

Prerequisite MATH 237 and MATH 307 and MATH 310, with a grade of C or better.

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Office Hrs MW 12:30 – 1:20; TR 11:45 – 12:45; or by appointment.

Course Description **MATH 337** is an introduction to the concepts of real analysis. The course covers standard material on the real number system, metric spaces, limits, sequences, functions, and continuity. Material on differentiation, series, integration, and sequences and series of functions is now covered in MATH 431.

Text No text is required. Course notes will be provided in pdf format at <http://people.wku.edu/david.neal/337/>

Standard texts on Real Analysis or Advanced Calculus can be used for further reference.

Homework

Exercises will be assigned daily with some problems to be turned in for a grade. On these problems, students are expected to do their own work; plagiarism and allowing plagiarism are not allowed and will result in a grade of 0 for the assignment. A repeat offense will result in the offending students being dismissed from the class. Late homework will not be accepted for credit.

All problems will require you to write a proper mathematical proof. All proofs should be written elegantly and neatly in a formal mathematical style. Complete sentences of explanation are required. Do not simply write an equation; you must explain what the equation is giving and/or why it is being used. Moreover, all equations must be properly aligned with no scratch outs.

Tests

Each test will be based on class lectures and assigned homework. Details of the tests will be outlined about a week and a half in advance of the tests. The tests will be closed book with no formula sheets allowed and no calculators allowed.

Test Dates

Test 1: Thurs Sep 22 **Test 2:** Tues Oct 25 **Test 3:** Tues Nov 22

Final Exam: Monday December 12 10:30 – 12:30.

Attendance Policy

Registration in this course obligates you to be regular and punctual in class attendance. However you may attend or not attend, as you desire. If you attend class, then please be attentive and respectful. If you ever choose not to attend class, then you should not expect to receive a passing grade.

Make-Up Policy

Students are expected to take all tests in class when they are scheduled. I am unable to accommodate requests to re-schedule exams for students who miss class to go do other activities. But if you must miss an exam due to a documented medical cause or tragedy, such as a heart attack, stroke, burst appendix, seizure, coma, broken femur, childbirth, earthquake, tornado, tsunami, car wreck, kidnapping, etc., then I may consider giving you a make-up.

Grading Policy

In order to receive a passing grade for this class, you must demonstrate that you have learned the material and that you have learned it well. For students who attend class, grades will be weighted as follows:

Assignments: 30% **Three Tests:** 17.5% each **Final Exam:** 17.5%

A: Average $\geq 95\%$ **B:** $87.5\% \leq \text{Avg} < 95\%$ **C:** $80\% \leq \text{Avg} < 87.5\%$ **F:** Avg $< 80\%$

At my discretion, there may be a slight curve to this grading scale.

Withdrawal Date

October 19, 2011 is the *last* day to withdraw from the course with a grade of W or to change enrollment from credit to audit. But you may withdraw from the class any time you like before this date.

Disability Services

Students with disabilities who require accommodations, academic adjustments, and/or auxiliary aids or services for this course must contact the Office for Student Disability Services in DUC A-200. The OFSDS telephone number is 745-5004 (or 745-3030 TTY). Please do not request accommodations directly from the professor without a letter of accommodation from the Office for Student Disability Services.

Therefore, every student is expected to attend every class. If you miss a class, then you must provide a legitimate, documented, written excuse upon returning to class in order for the absence to be excused. If you accrue two unexcused absences, then you will automatically receive an F in this course if you do not withdraw on your own.

Please be aware that a note stating that you visited Student Health Services does not guarantee an excused absence unless it specifically states that you had a serious ailment that prevented you from attending class. This applies, in particular, if you feel a little nauseous because you have to take a test for which you haven't studied, and you skip the test and run to get a note that says you visited Student Health Services. You will not be given a make-up exam unless the attending physician provides documentation that you had a serious impediment such as: a heart attack, a stroke, a burst appendix, a seizure or coma, a broken femur, you went into labor, etc.

The University has designated Tuesdays and Thursdays from 12:45 to 2:05 as the time that I am allowed to conduct class. Therefore, my class is an official university sanctioned event. In my opinion, it takes priority over all other events scheduled at the same time, including travel to and from other "extra"-curricular events. In other words, my class comes first. Therefore, I expect you to take each test in class when I decide to administer it, not when you decide that you are available to take it. I will not re-schedule an exam for you so that you may go do something else. But if you miss an exam due to a documented medical cause or tragedy, such as a heart attack, stroke, burst appendix, seizure, coma, broken femur, childbirth, earthquake, tornado, tsunami, car wreck, kidnapping, etc., then I may consider giving you a make-up.