

# Syllabus

## Calculus II

MATH 126 Section 005

Fall 2016, Lecture

Yangyang Xu

### Office Hours and Contact Information

Office location: Gordon Palmer Hall 313B

Office hours: 2:00-4:30pm on Mondays and Wednesdays or by appointment.

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Office phone: 205-348-1975

### Prerequisites

#### UA Course Catalog Prerequisites

Prerequisite(s): MATH 125 or MATH 131 or MATH 145

### Course Description

#### UA Course Catalog Information

This is the second of three courses in the basic calculus sequence. Topics include vectors and the geometry of space, applications of integration, integration techniques, L'Hopital's Rule, improper integrals, parametric equations, polar coordinates, conic sections and infinite series.

#### Core Designations:

Mathematics

### Student Learning Outcomes

Following completion of this course, students are expected to be able to:

- 1) Describe and manipulate vectors and coordinate systems for three-dimensional space.
- 2) Evaluate indeterminate limit by the L'Hospital's rule.

- 3) Apply techniques of integration, including integration by parts, trigonometric substitution, and the partial fractions method, to calculate integrals of complicated functions.
- 4) Compute the volumes of solids using definite integrals.
- 5) Determine the convergence properties of infinite sequences and series using various tests, and express and approximate functions using them.
- 6) Use parametric equations and polar coordinates.

## Required Texts

### UA Supply Store Textbook Information

- STEWART (USED HARDBOOK ONLY) / ESSENTIAL CALCULUS: EARLY TRANSCENDENTALS **(Optional)**
- STEWART (USED HARDBOOK ONLY) (RENTAL) / (RENTAL) ESSENTIAL CALCULUS: EARLY TRANSCENDENTALS **(RENTAL)**
- STEWART (USED BINDER READY)(VP) / ESSENTIAL CALCULUS: EARLY TRANSCENDENTALS **(Optional)**
- STEWART (HARDBACK BUNDLE) (RENTAL) / (RENTAL) ESSENTIAL CAL W/ WEBASSIGN **(RENTAL)**
- STEWART (HARDBACK BUNDLE) / ESSENTIAL CAL W/ WEBASSIGN **(Choose One)**
- NONE / WEBASSIGN 1 SEMESTER ACCESS CODE **(Choose One)**
- STEWART (BINDER READY BUNDLE) (CUSTOM) / ESSENTIAL CALCULUS W/WEBASSIGN MULTI-TERM **(Choose One)**
- STEWART (EBOOK) / ESSENTIAL CALCULUS: EARLY TRANSCENDENTALS **(Choose One)**
- NONE / ENHANCED WEBASSIGN 2 TERM ACCESS CARD FOR CALCULUS **(Choose One)**

## Outline of Topics

Chapter 10. Vectors and the geometry of space, Sections 10.1 - 10.5

Section 3.7: Indeterminate forms and l'Hospital's rule

Chapter 6. Techniques of Integration, Sections 6.1- 6.6

Chapter 7. Applications of integration, Sections 7.1 - 7.4

Chapter 8. Infinite series, Sections 8.1 - 8.7

Chapter 9. Parametric equations and polar coordinates, Sections 9.1 - 9.4

## Exams and Assignments

There will be three in-class tests during the semester and a final exam. Each in-class test will roughly cover 1/3 part of this course, and the final exam will cover all contents of this course. The dates of the exams will be announced later by email and also in class.

Homework will be assigned weekly via webassign (class key: ua 4323 8871) and **due at 3:00pm every Friday**. For example, the assignment on the first week will be due on Friday of the second week.

## Grading Policy

The course grading is under the "A, B, C, D, or F" policy, +/- grades will be given. The total points are 100. **If your final grade is below 60, you will get F.** The weights of the homework and exams for the final grade are:

Homework 20%;  
Three in-class tests 15% each;  
Comprehensive final exam: 35%.

## Policy on Missed Exams & Coursework

If you miss a mid-term test, you will get zero grade for that test. If it is missed due to a serious verifiable circumstance, the zero test grade will be replaced with the final exam grade (see Grading Policy). For example, if you are seriously sick and cannot take the test, you have to provide a proof such as the doctor's signed note. Students who miss work due to official University business must give notification at least one week beforehand. **The final exam cannot be missed. There will be no make-up final exam.**

## Attendance Policy

Attendance for this course is mandatory. You are expected to attend all of your scheduled classes.

