MATH 1312 – Calculus II

The University of Texas at El Paso
Spring 2026

Course information

CRN: 20513
Credits:3
Course Modality: In-person (face to face)
Meeting Days/Times: Monday & Wednesday / 1:30 pm – 2:50pm
Location: Texas Western Hall 317

Instructor information

Instructor: Martha Delgado
Office: Bell Hall 115 & Library 218 (MaRCS)
Office hours: By appointment
Email: madelgado8@utep.edu
Students must use their UTEP email account and include the course number in the subject line. Responses can be expected within **24–48 hours** during business days.
Phone: 747-5764 / 747-7093

Course Prerequisites

This course requires successful completion of **Calculus I**. Students are expected to have a solid understanding of logarithmic and exponential functions, trigonometric and hyperbolic functions, and techniques for computing inverses, limits, and derivatives.

Course Description

MATH 1312 (Calculus II) continues the study of calculus begun in Calculus I. Topics include techniques of integration and their applications, infinite series and tests for convergence, and Taylor polynomial approximations of elementary functions.
This course prepares students for advanced mathematics courses such as Calculus III and Differential Equations and provides essential mathematical foundations for physics, engineering, and related disciplines.

Course Learning Outcomes

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

- **Model** geometric and physical with definite integrals.
- **Compute** areas, volumes, arc lengths, work and average values using integrals.
- **Select and execute** appropriate integration techniques (substitution, integration by parts, trigonometric integrals, trigonometric substitution, partial fractions).
- **Evaluate and classify** improper integrals as convergent of divergent.
- **Analyze** sequences and infinite series for convergence using standard tests.
- **Determine** radius and interval of convergence for power series.
- **Construct and use** Taylor/Maclaurin polynomials and series to approximate functions and estimate errors.
- **Explain** your reasoning clearly in written solutions and exam work.

Course Structure

The course will cover **Chapters 7–9** of the textbook. We begin with Chapter 8, which introduces integration techniques used later in the course.

Each week typically includes lectures, homework assignments, and quizzes or exams. The course schedule is tentative and may be adjusted as needed to support student learning. The final exam will be held during the official exam period.

Week	Content
Jan 21	Welcome to Calculus II & Basic Integration Rules
Jan 26 – Jan 28	Section 8.1 & 8.2
Feb 2 – Feb 4	Section 8.3 & 8.4, Quiz 1
Feb 9 – Feb 11	Section 8.5 - 8.7
Feb 16 – Feb 18	Midterm Exam 1
Feb 23 – Feb 25	Section 7.1 & 7.2
Mar 2 – Mar 4	Section 7.3 & 7.4, Quiz 2
Mar 9 – Mar 11	Section 7.5, Chapter 7 Review, Quiz 3
Mar 16 – Mar 18	Spring Break
Mar 23 – Mar 25	Midterm Exam 2
Mar 30 – Apr 1	Section 9.1 & 9.2, Quiz 4
Apr 6 – Apr 8	Section 9.3 & 9.4, Quiz 5
Apr 13 – Apr 15	Section 9.5 & 9.6, Quiz 6
Apr 20 – Apr 22	Section 9.7 & 9.8, Quiz 7
Apr 27 – Apr 29	Chapter 9 Review & Overall Course Review
May 4 – May 5	
May 11– May 15	Final Exam (Comprehensive)

Required Course Materials

- **Textbook:** Larson, Ron, and Bruce H. Edwards. *Calculus*, 12th Edition. Cengage Learning, 2023, ISBN: 978-0-357-74913-5
- **Calculator:** A graphing calculator (e.g., TI-89 or TI-92) or the WolframAlpha online plotting tool, plot - Wolfram|Alpha (wolframalpha.com)
  Note: Calculators are not permitted during exams.

Grading and Evaluation

Graded Components

- Final Exam: 30 %
- Midterm Exam 1: 20 %
- Midterm Exam 2: 20 %
- Quizzes (5): 15 % *(lowest 2 quizzes dropped)*
- Homework & Participation: 15 %

Letter Grade Scale

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

Attendance, Participation, and Assessments

Regular attendance and active participation are expected and contribute to the final grade. Students are responsible for material covered during missed classes. Absences due to illness or emergencies must be supported by appropriate documentation. Attendance will be taken at every class meeting, after 3 unexcused absences, you will be dropped from the course.

