

MATH 2730.410 Multivariable Calculus (INET)

Fall 2026

Instructor

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Office Hours: By appointment

Course Format: Asynchronous online

Course Description

Vectors and analytic geometry in 3-space; partial and directional derivatives; extrema; double and triple integrals and applications; cylindrical and spherical coordinates.

Course Prerequisites

A grade of C or higher in either MATH 1720 or MATH 1830.

Course Objectives

Upon successful completion of this course, students will:

1. Perform calculus operations on vector-valued functions, including derivatives, integrals, curvature, displacement, velocity, and acceleration.
2. Perform calculus operations on functions of several variables, including partial derivatives, directional derivatives, and multiple integrals.
3. Find extrema and tangent planes.

Required Textbook and Equipment

Textbook: *Calculus*, 9th edition, James Stewart, with WebAssign eBook/access.

Students must have access to a computer or other device meeting the technical requirements for Canvas, WebAssign, and Respondus LockDown Browser with webcam.

Students will also need a webcam and a means of scanning or photographing handwritten work for submission through Canvas. Paper, pencils or pens, and a calculator will be needed for exams.

Course Format and Participation

This is a fully asynchronous online course. Course materials, assignments, announcements, and other information will be provided through Canvas and WebAssign.

Students are responsible for regularly checking Canvas, keeping up with the posted course material, and completing assignments and exams by their stated deadlines. Assignments and exams have specific due dates.

Grading

Component	Percentage
WebAssign Homework	15%
Written Homework	5%
Exam 1	25%
Exam 2	25%
Comprehensive Final Exam	30%

Final course grades will be assigned according to the following scale:

A: 90–100

B: 80–<90

C: 70–<80

D: 60–<70

F: 0–<60

Homework

WebAssign Homework

WebAssign homework will normally be due on Sundays at 11:59 p.m. The two lowest WebAssign homework grades will be dropped.

Written Homework

Written homework will be submitted through Canvas and will normally be due on Sundays at 11:59 p.m. The two lowest written homework grades will be dropped.

Late homework is accepted when required by university policy or an approved accommodation.

Exams

Exam 1: Friday, October 2 — 25%

Exam 2: Friday, November 13 — 25%

Comprehensive Final Exam: Wednesday, December 9 — 30%

The final exam will be available online throughout the day on December 9.

Exams will be administered online using Respondus LockDown Browser with a webcam. Students will complete mathematical work on blank paper and submit their written work according to instructions provided in Canvas.

Information concerning exam procedures, time limits, permitted materials, and coverage will be provided in Canvas.

Students who are unable to take an exam because of an authorized absence, approved accommodation, or other qualifying circumstance should contact the instructor as soon as possible. Makeup arrangements will be determined as appropriate.

Tentative Course Schedule

The following schedule is tentative and may be adjusted as necessary during the semester.

Week	Material
1	12.1, 12.2
2	12.3, 12.4, 12.5
3	12.6
4	13.1, 13.2
5	13.3, 13.4
6	14.1, 14.2
7	14.3; Exam 1
8	14.4, 14.5
9	14.6, 14.7
10	14.8
11	15.1
12	15.2, 15.3
13	15.6, 15.7; Exam 2
14	15.8
Thanksgiving Break	No classes
15	16.1, 16.2
Final Exam Week	Comprehensive Final Exam

Changes to the Syllabus

The instructor may make reasonable changes to the course schedule or other course details when circumstances require. Changes will be communicated to students through Canvas.

University of North Texas Policies and Resources

The following sections contain university-wide and departmental policies, requirements, and resources and are not specific to MATH 2730.410.

Academic Integrity

According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty includes behaviors such as cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in academic penalties or university sanctions ranging from admonition to expulsion from the University.

Students are responsible for complying with UNT's academic integrity requirements and with the specific instructions provided for assignments and exams in this course.

Unauthorized Aids on Examinations and Assessments

Students may use only those materials and resources that are expressly authorized by the instructor for a particular examination or assessment. Touching, holding, or accessing any unauthorized aid during the examination period constitutes a violation of the Student Code of Conduct, regardless of whether the aid is used.

Any item that may be considered an unauthorized aid must be kept out of view and in a closed container (e.g., zipped backpack, buttoned purse, etc.) during the entirety of the examination or assessment.

Unless specifically authorized in writing by the instructor, prohibited aids include, but are not limited to:

- Mobile phones and smartphones
- Smartwatches and fitness trackers with communication, recording, or internet capabilities
- Tablets, laptops, and other computing devices
- Earbuds, headphones, and other audio devices
- Smart glasses, cameras, recording devices, and wearable technology
- Artificial intelligence (AI) tools, chatbots, and other generative AI technologies
- Notes, textbooks, study guides, formula sheets, or reference materials
- Any other device, material, or resource not expressly permitted by the instructor

Students are responsible for clarifying any questions about permitted materials before the examination begins.

Disability Accommodations

UNT provides reasonable academic accommodations for qualified students with disabilities. Students seeking accommodations should register with the Office of Disability Access (ODA), which coordinates decisions regarding student accommodations.

Students who receive an accommodation letter should communicate with the instructor regarding implementation of their approved accommodations. Students are encouraged to begin this process as early as possible so that accommodations can be implemented in a timely manner.

Religious Observances and Authorized Absences

UNT recognizes authorized absences in accordance with university policy and applicable law. Students who will miss an examination, assignment deadline, or other required course activity because of an authorized absence, including observance of a religious holy day, should notify the instructor as required by university policy.

Students with an authorized absence will be provided a reasonable opportunity to complete required coursework or examinations in accordance with university policy.

Emergency Notification and Procedures

UNT uses **Eagle Alert** to communicate critical information to students in emergencies, including severe weather, university closures, and public-safety emergencies.

Students should monitor official UNT communications and Canvas for information regarding course activities when university operations are affected by an emergency or closure.

Academic and Student Support Resources

UNT provides academic and student-support services to assist students throughout the semester. Students are encouraged to make use of appropriate university resources when needed.

Available resources include academic advising, tutoring and learning support, library services, technology assistance, accessibility services, and other student-support programs provided by the University.

Online Learning and Technology

Students in online courses are responsible for maintaining reliable access to the technology necessary to participate in their courses and should become familiar with Canvas and other required instructional systems.

UNT provides technical assistance and online-learning resources for students who need help accessing or using university instructional technologies.

Students should regularly monitor Canvas and their UNT communications for course and university information.

Course Syllabus and University Policies

This syllabus should be read together with applicable University of North Texas policies and procedures. University policies remain applicable to this course even when the complete text of a policy is not reproduced in the syllabus.

Students may consult the UNT Policy Office and other official university resources for current university policies and procedures.