

0701M230**Calculus II****Instructor:** TBA**E-mail:** TBA**Time:** May 18, 2026 - June 19, 2026; M, T, Th, 1:00pm-4:20pm**Office Hours:** By appointment**Contact Hours:** 60 (50 minutes each)**Credits:** 4**Location:** Online, Zoom**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
- Integration by parts

Thursday

- Trigonometric Integrals
- Trigonometric Substitution

Week 2

Monday

- Partial Fractions
- Numerical Integration

Tuesday

- Improper Integrals
- Area Between Curves
- Volumes of Rotation: Disk Method and Shell Method

Thursday

- Arc Length
- Work

Week 3

Monday

- Center of Mass
- Sequences

Tuesday

- Series and Convergence
- Integral Test and p-Series

Thursday

- Comparison Test of Series
- **Midterm**

Week 4

Monday

- Alternating Series
- Ratio Test

Tuesday

- Power Series
- Representation of Functions by Power Series

Thursday

- Taylor and Maclaurin Series
- Plane Curves and Parametric Equations

Week 5

Monday

- Parametric Equations and Calculus
- Polar Coordinates and Graphs

Tuesday

- Area and Arc Length in Polar Coordinates
- Final Exam Review

Thursday

- **Final Exam**

Grading Policy

Quizzes	15 %
Homework	25 %
Midterm Exam	30 %
Final Exam	30%
TOTAL	100 %

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. If you arrive more than 10 minutes late or leave more than 10 minutes early, your attendance will not be recorded. You are expected to actively participate in class discussions. During the session, you may be randomly selected to assist in solving examples to assess your understanding of core concepts. Additionally, you should be prepared to work through assigned examples during practice time.

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

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.