COURSE DESCRIPTION
CALCULUS II - HONORS
MA 226–6C
SPRING 2026

DEPARTMENT OF MATHEMATICS
UNIVERSITY OF ALABAMA AT BIRMINGHAM

Course Instructor: Alexander Blokh
Office: UH 4018
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Office Hours: MW 11:00 pm – noon and by appointment

Meeting times: MW 12:20 pm — 2:10 pm
Meeting location: HHB 420
Prerequisite: Grade of C or better in MA 125 or equivalent
Credits: 4 semester hours
Textbook: Hass, Heil, Bogacki, Weir. Thomas' Essential Calculus. 15th Edition (2023). Pearson. UAB First-Day-Access provides the e-book (you do not need the hard copy).
Canvas: `https://www.uab.edu/elearning/canvas/`

Important dates:

First day of classes: January 12
Martin Luther King Holiday: January 19
Last day to Drop/Add without paying in-full: January 20
Midterm exam I: Wed February 11
Spring Break: March 9 – 15
Midterm exam II: Wed March 18
Last day of classes: April 24
Final Exam: Wed April 29, 1:30 pm – 4:00 pm
Grades available online: May 6

Course content:

- The substitution rule (Sections 5.5, 7.1, 7.3).
- Inverse trig functions (Sections 7.6, 8.1).
- L'Hospital's rule (Section 7.5).
- Techniques of integration (Sections 8.1 – 8.3, 8.5, & 8.8).
- Applications of integration (Sections 6.1 – 6.3 & 6.5).
- Sequences and series (Sections 10.1 – 10.9).
- Vectors (Sections 12.1 – 12.5).
- Vector functions (Sections 13.1 – 13.3).

Date: January 11, 2026.

Aims of the course:
The course aims for students to attain *conceptual understanding* and *procedural fluency* with regard to the Calculus of Differentiation and Integration. *Conceptual understanding* is demonstrated by the ability to explain in detail the solutions of assigned problems. *Procedural fluency* is demonstrated by exercising routine tasks in an assured and timely fashion. The course also emphasizes *critical thinking* and *communication skills*, both written and verbal.

Methods of teaching and learning:

- 27 class meetings of 100 minutes with presentations by the instructor as well as by students.
- A significant time commitment (certainly more than class time) is to be expected.
- Working in groups is encouraged but not required.
- Students may seek outside help (books, internet, class mates) as they see fit as long as any help is acknowledged.

How this class works

Only falling down and getting up again, you learn how go skate. (Kees Verkerk, famous Dutch speed skater)

I get knocked down but I get up again (Tubthumping, a song by Chumbawamba, 1997)

In this course we will approach learning in a different way from what you are likely used to. The best way to learn mathematics is to do mathematics and while (or rather because) that may often mean struggle and sometimes failure, the benefits of actively engaging with the subject are profound. Therefore I urge you to approach the tasks at hand without fear. You can do it, even though you will fall once in a while (as I do).

These are the tasks to be done before every class meeting:

- Review the recently worked problems.
- Work on newly assigned problems (you are encouraged to collaborate) and and write up their solutions.
- Make a list of questions to ask me at the beginning of the next class.
- Read over the upcoming lecture.

During class we will typically do the following:

- I will answer your questions.
- You will present your work on previously assigned problems.
- You are encouraged to ask questions of the presenter. Problems similar to the assigned ones will appear on the exams and everyone should be sure how to do each and everyone of them.
- I will present new concepts, definitions, and theorems.

I will assign problems to students every time we meet (except for the beginning of the semester). You will present once a week or so.

Some rules and tips for presentations:

- To present a problem at the board successfully includes to have explained your solution thoroughly and to have answered all questions regarding the problem.
- Since you will be communicating with other students on a regular basis, here are several guidelines that will help you (on the board and in the audience).
  - Most importantly, remember that the whole class is on your side and wants to see you succeed, so questions (even mine) are intended to help everyone, not to criticize you.
  - Do not be upset when you make a mistake - learn from it.
  - Do not let anything go on the board that you do not fully understand. Do not say to yourself, I will figure this out at home.
  - Acknowledge any help you had when you are at the board.
  - Be polite and respectful.
  - Let people answer when they are asked a question.
- Do not use concepts we have not defined.
- Do not try to put up a problem you have not written up but prepare arguments in advance.

Assessment procedures:

- Student achievement will be assessed by the following measures:
  - Students' presentations contribute 40% of the course average.
  - Two in-class tests (50 minutes) including multiple choice part (no partial credit awarded) and free response part (partial credit is awarded where appropriate). Each test contributes 15% to the course average.
  - A 150-minute comprehensive final examination including multiple choice part (no partial credit awarded) and free response part (partial credit is awarded where appropriate). The final contributes 30% to the course average.
- Your course performance is your properly weighted course average (including the final exam score). This is a number between 0 and 100.
- Your final grade is determined according to the following table:

Course performance:	90-100	75-90	60-75	50-60	below 50
Final Grade:	A	B	C	D	F

Course policies:

- Please make sure that you are able to receive e-mails through your BlazerID account. Official course announcements may be sent to that address.
- If a test is missed due to a serious verifiable circumstance or official university business, the test grade will be replaced with the properly rescaled final exam score. You have to advise the instructor of such circumstances at your earliest convenience.
- You may use the textbook and your notes as well as a calculator during the exams.
- No internet access other than to the e-book will be allowed during any of the exams.

Tips:

- Help is available in the Math Learning Lab (HHB 202). For specific information on opening hours click on Math Learning Lab under the Resources tab of the department's homepage at `www.uab.edu/cas/mathematics`.
- Past exams given in Calculus II are also posted on our homepage. Click on Calculus Testbank under the Resources tab.
- By working steadily and regularly, you will increase your chances to succeed in this course.
- If your are contacted via the Early Alert Program, you should consider taking advantage of the services it offers. Various services to assist you are also listed at `https://www.uab.edu/students/home/services`.
- Remember, being a full-time student is a full-time job.
- Seek help when you need it.

Disability Support Services

UAB is committed to providing an accessible learning experience for all students. If you are a student with a disability that qualifies under the Americans with Disabilities Act (ADA) and/or Section 504 of the Rehabilitation Act, and you require accommodations, please contact Disability Support Services for information on accommodations, registration and procedures. Requests for reasonable accommodations involve an interactive process and consist of a collaborative effort among the student, DSS, faculty and staff. If you are registered with Disability Support Services, please contact me to discuss accommodations that may be necessary in this course. If you have a disability but have not contacted Disability Support Services, please call (205)934-4205 or visit `http://www.uab.edu/dss`.

Title IX Statement

In accordance with Title IX, the University of Alabama at Birmingham does not discriminate on the basis of gender in any of its programs or services. The University is committed to providing an environment free from discrimination based on gender and expects individuals who live, work, teach, and study within this community to contribute positively to the environment and to refrain from behaviors that threaten the freedom or respect that every member of our community deserves. For more information about Title IX, policy, reporting, protections, resources, and supports, please visit the UAB Title IX webpage at `http://www.uab.edu/titleix`.