Math 119 Calculus II Syllabus
Agnes Scott College, Spring 2021
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The class is hybrid, in person and through Canvas and Zoom. If you have any technology issues (wifi, Zoom, Canvas, etc.), just let me know and we'll figure out something that will work for you.

All times are Atlanta (US Eastern) time zone.

Office hours: Mon 2:00-3:00, Tues 10:00-11:00, and by appointment. On Zoom - links on Canvas.

Required material: The textbook is Hughes-Hallett et al., *Calculus*, 4th ed.

Class structure: (Details and links on Canvas.) The class will meet in-person and also be live on Zoom; you can choose which works best for you. Exams will be online; we will not meet in person on exam days. (Zoom class meetings will be recorded and posted on Canvas. To preserve the integrity of the classroom experience and to protect students' privacy, which we are legally required to do, only students registered in the course may attend a Zoom class meeting.) There will also be online discussion on Canvas - each week, you are required to post at least one comment, and respond to another student's comment.

Plan: We'll cover most of chapters 6-11. Topics include techniques and applications of integration, sequences and series, Taylor series, and differential equations. There's a more detailed schedule below, but it's subject to change.

Homework: By now you've probably figured out that working problems is mostly how you learn math. There will be homework assigned nearly every week, due at midnight on Wednesdays. I strongly encourage you to work in groups, but you must make sure that you understand the problem completely yourself before submitting your answer.   You will turn in some of each assignment on Webwork, which you can access through Canvas. You can submit answers as many times as necessary on Webwork (up to the due date), so I expect that you'll get 100% on each assignment. Some of the assignments you do not need to turn in, but you are responsible for the material - completing only the Webwork assignments is not enough to prepare you for the exams. This is a 4-credit course. In addition to in-class time, you will be spending time outside of class on various activities. The first and most important activity is to regularly read the text and to work through and understand the examples in each section. You should try to spend time on this every day.

Proficiency test: All Calculus II students are required to pass an "integration proficiency test" online. This test will have 7 integration problems, and **you must get each problem correct in order to pass**. You should be able to answer all the questions after we have finished Chapter 7. You may retake the proficiency test (with different problems) as many times as necessary. These must be completed by hand without help from any technology, websites, or other people.

Honor code and group work: All students are expected to follow the honor code throughout the semester; all exams and assignments should be pledged.
I strongly encourage you to work on the homework in groups. I suggest that you work on the problems by yourself first, making a note of anything giving you trouble; then meet with your group and work through the remaining problems together; and finally submit the solutions by yourself. Every group member must submit her own solutions independently; just copying the group's answers is plagiarism and is unacceptable.

Getting help: Chances are that sooner or later you'll get stuck on something, so don't get frustrated. Think hard, and if you're still stuck, do something else for a while. (It's amazing how often that works.)

My office hours are above - these are times when I'm guaranteed to be sitting around on Zoom waiting to talk to someone. If you want to see me at other times, please let me know and we'll find a time.

Student learning assistants in the Math Learning Center will be able to provide help throughout the week. More details, including the schedule, will be posted on Canvas. You are encouraged to use this service, and should think of it as part of your weekly mathematics regimen.

Finally, I can't emphasize enough that your classmates are your best source of help.

Course goals:
Learn to
Examine mathematical concepts graphically, numerically, and algebraically
Define, describe, and apply the concepts of calculus (in particular, integrals, series, and differential equations)
Develop skills in problem analysis and problem solving
Interpret real-world problems in the language of mathematics
Communicate mathematics effectively, both orally and in writing

Exams: We will have three midterm exams and one final exam, all closed-book. The first midterm covers all material up to that point, the second covers all material since the first, the third covers all material since the second, and the final is cumulative. The midterms will be available on Canvas between 8 am and 10 pm on their scheduled day; you will download a PDF of the exam, write solutions on your own paper, then scan and upload your solutions. You will have 90 minutes to upload your solutions, starting when you access the exam.

Assessment: Each midterm 10%, integration proficiency test 10%, homework 25%, weekly discussion participation 10%, final exam 25%.