## Emergency Contact Information

UA's primary communication tool for sending out information is through its web site at [www.ua.edu](http://www.ua.edu). In the event of an emergency, students should consult this site for further directions. Additional course information will be posted using Blackboard Learn.

## Severe Weather Guidelines

The guiding principle at The University of Alabama is to promote the personal safety of our students, faculty and staff during severe weather events. It is impossible to develop policies which anticipate every weather-related emergency. These guidelines are intended to provide additional assistance for responding to severe weather on campus.

UA is a residential campus with many students living on or near campus. In general classes will remain in session until the National Weather Service issues safety warnings for the city of Tuscaloosa. Clearly, some students and faculty commute from adjacent counties. These counties may experience weather related problems not encountered in Tuscaloosa. Individuals should follow the advice of the National Weather Service for that area taking the necessary precautions to ensure personal safety. Whenever the National Weather Service and the Emergency Management Agency issue a warning, people in the path of the storm (tornado or severe thunderstorm) should take immediate life saving actions.

When West Alabama is under a severe weather advisory, conditions can change rapidly. It is imperative to get to where you can receive information from the [National Weather Service](http://www.nws.gov) and to follow the instructions provided. Personal safety should dictate the actions that faculty, staff and students take.

**The Office of University Relations will disseminate the latest information regarding conditions on campus in the following ways:**

- Weather advisory posted on the UA homepage
- Weather advisory sent out through UA Alerts to faculty, staff and students
- Weather advisory broadcast over WVUA at 90.7 FM

- Weather advisory broadcast over Alabama Public Radio (WUAL) at 91.5 FM
- Weather advisory broadcast over WVUA-TV/WUOA-TV, and on the website at <http://wvua23.com/weather>.

In the case of a tornado warning (tornado has been sighted or detected by radar; sirens activated), all university activities are automatically suspended, including all classes and laboratories. If you are in a building, please move immediately to the lowest level and toward the center of the building away from windows (interior classrooms, offices, or corridors) and remain there until the tornado warning has expired. Classes in session when the tornado warning is issued can resume immediately after the warning has expired at the discretion of the instructor. Classes that have not yet begun will resume 30 minutes after the tornado warning has expired provided at least half of the class period remains.

## Policy on Academic Misconduct

All students in attendance at The University of Alabama are expected to be honorable and to observe standards of conduct appropriate to a community of scholars. The University of Alabama expects from its students a higher standard of conduct than the minimum required to avoid discipline. At the beginning of each semester and on examinations and projects, the professor, department, or division may require that each student sign the following Academic Honor Pledge: “I promise or affirm that I will not at any time be involved with cheating, plagiarism, fabrication, or misrepresentation while enrolled as a student at The University of Alabama. I have read the Academic Honor Code, which explains disciplinary procedure resulting from the aforementioned. I understand that violation of this code will result in penalties as severe as indefinite suspension from the University.”

See the [Code of Student Conduct](#) for more information.

## Disability Statement

If you are registered with the Office of Disability Services, please make an appointment with me as soon as possible to discuss any course accommodations that may be necessary.

If you have a disability, but have not contacted the Office of Disability Services, please call (205) 348-4285 (Voice) or (205) 348-3081 (TTY) or visit 1000 Houser Hall to register for services. Students who may need course adaptations because of a disability are welcome to make an appointment to see me during office hours. Students with disabilities must be registered with the Office of Disability Services, 1000 Houser Hall, before receiving academic adjustments.

## UAct: Ethical Community Statement

The University of Alabama is committed to an ethical, inclusive community defined by respect and civility. The UAct website (<http://www.ua.edu/uact>) provides extensive information on how to report or obtain assistance with a variety of issues, including issues related to dating violence, domestic violence, stalking, sexual assault, sexual violence or other Title IX violations, illegal discrimination, harassment, child abuse or neglect, hazing, threat assessment, retaliation, and ethical violations or fraud.