Course Plan
MATH 5143—Real Analysis I—Fall 2016

Instructor Dr. A. Noell; office: MS 404, phone: 744-5772; email: `noell@math.okstate.edu`

Office hours Monday and Wednesday 9:30–10:20 am, Tuesday and Thursday 1:30–2:20 pm, or by appointment

Prerequisites Advanced Calculus II (MATH 4153 or MATH 5053)

Text *Real Analysis* (2nd edition) by Gerald B. Folland. For a list of errata go to
`www.math.washington.edu/~folland/Homepage/index.html`

Format Homework will be assigned regularly and collected once per week typically.

Exams There will be two fifty-minute exams, tentatively scheduled for September 16 and October 28. A comprehensive final examination will be administered from 10:00 to 11:50 on Monday morning, December 5. A student shall be offered reasonable accommodation in the event that he or she misses an examination for a valid and documented reason. Clear such conflicts with the instructor in advance of the examination.

Grading For the course grade, the combined score on the homework assignments will count 40%, each of the two fifty-minute exam scores will count 15%, and the final exam will count 30%. The following scores are guaranteed: 90%–A; 80%–B; 70%–C; 60%–D.

University drop policy The last day to drop the course with no grade is Monday, August 22. A grade of W will be recorded if the course is dropped after August 22 and before the end of Friday, November 4. The last day to drop the course is Friday, November 4.

Syllabus attachment A syllabus attachment from OSU Academic Affairs is available at
`http://academicaffairs.okstate.edu/sites/default/files/documents/Fall 2016 Syllabus Attachment.pdf`

Academic integrity Here is a brief statement of the OSU policy: "OSU is committed to maintaining the highest standards of integrity and ethical conduct. This level of ethical behavior and integrity will be maintained in this course. Participating in a behavior that violates academic integrity (e.g., unauthorized collaboration, plagiarism, multiple submissions, cheating on examinations, fabricating information, helping another person cheat, unauthorized advance access to examinations, altering or destroying the work of others, and altering academic records) will result in an official academic sanction. Violations may subject you to disciplinary action including the following: receiving a failing grade on an assignment, examination or course, receiving a notation of a violation of academic integrity on your transcript, and being suspended from the University. You have the right to appeal the charge." Contact the Academic Integrity Coordinator, 101 Whitehurst, (405) 744-5627, `http://academicintegrity.okstate.edu`. **Note:** Informal discussion of homework assignments with other students can be helpful, but you must write up your solutions in your own words and based on your own work. Here are examples of violations of academic integrity: joining with others in writing solutions on the board and then copying them on your paper; examining another student's written work before submitting an assignment; using solutions obtained from the Internet.

Etiquette As a courtesy to others in the classroom, please turn off and stow all electronic devices before class begins.

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Supplementary references The following books may be useful: Andrew Bruckner et al.: *Real Analysis*; Donald Cohn: *Measure Theory*; Edwin Hewitt and Karl Stromberg: *Real and Abstract Analysis*; Frank Jones: *Lebesgue Integration on Euclidean Space*; H.L. Royden and P.M. Fitzpatrick: *Real Analysis*; Walter Rudin: *Real and Complex Analysis.*

First assignment Due Friday, 8/19:

1. Prove the following fact (as presented in class): $f^{-1}\left(\bigcap E_\alpha\right) = \bigcap f^{-1}\left(E_\alpha\right)$.
2. p. 24 # 4