

**Prerequisite** MATH 237, MATH 307, and MATH 310, with grades of C or better.

**Professor** Dr. David K. Neal COHH 4136 745-6213 david.neal@wku.edu

**Office Hrs** MWF 10:45 – 11:30; M F 12:30 – 1:00  
TR 10:30 – 11:00; 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.

### **Tentative Test Dates**

**Test 1:** Thurs Feb 16      **Test 2:** Thurs Mar 22      **Test 3:** Tues Apr 17

**Final Exam:** Monday May 7 8:00 – 10:00

## **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 because it is my judgement that, at this level, even average students of mathematics attend each class.

## **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 each class, grades will be weighted as follows:

<b>Assignments:</b> 30%		<b>Three Tests:</b> 17.5% each		<b>Final Exam:</b> 17.5%	
<b>A:</b> Average $\geq 95\%$ (Excellent)	<b>B:</b> $87.5\% \leq \text{Avg} < 95\%$ (Good)	<b>C:</b> $80\% \leq \text{Avg} < 87.5\%$ (Average)	<b>F:</b> Avg $< 80\%$ (Failure)		

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

## **Withdrawal Date**

March 16, 2012 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.