Prerequisite: MATH 227

Professor: Dr. David K. Neal, TCCW 315, 745-6213, david.neal@wku.edu

Office Hrs: MW 9:00 – 10:00 and 12:15 – 1:15; TR 11:00 – 12:30; F 9:00 – 10:00; or by appointment.

Text: *A Discrete Transition to Advanced Mathematics* by Richmond & Richmond

Course Description: MATH 310 is a transition to advanced mathematics intended primarily for students majoring or minoring in mathematics. The main goal of the course is to provide a foundation for students to begin studying abstract mathematics. Topics include logic, set theory, mathematical induction, relations, functions, cardinality, and counting techniques. In addition, the formalities of notation, mathematical rigor, and techniques of proof are detailed in this course so that students can improve their ability to write mathematics in a proper style. The course will cover material from Chapters 1 – 7 in the text. Supplemental material may be included.

Grades will be dependent on class average and attendance as follows:

- **Homework:** 20%
- **Three Tests:** 20% each
- **Final Exam:** 20%

- A – at least a 90% average and no more than two absences
- B – at least an 80% average and no more than two absences
- C – at least a 70% average and no more than two absences
- D – at least a 65% average and no more than two absences
- F – Below a 65% average

Students having more than two absences will receive a reduction in letter grade. Excessive absences (more than three) will constitute failure of the course.

(Grades of B+, C+, and D+ may be given in conjunction with the +/– Pilot Study.)

Homework: Exercises will be assigned daily with some problems designated to be turned in for a grade. On problems that are to be turned in, 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. Late homework will not be accepted.

All homework to be turned in should be neat and well-written, preferably typed with all mathematical symbols made in an Equation Editor in a math font. Examples of proper mathematical writing will be given throughout the course for students to use as a guide.

Tests: Each test will be based on class lectures and assigned homework. Details of the tests will be outlined several days in advance. The exams will be closed-book with no formula sheets allowed and, generally, no calculators allowed.
The tests are scheduled as follows:

**Test 1**: Tue Feb 8  
**Test 2**: Thur Mar 10  
**Test 3**: Thur Apr 14  

**Final Exam**: Thursday May 5  10:30 AM – 12:30 PM

**Make-Up Policy**

Students are expected to take each test on the day that it is scheduled. If a student cannot take an exam as scheduled, then the student is required to make a prior arrangement for a make-up. Failure to do so will result in a grade of 0 for the exam. There are absolutely no exceptions to this policy.

Students may re-schedule an exam only if they have a valid, documented reason for the absence. “Feeling sick” is not a valid reason unless the student requires hospitalization or immediate medical attention. In those cases, the student is required to have a doctor's written notification.

**Withdrawal Date**

March 1, 2005 is the last day to withdraw from the course with a grade of W or to change enrollment from credit to audit.

**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, Room 101, Garrett Conference Center. The OFSDS telephone number is (270) 745-5004 V/TDD. Please do not request accommodations directly from the professor without a letter of accommodation from the Office for Student Disability Services.

Please feel free to see me if you ever need any help with the class or if you’d like to discuss any other matter. Good luck in the course!