Exams are administered **in person during class**, while homework & quizzes are completed through **Blackboard**. Make-up exams or quizzes are granted **only in documented, extraordinary circumstances** and require advance written notice when possible.

A great deal of concentration of the course is stressed on homework. There will be homework assigned each class. Selected problems will be discussed in greater detail in class. Having learned how to do and how to write the homework is a key to success in this course, since the quizzes and exams will be based on and look like the homework.

Technology and Blackboard Use

Course materials, announcements, quizzes, and grades will be delivered through **Blackboard**. Students should use an updated web browser such as Google Chrome or Mozilla Firefox.

If you experience technical difficulties beyond basic troubleshooting, please contact the **UTEP Help Desk**. Please do not contact the instructor for technical support.

Students are responsible for checking Blackboard announcements regularly.

Academic Integrity (UTEP Policy)

Academic dishonesty is prohibited and is considered a violation of the **UTEP Handbook of Operating Procedures**. Scholastic dishonesty includes, but is not limited to, cheating, plagiarism, and collusion. Cheating may involve copying from the test paper of another student, communicating with another student during a test, giving or seeking aid from another student during a test, possession of unauthorized materials during exams, or falsifying research or academic work. Plagiarism occurs when someone intentionally or knowingly represents the words or ideas of another as one's own. Collusion involves collaborating with another person to commit any academically dishonest act. Any act of academic dishonesty attempted by a UTEP student is unacceptable and will not be tolerated. All suspected violations of academic integrity must be reported to the **Office of Student Conduct and Conflict Resolution** for possible disciplinary action. Treating Generative AI (e.g., ChatGPT, Copilot) output as your own work counts as academic dishonesty.

Accommodations and Accessibility (UTEP Required Statement)

The University is committed to providing reasonable accommodations and auxiliary services to students, staff, faculty, job applicants, applicants for admissions, and other beneficiaries of University programs, services and activities with documented disabilities in order to provide them with equal opportunities to participate in programs, services, and activities in compliance with sections 503 and 504 of the Rehabilitation Act of 1973, as amended, and the Americans with Disabilities Act (ADA) of 1990 and the Americans with Disabilities Act Amendments Act (ADAAA) of 2008. Students requesting accommodation based on a disability must register with the **Center for Accommodations and Support Services (CASS)**. Contact the Center for Accommodations and Support Services at **915-747-5148**, email them at **cass@utep.edu**, or apply for accommodations online via the **CASS portal**.

Drop Policy

Students who wish to drop must initiate the process through the Registrar's Office. The deadline to drop this course is **April 2nd, 2026**. Failure to officially drop may result in a final grade of "F."

Student Privacy (FERPA)

The **Family Educational Rights and Privacy Act (FERPA)** affords students certain rights with respect to their education records. Students' grades and records will not be shared without written consent. Blackboard and other course platforms are used in compliance with FERPA requirements.

Copyright and Use of Course Materials.

All materials used in this course are protected by copyright law. The course materials are only for the use of students currently enrolled in this course and only for the purpose of this course. They may not be further disseminated.

Student Support Resources

UTEP provides a variety of student support services, including:

Technology Resources

Help Desk: Students experiencing technological challenges (email, Blackboard, etc.) can submit a ticket to the UTEP Helpdesk for assistance. Contact the Helpdesk via phone, email, chat, website, or in person if on campus.

Academic Resources

UTEP Library: Access a wide range of resources including online full-text access to thousands of journals and eBooks plus reference service and librarian assistance for enrolled students.
Math Tutoring Center (MaRCS): Ask a tutor for help and explore other available math resources.

Individual Resources

Military Student Success Center: Assists personnel in any branch of service to reach their educational goals.
Center for Accommodations and Support Services: Assists students with ADA-related accommodations for coursework, housing, and internships. Counseling and Psychological Services: Provides a variety of counseling services including individual, couples, and group sessions as well as career and disability assessments.

NO CELL PHONES
A student staying in this class accepts all the rules of the syllabus