# 0701M230

# Calculus II

**Time:** December 22, 2025 - January 9, 2026; Mon.-Fri., 8:40am-12:00pm

**Office Hours:** 2 hours (according to the teaching schedule)

**Contact Hours:** 60 (50 minutes each)

**Credits:** 4

**Location:** Online, Zoom

**Instructor:** TBA

**E-mail:** TBA

## Course Description

Techniques of integration, applications of integration, sequences and series, power series and Taylor series, parametric equations and polar coordinates.

## Required Textbook(s)

M. Weir and J. Hass, Thomas *Calculus: Early Transcendentals*, 12th edition, Addison-Wesley, (Pearson,) Reading, MA.  ISBN: 978-0-321-58876-0

On Coursesmart as eText: ISBN-13 9780321640932

## Prerequisites

We assume students are familiar with the standard content of a calculus I course for scientists and engineers. This includes the study of limits, derivatives, optimization of functions of a single variable, using derivatives to sketch graphs, antiderivatives and the method of substitution, definite integrals and Riemann sums, and the fundamental theorem of calculus. Moreover, they should have studied this material in the context of

algebraic, exponential, logarithmic, and trigonometric functions.

## Course Schedule

Please note that the schedule is meant to give an overview of the major concepts this course. Changes may occur in this calendar as needed to aid in the student`s development.

**Week 1**

Monday:         Indeterminate forms and L'Hospital Rule

                Review of Basic Integration

                Review of substitution

Tuesday:        Inverse Trigonometric Functions: derivatives

                Inverse Trigonometric Functions: integration

Wednesday:      Integration by parts

                Trigonometric Integrals

Thursday:       Trigonometric Substitution

                Partial Fractions

Friday:         Numerical Integration

                Improper Integrals

**Week 2**

Monday:         Area Between Curves

                Volumes of Rotation: Disk Method and Shell Method

                Arc Length

Tuesday:        Work

                Center of Mass

                Sequences

Wednesday:      Series and Convergence

                Integral Test and p-Series

                Comparison Test of Series

Thursday:       Midterm

Friday:         Alternating Series

                Ratio Test

**Week 3**

Monday:          Power Series

                 Representation of Functions by Power Series

Tuesday:         Taylor and Maclaurin Series

                 Plane Curves and Parametric Equations

Wednesday:       Parametric Equations and Calculus

                 Polar Coordinates and Graphs

Thursday:        Area and Arc Length in Polar Coordinates

                 Final Exam Review

Friday:          Final Exam


## Grading Policy

| | |
|---|---|
| Quizzes | 15 % |
| Homework | 25 % |
| Midterm Exam | 30 % |
| Final Exam | 30% |
| **TOTAL** | **100 %** |


## 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 |


## Attendance

You are expected to log in to Zoom to attend class and actively participate in discussions. Attendance will be recorded for each session and will contribute to

students' participation records. Students should inform the instructor as early as possible if they need to request a leave of absence. All absences may negatively impact students' final grades. Attendance will be taken at both the beginning and end of each class. .

## 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.