MATH 608—Real Variables II
Spring 2019

Instructor: David Kerr
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Office: Blocker 525K
Office hours: T 10:00-11:30, or by appointment

Lectures: MWF 9:10–10:00, BLOC 161

Course description: Topological spaces, continuity, Urysohn's lemma, Tietze extension theorem, nets, compact spaces, locally compact spaces, Tychonoff's theorem, Ascoli-Arzelà theorem, Stone-Weierstrass theorem, normed vector spaces, Banach spaces, linear operators, linear functionals, Hahn-Banach theorem, Baire category theorem, open mapping theorem, closed graph theorem, uniform boundedness principle, topological vector spaces, weak and weak* topologies, Alaoglu's theorem, Hilbert spaces, L^p spaces, Hölder's inequality, Minkowski's inequality, dual of L^p, Radon measures, Riesz representation theorem, Lusin's theorem, dual of $C_0(X)$. Prerequisite: MATH 607.

Textbook: G. B. Folland. Real Analysis. Modern Techniques and Their Applications. Second edition. Published by John Wiley & Sons, New York, 1999.

Grading: Grades will be based on weekly assignments (40%), a midterm exam (25%), and a final exam (35%).

Make-up policy: In accordance with university regulations, late assignments will only be allowed for a university-approved excuse in writing. Whenever possible, students should inform the instructor before an assignment is due. Students are required to notify the instructor by the end of the next working day after missing an assignment. Otherwise, they forfeit their rights to a make-up.

Support services: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Disability Services <https://disability.tamu.edu>.

Academic integrity: The Aggie Code of Honor states "An Aggie does not lie, cheat, or steal or tolerate those who do." See <https://aggiehonor.tamu.edu> for university policy concerning academic dishonesty and the rules and procedures of the Honor Council.

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