# MATH 2730.410 (Fall 2025): Multivariable Calculus INET

## Instructor Contact

**Name:** Santiago Betelu

**Office Location:** GAB 470B

**Course is fully online with Canvas / Webassign**

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**Office Hours:**  Mo We 16:25-17:25PM at <https://unt.zoom.us/j/85768106388> or by appointment

## Course Description

3 hours. This is a Multivariable Calculus course about vectors and analytic geometry in 3-space; partial and directional derivatives; extrema; double and triple integrals and applications; cylindrical and spherical coordinates.

## Course Prerequisites

## Math 1720 or equivalent

## Course Objectives

By the end of this course, students will be able to:

* Understand and compute multi-variable limits, partial derivatives and their connections to problems in analytic geometry
* Find maxima and minima of multiple variable functions with or without constraints
* Compute double and triple integrals in rectangular, cylindrical and spherical coordinates and with variable changes
* Develop applications requiring multiple variables, including optimization problems.

## Communication Expectations

If you have a question about the contents of the course or homework, connect during office hours for help. I will check my email every day (except weekends and holidays) and will make every effort to respond within 24 hours.

## Required Texts

The textbook is "Calculus", James Stewart, 9E edition. **It is available online through WebAssign platform.**

## Cengage WebAssign Required

WebAssign is accessed directly through Canvas. It includes all online homework assignments, the e-textbook and additional learning resources. **Use the link in Canvas to register immediately.** You must register in WebAssign by the 2nd class day of the semester.

## What You Should Do Immediately

Log in to Canvas and click the WebAssign link at the top of the module page. Please use **your UNT E-mail address** to register for this course. See [Video Tutorial: Access WebAssign from Canvas](https://www.webassign.net/manual/student_guide/t_s_vt_canvas.htm) for more information. WebAssign grants a **no-cost temporary access**. You must purchase your access before the temporary access expires. Students who do not purchase WebAssign by the end of the temporary access period may lose credit for all work previously completed with the possibility of no refund.

I strongly encourage you to get started with Enhanced WebAssign as soon as possible. If you delay, you run the risk of unforeseen technical problems that could prevent you from completing the first assignment. For more directions, please go to the Cengage Zoom office. [U of North Texas MATH (cengage.com)](https://www.cengage.com/coursepages/UNT_WebAssign_FALL231)

## Technical Requirements & Skills

### Minimum Technology Requirements

* Access to a computer, tablet, or laptop that is compatible with all required apps for the course.
* Phone access to Canvas/Webassign is not sufficient nor adequate.
* Access to reliable internet access
* [Canvas Technical Requirements](https://clear.unt.edu/supported-technologies/canvas/requirements) (<https://clear.unt.edu/supported-technologies/canvas/requirements>)

### Computer Skills & Digital Literacy

Students are expected to be proficient at:

* Navigating Canvas and WebAssign
* Uploading documents to Canvas
* Completing assignments on WebAssign
* Scanning documents and creating pdf files (there are several free scanning apps for phones / tablets like Adobe Scan or Office Lens)

### Course/Assignment Schedule

*I reserve the right to change this schedule as necessary throughout the semester. You are still responsible for being aware of any changes I announce in class even if you were not in class.*

|  |  |
| --- | --- |
| **Assignment (Section)** | **Due Date** |
| Practice with LockDown Browser | 8/20 |
| 12.1, 12.2 | 8/22 |
| 12.3, 12.4 | 8/29 |
| 12.5 | 8/29 |
| 12.6 | 9/5 |
| 13.1, 13.2 | 9/12 |
| 13.3 | 9/19 |
| 14.1, 14.2 | 9/26 |
| 14.3 | 10/3 |
| **Midterm 1** | 10/3 |
| 14.4, 14.5 | 10/10 |
| 14.6, 14.7 | 10/24 |
| 14.8 | 10/31 |
| 15.1, 15.2 | 11/7 |
| **Midterm 2** | 11/7 |
| 15.3, 15.6 | 11/6 |
| 15.7 | 11/21 |
| 15.8 | 11/15 |
| 15.9 | 11/21 |
| **Midterm 3** | 11/21 |
| 16.1, 16.2 | 12/4 |
| Comprehensive Review | 12/5 |
| **Final Exam Tuesday** | 12/12 |

## Grading

|  |  |
| --- | --- |
| Midterms |  3 x 20 (lowest dropped) |
| Homework+Quizzes | 20 |
| Final | 40 |
| Total after dropping midterm | 100 |

**Grades:** A:90–100 % B:80–89.9% C:70–79.9% D:60–69.9% F:below 60%

## Course Policies

### Examination Policy

There will be 3 midterm exams and a comprehensive final exam administered with **Respondus** and **Lockdown Browser**. No notes or assistance are allowed during exams. After the exam is graded, you have 48 hours to appeal your grade. You may ask me to go over exam problems with you.

**Your lowest midterm exam score will be dropped.**

**Make-up Policy:** Make up exams will NOT be given for any reason after the fact. I drop the lowest exam score to cover emergencies which may arise unexpectedly. An exam may be taken prior to the scheduled date if you have a conflict with another obligation and can provide documentation. I require notification a week in advance for this accommodation.

**Academic Dishonesty:** Cheating will not be tolerated. Any student caught cheating will receive a “0” on the assignment and a report will be filed with the Office of Academic Integrity.

I reserve the right to test you on problems that are generalizations of material covered in the class and/or in the text. In short, the problems may not look exactly like the ones in the book. Everything that is covered in the course content is fair game for exam material. You will be responsible for everything unless I advise you to the contrary.

### Homework Policies

All homework assignments are given via WebAssign.

