



Syllabus for Math 555

Advanced Calculus I

Spring 2017

Instructor: Jeremy Clark

Office Location: 306 Hume Hall

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Office Hours: 3:45-4:45 on MW

Phone: (662) 915-7065

Lecture Time/Place: We meet MW 2:30-3:45 in Hume 331.

Textbook: *Calculus* by Michael Spivak, 4th edition, Publish or Perish, ISBN: 978-0914098911

Make sure to get the 4th edition since the exercises in the problem sets have been changed from the 3rd edition.

Course Content: Math 555 is the first half of the course series on advanced calculus, which covers the logical foundations of calculus. As you may have noticed, the content of lower-division calculus courses is application-oriented with an emphasis on computation and intuition and without much attention to proving theorems. One of the main goals of this advanced calculus series is to fill in proofs for some of the calculus results that you mostly likely have taken for granted, such as the intermediate value theorem. We will begin this endeavor by acquiring proof skill with the so-called ϵ - δ definition for the limit of a real-valued function.

Grading Scheme: There will be a total of 600 possible points with the following breakdown:

- First midterm exam is worth 120 points. (20%)
 - Second midterm exam is worth 150 points. (25%)
 - Homework and participation is worth 120 points. (20%)
 - The final exam is worth 210 points. (35%)
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Your final letter grade in the course will be related to your percentage score as follows:

A	93-100%	B	83-87%	C	70-77%
A-	90-93%	B-	80-83%	D	60-70%
B+	87-90%	C+	77-80%	F	< 60%

Missed exams will receive a **zero score** and cannot be made up.

Attendance: Attendance will be recorded through the wall scanners. There will be a 10-point penalty for every lecture missed after the first four absences.





Homework: The homework will be due on a nearly weekly basis. It is imperative that you get plenty of proof practice by working through the homework problems!

- Proofs should be thorough and written in complete sentences.
- You are encouraged to work jointly on the homework sets, but you should attempt each problem on your own first.
- Copying solutions from online sources is a bad idea since it will not help you develop your proof writing skills.

Important Dates:

Midterms: Monday 2/27 and Wednesday 4/12

Final: Monday, May 8th at 4pm

Tentative Schedule

Weekly Date Range	Monday	Wednesday
1/23 → 1/27	Overview + Ch. 1	Ch. 4 + Ch. 5
1/30 → 2/3	Ch. 5	Ch. 5
2/6 → 2/10	Ch. 5	Ch. 5
2/13 → 2/17	Ch. 5	Ch. 6
2/20 → 2/24	Ch. 6	Ch. 7
2/27 → 3/3	Exam #1	Ch. 7
3/6 → 3/10	Ch. 8	Ch. 8
3/13 → 3/17	No class	No class
3/20 → 3/24	Ch. 9	Ch. 9
3/27 → 3/31	Ch. 10	Ch. 10
4/3 → 4/7	Ch. 11	Ch. 11
4/10 → 4/14	Ch. 12	Exam #2
4/17 → 4/21	Ch. 13	Ch. 13
4/24 → 4/28	Ch. 13	Ch. 13
5/1 → 5/5	Ch. 14	Ch. 14
5/8 → 5/12	The Final	

