

0701M110

Calculus I

Instructor: TBA

Time: December 15, 2025 - January 16, 2026

Office Hours: by appointment

Contact Hours: 60 (50 minutes each)

Credits: 4

E-mail: TBA

Course Description

Review of algebraic and trigonometric functions and their graphs, the concepts of limit and continuity, theory and techniques of differentiation, and applications of differentiation, introduction to the theory and techniques of integration.

Required Textbook(s)

“Calculus”, 11th Edition by Larson. Coverage: Chapters 1-6, Select Sections

Prerequisites

Students are assumed to have taken and passed a pre-calculus course. In particular, students should be proficient in high school algebra and geometry, as well as trigonometry. Moreover, they should have studied exponential and logarithmic functions.

Calculators

No graphing calculators, websites, or cell phones may be used on tests. You may use a

scientific calculator. However, all answers should be exact unless stated otherwise.

Grading Policy

Your grade in this course will be determined by your performance in the following categories:

Participation (Q&A)	10%
Homework	15%
Quizzes (Week 1 and 3)	25%
Midterm Exam	25%
Final Exam	25%
Total	100%

Homework

Specific homework exercises will be assigned for each chapter. It is expected that you will read the sections, watch the videos provided, and complete the assignments by the given due date. It is encouraged to help each other solve homework problems. Homework is for you to improve your skills. Homework will be graded. If you have questions, please contact your TA or your professor for help. You should complete the homework **using topics discussed in the text and lecture**. There are many methods of solving calculus concepts. We are strictly using the beginning concepts.

Quizzes

There will be two quizzes. The first will be during the first week of class. This will cover chapter 1 and 2.1. The second quiz will be during the 3rd week of class. This will cover chapter 3.

You should work these on your own without help. These will be timed. Think of the quizzes as a way to prepare for your exams. There will be around 10 to 20 questions for the quizzes. You must show work where appropriate to get credit for the question. You must use knowledge presented in the current chapter when making calculations. No notes, websites, or other outside resources should be used during the test.

This should be YOUR work. **Cheating will result in a zero for the quiz and the course.**

Midterm and Final Exams

There will be a required midterm and final exam. The midterm will be during the second week and will cover the first two chapters. The final exam will be during the fifth week and will cover chapters 3 through 6. You must show work where appropriate to get credit for the question. You must use knowledge presented in the current chapter when making calculations. These will be timed. There will be around 30 questions per exam. No notes, websites, or other outside resources should be used during the test. This should be YOUR work. **Cheating will result in a zero for the quiz and the course.**

Late Assignments and Make-up Exams

If under ANY circumstances (excused or unexcused) you cannot take a quiz, you will have the ability to have the midterm exam replace your missing quiz 1. The final exam can replace your missing quiz 2. **However, this only holds for ONE quiz.** Do not bring me notes from doctors, police, or other qualified professionals for absences. **The date and time for the midterm and final are SET!** Do not plan trips during the midterm and final exam day. You will receive a 0% if you do not take either one. You must show all of your work on the tests. Unsupported answers will earn no credit. Partial credit is given for correct work shown even if you do not get the correct answer.

There are no late submissions for any assignments. The due dates are firm. If you miss a participation day, you will NOT be able to make-up the grade.

Grading Scale

The instructor will use the grading system as applied by JNU:

Definition	Letter Grade	Score
Excellent	A	90~100
Good	B	80~89
Satisfactory	C	70~79
Poor	D	60~69
Failed	E	Below 60

Syllabus Disclaimer

The instructor reserves the right to make changes on this syllabus should the need arise. You will be given ample notice should any changes take place. Please feel free to ask questions through email or through texts and to consult me any time you wish to do so. The best means of contacting me is by e-mail, so please utilize this. It is vital that you do not fall behind.

Remember, the only stupid question is the question unasked.

Course Schedule

Week 1:

- 1.2: Finding Limits Graphically and Numerically
- 1.3: Evaluating Limits Analytically
- 1.4: Continuity and One-Sided Limits
- 1.5: Infinite Limits
- 2.1: The Derivative and the Tangent Line Problem
- ***Quiz 1***

Week 2:

- 2.2: Basic Differentiation Rules and Rates of Change
- 2.3: Product and Quotient Rules and Higher-Order Derivatives
- 2.4: The Chain Rule
- 2.5: Implicit Differentiation
- 2.6: Related Rates
- ***Midterm Exam***

Week 3:

- 3.1: Extrema on an Interval
- 3.2: Rolle's Theorem and the Mean Value Theorem
- 3.3: Increasing and Decreasing Functions and the First Derivative Test
- 3.4: Concavity and the Second Derivative Test
- 3.5: Limits at Infinity

- 3.6: A Summary of Curve Sketching
- 3.7: Optimization Problems
- **Quiz 2**

Week 4:

- 4.3: Riemann Sums and Definite Integrals
- 4.2: Area
- 4.1: Antiderivative and Indefinite Integration
- 4.4: The Fundamental Theorem of Calculus
- 4.5: Integration by Substitution
- 5.1: The Natural Logarithmic Function: Differentiation
- 5.2: The Natural Logarithmic Function: Integration
- 5.4: Exponential Functions: Differentiation and Integration

Week 5:

- 5.5: Bases Other than e and Applications
- 5.6: Indeterminate Form and L'Hopital's Rule
- 6.2: Growth and Decay
- **FINAL EXAM**

Academic Integrity

As members of the Jinan University academic community, students are expected to be honest in all of their academic coursework and activities. Academic dishonesty includes (but is not limited to) cheating on assignments or examinations; plagiarizing, i.e., misrepresenting as one's own work any work done by another; submitting the same paper, or a substantially similar paper, to meet the requirements of more than one course without the approval and consent of the instructors concerned; or sabotaging other students' work within these general definitions. Instructors, however, determine what constitutes academic misconduct in the courses they teach. Students found guilty of academic misconduct in any portion of the academic work face penalties that range from the lowering of their course grade to awarding a grade of E for the entire course.