

MATH 4320/5320 Modern Analysis II Spring, 2019

Meetings: Tu,Th 4:45 - 6:00 pm, Engr 105

Instructor: Greg Morrow

Office: Engr 284, (719) 255-3184

Hours: Tu &Th: 10:15 -10:45 am, and Tu &Th: 1:45 - 2:45 pm

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Prerequisite: Advanced Calculus in one real variable (MATH 4310)

Text: *Advanced Calculus, 2nd Edition*, by Patrick M. Fitzpatrick. ISBN 9780821847916.

Description: Pointwise and uniform convergence of sequences and series of functions, differentiation and integration of uniform limits, power series; topology of Euclidean space, continuity and the extreme value theorem for real valued functions on Euclidean space; topology of metric spaces, completeness, the contraction mapping principle, compactness in a metric space; differentiation of functions of several real variables; the mean value theorem, the chain rule, and the inverse function theorem in several variables.

Homework and Tests: Homework will be assigned and collected weekly; see the assignments and due dates on the syllabus. Late homework will not be accepted. The lowest homework score will be dropped. There will be two mid-semester tests and a final exam. The following percentages may be used to compute the final grade: homework 20%, midterms 25% each, and final exam 30%.

Final Exam: Tuesday, May 14, 5:20 – 7:20 pm

Grading: 90's => grade of A, 80's => grade of B or better, 70's => grade of C or better.

MATH 4320/5320 Modern Analysis II Schedule Spring, 2019 (subject to change)

<u>Meetings</u>	<u>Coverage</u>	<u>Due date</u>
1/22 – 1/24	9.2 - 9.3	
1/29 – 1/31	9.4, 9.5	HW I , 1/31
2/5 – 2/7	10.1, 10.2	HW II , 2/7
2/12 – 2/14	10.3, 11.1	HW III , 2/14
2/19 – 2/21	11.2	HW IV , 2/21
2/26 – 2/28	Test over Chaps. 9, 10 on 2/28	
3/5– 3/7	12.1, 12.2	HW V , 3/7

MATH 4320/5320 Modern Analysis II Schedule Spring, 2019 (subject to change)

<u>Meetings</u>	<u>Coverage</u>	<u>Due date</u>
3/12 – 3/14	12.4	HW VI , 3/14
3/19 – 3/21	12.5	HW VII , 3/21
Spring Break: 3/25 – 3/31		
4/2 – 4/4	13.1 - 13.3	HW VIII , 4/4
4/9 – 4/11	Test over Chaps. 11, 12 on 4/11	
4/16 – 4/18	14.1 - 14.3	HW IX , 4/18
4/23 – 4/25	15.2, 15.3	HW X , 4/25
4/30 – 5/2	16.1, 16.2	HW XI , 5/2
5/7 – 5/9	Review for Final	E.C. HW XII due Tues. , 5/7

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