* When you log in, you will be able to see due dates.
* You have multiple **submissions** for most questions. Your last submission will count as your final answer.

If you use a help option (Read it, Watch it and Talk to a Tutor), it will count as 1 submission.

* You can save your work without using a submission.
* Some exercises will use randomization. In other words, it’s possible that every student will have slightly different questions with accordingly different answers.
* Requests for manual extensions will NOT be granted.
* Quizzes will be given with Respondus LockDown Browser and will be counted as homework

Late Work

The best way to ensure you pass this course is to work consistently throughout the semester. In mathematics courses topics always build one upon the other making it very difficult to catch up later if you fall behind. If you need to pass this course because it is your last semester, your financial aid depends on it, your scholarship depends on it, or your parent/guardian has threatened you in some manner then do yourself a favor and start studying right away. **I will not entertain any pleas for extra credit or offers to do additional work at the end of the semester. Late work will not be accepted in this course regardless of the reason.**

**Getting Help**

**Technical Assistance**

Part of working in the online environment involves dealing with the inconveniences and frustration that can arise when technology breaks down or does not perform as expected. Here at UNT we have a Student Help Desk that you can contact for help with Canvas or other technology issues.

**UIT Help Desk**: [UIT Student Help Desk site](http://www.unt.edu/helpdesk/index.htm) (http://www.unt.edu/helpdesk/index.htm)

**Email**: helpdesk@unt.edu

**Phone**: 940-565-2324

**In Person**: Sage Hall, Room 130

**Walk-In Availability**: 8am-9pm

**Telephone Availability**:

* Sunday: noon-midnight
* Monday-Thursday: 8am-midnight
* Friday: 8am-8pm
* Saturday: 9am-5pm

**Laptop Checkout**: 8am-7pm

For additional support, visit [Canvas Technical Help](https://community.canvaslms.com/docs/DOC-10554-4212710328) (https://community.canvaslms.com/docs/DOC-10554-4212710328)

**Student Support Services**

UNT provides mental health resources to students to help ensure there are numerous outlets to turn to that wholeheartedly care for and are there for students in need, regardless of the nature of an issue or its severity. Listed below are several resources on campus that can support your academic success and mental well-being:

* [Student Health and Wellness Center](https://studentaffairs.unt.edu/student-health-and-wellness-center) (https://studentaffairs.unt.edu/student-health-and-wellness-center)
* [Counseling and Testing Services](https://studentaffairs.unt.edu/counseling-and-testing-services) (https://studentaffairs.unt.edu/counseling-and-testing-services)
* [UNT Care Team](https://studentaffairs.unt.edu/care) (https://studentaffairs.unt.edu/care)
* [UNT Psychiatric Services](https://studentaffairs.unt.edu/student-health-and-wellness-center/services/psychiatry) (https://studentaffairs.unt.edu/student-health-and-wellness-center/services/psychiatry)
* [Individual Counseling](https://studentaffairs.unt.edu/counseling-and-testing-services/services/individual-counseling) (https://studentaffairs.unt.edu/counseling-and-testing-services/services/individual-counseling)

Other student support services offered by UNT include

* [Registrar](../../../../../C%3A/Users/jdl0126/AppData/Local/Temp/OneNote/16.0/NT/0/Registrar) (https://registrar.unt.edu/registration)
* [Financial Aid](https://financialaid.unt.edu/) (https://financialaid.unt.edu/)
* [Student Legal Services](https://studentaffairs.unt.edu/student-legal-services) (https://studentaffairs.unt.edu/student-legal-services)
* [Career Center](https://studentaffairs.unt.edu/career-center) (https://studentaffairs.unt.edu/career-center)
* [Multicultural Center](https://edo.unt.edu/multicultural-center) (https://edo.unt.edu/multicultural-center)
* [Counseling and Testing Services](https://studentaffairs.unt.edu/counseling-and-testing-services) (https://studentaffairs.unt.edu/counseling-and-testing-services)
* [Pride Alliance](https://edo.unt.edu/pridealliance) (https://edo.unt.edu/pridealliance)
* [UNT Food Pantry](https://deanofstudents.unt.edu/resources/food-pantry) (https://deanofstudents.unt.edu/resources/food-pantry)

**Academic Support Services**

* [Academic Resource Center](https://clear.unt.edu/canvas/student-resources) (https://clear.unt.edu/canvas/student-resources)
* [Academic Success Center](https://success.unt.edu/asc) (https://success.unt.edu/asc)
* [UNT Libraries](https://library.unt.edu/) (https://library.unt.edu/)
* [Writing Lab](http://writingcenter.unt.edu/) (http://writingcenter.unt.edu/)
* [MathLab](https://math.unt.edu/mathlab) (https://math.unt.edu/mathlab)

**UNT Policies**

**Academic Integrity Policy**

Academic Integrity Standards and Consequences. According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University.

## **AI Policy**

You can use AI to check formatting or spelling in the **homeworks**, but you cannot use it to actually solve the problems. AI is absolutely prohibited during exams and its use will be considered cheating. When I create exam problems I make sure I can detect AI on the answers.

**ADA Policy**

UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Access (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one’s specific course needs. Students may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. If you are an ODA approved student then you must take the exam at the ODA Test Center. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the [ODA website](https://disability.unt.edu/) (<https://disability.unt.edu/>).

**Emergency Notification & Procedures**

UNT uses a system called Eagle Alert to quickly notify students with critical information

in the event of an emergency (i.e., severe weather, campus closing, and health and

public safety emergencies like chemical spills, fires, or violence). In the event of a

university closure, please refer to the UNT Learning Management System (LMS) for

contingency plans for covering course materials.