Fall 2025
Math 1720.140 Calculus 2
CURY 103 MW 2-3:20pm

Instructor Information

Name: Joseph Iaia
Pronouns he/his/him
Office Location: GAB 420
Phone Number: 940-565-2155
Office hours: Tues, Thur 11-1 or by appt.

Email: iaia@unt.edu

You may contact me by email or by coming to office hours. I will make every effort to respond to emails promptly.

NO CALCULATORS WILL BE ALLOWED ON EXAMS AND/OR QUIZZES, but they are allowed when doing homework.

There are 2 TA's for this class - Tobey Mathis (GAB 406) TobeyMathis@my.unt.edu and Jorge Montes Guzman (GAB 418) JorgeMontesGuzman@my.unt.edu

> Math 1710.141 (Guzman) meets WF 10am-10:50am in WH 121
> Math 1710.142 (Guzman) meets WF 11am-11:50am in GATE 142
> Math 1710.143 (Mathis) meets WF 12pm-12:50pm in WH 212

CLEAR has a webpage for students that provides Online Communication Tips (https://clear.unt.edu/online-communication-tips

Course Description

Log and exponential functions, methods of integration – integration by parts, partial fractions, u-substitution, trig substitution; infinite sequences and infinite series – nth term test, integral test, ratio test, root test, comparison test, limit comparison test, alternating series test, absolute convergence, conditional convergence; polar coordinates, areas of regions written in polar coordinates.

Course Structure

At the beginning of each class, we may go over some recent homework and then there will be a lecture about the topic of the day along with the solution of some problems similar to what will be on that evening's homework assignment.

Course Objectives

The objective of this class is to prepare students for a number of courses in the sciences including Biology, Chemistry, and Physics as well as many upper division math classes including Calculus 3, Linear Algebra, etc.

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

1. Compute derivatives and antiderivatives of functions built from the basic transcendental functions

2. Understand and apply exponential models to make predictions
3. Resolve limits in an indeterminate form using L'Hopital's rule in concert with other techniques.
4. Apply the integration by parts formula to definite and indefinite integrals.
5. Compute definite and indefinite integrals of powers and products of trigonometric functions.
6. Apply trigonometric substitution to calculate definite and indefinite integrals.
7. Develop a rational function in partial fractions and then find an antiderivative.
8. Recognize the appropriate integration technique.
9. Approximate definite integrals.
10. Recognize improper integrals and determine if they converge.
11. Apply techniques for finding limits of functions to sequences.
12. Evaluate the sums of geometric and telescoping series.
13. Understand and apply an appropriate test to determine series convergence.
14. Distinguish between absolute and conditional convergence.
15. Represent functions by power series (including determining radius of convergence).
16. Use Taylor polynomials in approximation problems.
17. Graph parametric curves and determine the slopes of their tangent lines (including horizontal and vertical tangents).
18. Express points and curves in polar coordinates.
19. Find tangents to polar curves.
20. Determine the area of a region bounded by a polar curve.

Required/Recommended Materials

Text: J. Stewart, ``Calculus,'' 9th ed.

This course has digital components. To fully participate in this class, students will need internet access to reference content on the Canvas Learning Management System and if circumstances change, you will be informed of other technical needs to access course content. Information on how to be successful in a digital learning environment can be found at Learn Anywhere (https://online.unt.edu/learn).

Assessing Your Work

Exams will be graded on a 0-100 scale. There may be some multiple choice and some short answer problems on each exam. Each exam is worth 20% of your grade. NO EXAM GRADES ARE DROPPED!

There will be a worksheet in your Wednesday recitation and there will be a short quiz in your Friday recitation. There will be about 11 of each of these throughout the semester. Two worksheet grades will be dropped, and two quiz grades will be dropped. The rest of the grades will be averaged, and this will be your Worksheet-Quiz Average. This is also worth 10% of your grade.

Homework will be assigned with WebAssign. The average on the WebAssign problems from throughout the semester is worth 10% of your grade. If a WebAssign assignment is turned in 48 hours early then you will receive a bonus of 5%.

Your numerical grade for the semester will be calculated as follows:
Numerical grade = .20(E1 + E2 + E3 + FE) + .10(Worksheet-Quiz Average) + .10(WebAssign Average)

Your LETTER grade will be determined by which of the following brackets your numerical grade lies.

