

COURSE DESCRIPTION
CALCULUS II - HONORS
MA 226-6C

DEPARTMENT OF MATHEMATICS
UNIVERSITY OF ALABAMA AT BIRMINGHAM

Course Instructor: Rudi Weikard
Office: UH 4032
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Office Hours: TT 2:00 pm – 3:00 pm and by appointment

Meeting times: MW 12:20 pm — 14:10 pm
Meeting location: UABHH 102 (Hybrid)
Prerequisite: Grade of C or better in MA 125 or equivalent
Credits: 4 semester hours
Textbook: James Stewart, Essential Calculus, 2nd ed., Brooks/Cole, 2012.
Canvas: <https://www.uab.edu/elearning/canvas/>
UAB United: <https://www.uab.edu/uabunited/students>

Important dates:

First day of classes: January 20 (for this course)
Last day to Drop/Add: January 26
Midterm exam I: February 8
Midterm exam II: March 1
Midterm exam III: March 24
Wellness day: April 14
Midterm exam IV: April 19
Last day of classes: April 21 (for this course)
Last day to withdraw: April 23
Final Exam: April 28, 1:30 PM – 4:00 PM
Grades available online: May 5

Course content:

- Review for Chapter 4: 4.2 – 4.5.
- Review for Chapter 5: 5.1 – 5.3.
- Chapter 5: 5.6 & 5.8.
- Chapter 6: 6.1 – 6.3 & 6.5 – 6.6.
- Chapter 7: 7.1 – 7.3 & 7.6.
- Chapter 8: 8.1 – 8.7.
- Chapter 10: 10.1 – 10.5 & 10.7 – 10.8

Date: January 11, 2021.

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:

- 26 class meetings of 110 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.
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How this class works

Tell me and I forget, teach me and I may remember, involve me and I learn.
(Chinese proverb)

The best way to learn mathematics is to do mathematics. I am just watching my grandson learning how to walk. Frequently he will lose balance and fall only to get up again and start over. Getting up again is exactly what I hope you will do after one of your inevitable mistakes.

It is in our genes to learn walking and talking. It is also in our genes to be able to learn reading, writing, and thinking logically. Therefore I urge you to approach the tasks at hand without fear. You can do it, but you will fall once in a while (as do I).

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

- Review the recently worked problems.
- Work on several newly assigned problems; you are encouraged to collaborate.
- Write up as many solutions as you can (in a form you would be willing to share).
- Read over the assigned section(s) of the textbook.
- Make a list of questions to ask me at the beginning of the next class (very important).

During class we will typically do the following:

- With the aid of a short multiple-choice quiz I will check who read the new material (this uses the Poll Everywhere app).
- I will answer your questions and present new concepts, definitions, and theorems.
- You will present your work on previously assigned problems from the book with the help of a document camera or by sharing your screen (give credit if you received any help).
- 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. Could you get up and do the problem now yourself? If not, you still have questions. Asking questions will be easier if you have worked on the problem beforehand.

Some rules and tips for presentations:

- I will call for volunteers every day and will pick the person with the lowest running course average to present a given problem.
 - Let me know ahead of time (by email), when you volunteer. Precedence is given to the student volunteering first.
 - A student who has not gone to the board on a given day has precedence over a student who has gone to the board that day.
 - Ties are broken by lot.
- To present a problem at the board successfully means to have written up the problem statement up and a correct solution using complete mathematical sentences, 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.
 - 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 - brush it off and 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:
 - Preparation for class and attendance are crucial for your success. At some point during each class meeting a very short quiz will be given with the aid of the Poll Everywhere app. Performance on these quizzes will contribute 9% to the course average.
 - Students' presentations contribute 30% of the course average. The semester will be split in half after the second exam (15% can be earned in each half).
 - Four in class tests (50 minutes) including short questions (Part I) as well as problems requiring in-depth understanding (Part II). On the latter partial credit is awarded where appropriate. Each test contributes 9% to the course average.
 - A 150-minute comprehensive final examination including Part I and Part II type problems. The final contributes 25% to the course average.
- Your course performance is your 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:	88-100	75-87	62-74	50-61	below 50
Final Grade:	A	B	C	D	F

Course policies:

- Please make sure that you are able to receive e-mails through your Blazer-ID 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 the earliest possibility.
- No books or phones will be allowed during any of the exams.
- Calculators which do not have access to the internet will be allowed during tests.
- A 5" × 8" Quick Reference Card prepared by the student (no copies!) will also be allowed on each exam.

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 you 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.

COVID-19

UAB Disability Support Services (DSS) has established a process for UAB students to request temporary adjustments based on the impact of COVID-19. The process is similar to the traditional DSS registration procedures for accommodations based on disability. However, these requests will be referred to as "COVID-19 Related Temporary Adjustments". On the DSS website <http://www.uab.edu/dss>, there is a section (next to the traditional DSS application process) titled "Request COVID-19 Temporary Adjustments" where students can read the process and click to complete an application.

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 934-4205 or visit <http://www.uab.edu/dss>.