or dean's designee.
- ii. The instructor, dean, or dean's designee must provide the student with a decision in writing regarding whether the excused absence is approved within three business days of receiving the student's request. Decisions must be made irrespective of the grade the student is currently earning in the class.

d. Appeal

- i. A student may appeal an instructor's decision regarding an excused absence request within 3 business days of receiving the decision. The appeal should be submitted in writing (email is acceptable) to the college dean or dean's designee who must provide a decision in writing to the student within 3 business days of receiving the appeal.
- ii. A student may appeal the decision of a dean or dean's designee within 3 business days of receiving the decision. The appeal should be submitted in writing (email is acceptable) to the appropriate administrator in the Office of the Provost who must provide a decision in writing to the student within 3 business days of receiving the appeal.
- iii. The decision of the Office of the Provost is final and further appeal is not permitted.

3. MAKE UP WORK

If a student's absence is excused, the instructor must either provide the student an opportunity to make up any quiz, exam or other work that contributes to the course grade or provide a satisfactory alternative by a date agreed upon by the student and instructor.

4. EXTENDED ABSENCES

- a. Excused Absence Limit— Excused absences under this policy may be granted for a maximum percentage of coursework as determined by the instructor in each class, typically 15%. Coursework limit may include “clicker” questions, exams, quizzes, and homework. The limit does not include the final exam.

- b. Extended Absence Alternatives—Students with absences that exceed 15% of coursework are encouraged to seek potential alternative options provided in other policies including [Dropping Courses](#), [Withdrawals](#), and temporary grades of [Incomplete](#). Faculty also have the option to drop students for [excessive absences](#) until the official closing date of the term.

5. RELATED POLICIES

Additional policies address excused absences for reasons that are not covered in this policy including the following:

- a. Military Service: [Excused Absence for Military Service Policy](#).
- b. Religious Holy Days: [Religious Holy Days Policy](#).
- c. Pregnancy and Related Conditions: [University of Houston System Anti-Discrimination Policy](#).
- d. Disability: [University of Houston System Student Academic Adjustments/Auxiliary Aids Policy](#).

Additional policies that address extended absences:

- a. Emergency Withdrawal: [Medical/Administrative Withdrawal](#)
- b. Military Withdrawal: [Students Called to Active Duty](#)

Whenever possible, and in accordance with 504/ADA guidelines, we will attempt to provide reasonable academic accommodations to students who request and require them.

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 (<http://www.uh.edu/provost/policies/honesty/>) 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.

Please note that cases of using websites/apps like GroupMe and Chegg to facilitate cheating will be punished to the maximum degree possible. This includes grades of 0 on any assignments or exams and potentially a grade of F for the course.

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

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 Student Resources 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. **Students should bring a copy of their approved SAF form when meeting with the instructor to complete a RITA form.**

*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 allotted time indicated on your RITA form, then your exam score will be reduced 1 percentage point for each minute over.**