A = 90-100
B = 80-89
C = 70-79
D = 60-69
F = 0-59

Makeup quizzes and/or exams will only be given if a student has a doctor's note certifying the student's absence.

Please be aware of the Academic Integrity Policy (PDF) (https://policy.unt.edu/policy/06-049)

Course Exam Schedule

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Date	Exam Dates	Points	% of Final Grade
09/10	Exam 1	100 points	20%
10/08	Exam 2	100 points	20%
11/05	Exam 3	100 points	20%
12/08	Final Exam	100 points	20%
weekly	Quiz-Worksheet Average	100 points	10%
weekly	WebAssign Average	100 points	10%

Course Policies

Attendance
Students are expected to attend class every day. Attendance will occasionally be taken.

Class Participation

Classroom participation is highly encouraged.

Late Work

Late work may be accepted but with a reduction of grade.

Examination Policy
Exams will be conducted in class on the dates mentioned above. NO EXAM GRADES ARE DROPPED!

Assignment Policy
Homework will be submitted using WebAssign.

Instructor Responsibilities and Feedback

- Students are free to stop by my office and ask questions at any time. I am usually in my office M-F from 8am – 4:30pm except when I am teaching. My other classes meet MW 10-10:50, TR 9:30-10:50.
- Exams will hopefully be returned within 48 hours; quizzes and worksheets will be returned on Canvas within one week.

Syllabus Change Policy

Provide information as to policies regarding changes to the syllabus, course information.

Course Approximate Daily Schedule

Meeting 1 – inverse functions
Meeting 2 – natural log
Meeting 3 – natural exponential
Meeting 4 – inverse trig functions and their derivatives
Meeting 5 – indeterminate forms
Meeting 6 – L'Hopital's rule
Meeting 7 – review for exam 1
Meeting 8 - exam 1
Meeting 9 – integration by parts
Meeting 10 – trig integrals
Meeting 11 – trig substitution
Meeting 12 – partial fractions
Meeting 13 – improper integrals
Meeting 14 – approximate integration
Meeting 15 - review for exam 2
Meeting 16 - exam 2
Meeting 17 - sequences
Meeting 18 - series
Meeting 19 – comparison test, limit comparison test
Meeting 20 -- ratio and root tests
Meeting 21 – alternating series, absolute convergence, conditional convergence
Meeting 22 -- power series
Meeting 23 -- review for exam 3
Meeting 24 -- exam 3
Meeting 25 – Taylor and Maclaurin series
Meeting 26 -- applications of Taylor polynomials
Meeting 27 – curves defined by parametric equations
Meeting 28 – calculus with parametric curves
Meeting 29 – polar coordinates, area in polar coordinates
Meeting 30 --review for final exam
Meeting 31 – final exam

Students will be notified by Eagle Alert if there is a campus closing that will impact a class and the calendar is subject to change, citing the Emergency Notifications and Procedures Policy (https://policy.unt.edu/policy/06-049).

How to Succeed in this Course

1. Attend class.
2. Work on the homework assignments daily and practice on other similar problems.

3. Practice, practice, practice problems until you are comfortable with the material.
4. If you are having trouble with the material, then come to my office hours or the office hours of one of the TA's or go to the Math Lab on the first floor of SAGE. You might also try to get help from someone who understands the material well.
5. *Research has shown that students who attend class are more likely to be successful. You should attend every class unless you have a university excused absence such as active military service, a religious holy day, or an official university function as stated in the* [Student Attendance and Authorized Absences Policy (PDF)](https://policy.unt.edu/policy/06-039) *(https://policy.unt.edu/policy/06-039). If you cannot attend a class due to an emergency, please let me know. Your safety and well-being are important to me.*

The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking reasonable accommodation must first register with the Office of Disability Access (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with a reasonable accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request reasonable accommodations at any time; however, ODA notices of reasonable accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of reasonable accommodation for every semester and must meet with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of reasonable accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information, refer to the [Office of Disability Access](http://www.unt.edu/oda) website (http://www.unt.edu/oda). You may also contact ODA by phone at (940) 565-4323.

Supporting Your Success and Creating an Inclusive Learning Environment

Every student in this class has the right to learn and engage within an environment of respect and courtesy from others. We will discuss our classroom's habits of engagement and I also encourage you to review UNT's student code of conduct so that we can all start with the same baseline civility understanding ([Code of Student Conduct](https://policy.unt.edu/policy/07-012)) (https://policy.unt.edu/policy/07-012).