Late work: Late work won't be accepted, and you won't be allowed to make up missed exams, except under very exceptional circumstances (e.g., the sasquatch attacks - and even then you should get a note from the sasquatch). In the case of a conflict that you absolutely can't resolve (for example, a religious holiday), you may arrange to take a midterm exam early.

Attendance and participation: I expect you to be at every class meeting, either in person or on Zoom, on time, unless you've talked to me about having to be absent for technological or other reasons. However, tardiness or absence will have no (direct) effect on your grade. Participation in the weekly discussions on Canvas is required,

Dates and deadlines:
First midterm exam: Wed., 2/10.
Integration proficiency test: Wed., 3/17.
Second midterm exam: Fri., 3/19.
Third midterm exam: Fri., 4/16.
Final exam: self-scheduled.

Course evaluation: Your feedback on the course is extremely valuable to me, the math department, and the administration. In particular, I take your comments very seriously and use them to improve the course the next time I teach it. You are responsible for completing an evaluation of the course at the end of the semester.

Title IX: For the safety of the entire community, any incidence of or information about sexual misconduct must be reported immediately to Title IX Coordinator Marti Fessenden

(mfessenden@agnesscott.edu, 404-471-6547) or Deputy Title IX Coordinator Karen Gilbert (kgilbert@agnesscott.edu, 404-471-6435).

Inclusion: This course adheres to the principles of diversity and inclusion integral to the Agnes Scott community. We respect people from all backgrounds and affirm people's decisions about gender expression and identity. Please let me know your preferred name or gender pronoun if different from the class roster. The Gay Johnson McDougall Center for Global Diversity and Inclusion is centered and grounded in dismantling systems of oppression, including structural and systemic racism, as well as empowering each individual to take action that uplifts and builds community. Students can contact them at diversity@agnesscott.edu or 404.471.6118.

ADA: Agnes Scott College seeks to provide equal access to its programs, services and activities for people with various abilities. If you will need accommodations in this class, please contact the Office of Academic Advising and Accessible Education (404-471-6150) to complete the registration process. Once registered, please contact me so we can discuss the specific accommodations needed for this course.

Date	Topic
Wed 1/20	Introduction
Fri 1/22	5 Definite integrals (review), 6.1 Graphical and numerical antiderivatives
Mon 1/25	More 6.1, 6.2 Analytical antiderivatives
Wed 1/27	More 6.2, 6.3 Differential equations
Fri 1/29	6.4 Fundamental Theorem of Calculus
Mon 2/1	6.5 Equations of motion
Wed 2/3	7.1 u-substitution
Fri 2/5	7.2 Integration by parts
Mon 2/8	Catch up, review
Wed 2/10	**First exam**
Fri 2/12	7.5, 7.6 Approximating definite integrals
Mon 2/15	7.7 Improper integrals
Wed 2/17	8.1 Area and volume
Fri 2/19	8.2 Geometric applications
Mon 2/22	8.3 Integrals in polar coordinates
Wed 2/24	8.4 Density
Fri 2/26	8.5 Applications - physics

Date	Topic
Mon 3/1	8.6 Applications - economics
Wed 3/3	Applications
Fri 3/5	8.7, 8.8 Distribution functions, probability
Mon 3/8 - Tues 3/16	**Journeys/Peak Week/Spring Break**
Wed 3/17	Catch up, review; **Int. Prof. Test due**
Fri 3/19	**Second exam**
Mon 3/22	9.1 Sequences
Wed 3/24	9.2 Geometric series
Fri 3/26	9.3, 9.4 Convergence, ratio test
Mon 3/29	9.5 Power series
Wed 3/31	10.1 Taylor polynomials
Fri 4/2	**Spring holiday**
Mon 4/5	10.2 Taylor series
Wed 4/7	10.3 Finding and using Taylor series
Fri 4/9	More 10.3, 10.4 Error estimates
Mon 4/12	More 10.4
Wed 4/14	Catch up, review
Fri 4/16	**Third exam**
Mon 4/19	11.1 Differential equations, 11.2 Slope fields
Wed 4/21	More 11.2, 11.3 Euler's method
Fri 4/23	11.4 Separation of variables
Mon 4/26	11.5 Growth and decay
Wed 4/28	11.6 Applications
Fri 4/30	Applications
Mon 5/3	11.7 Population models
Wed 5/5	Summary/review