Math 3325-001 Principles of Mathematics
MW 4:30-5:50 pm, BUSN 304, Fall 2009
CRN: 13275

Prerequisite: Calculus II (Math 1312).

Instructor: Hamide Dogan-Dunlap

Office Location: BH 302

Contact Info: hdogan@utep.edu
Office Hours: Wednesdays 3:00-4:00 pm and Sundays 9-10:00 pm online (Elluminate site).

Problem Solving Session: TH 9-10:00 pm online (Elluminate site).


Catalog Description:
Logic and proofs, elements of set theory, relations and functions: application of these ideas. Cardinality, groups and their quotients, and the field of real numbers. Prerequisite: MATH 1312.

Course Objectives: Upon successful completion of the course,
• you will be able to construct straightforward proofs in a variety of settings.

• you will be able to make use of existing theorems, and employ basic mathematical techniques of proof (induction, proof by contradiction, contrapositives, etc.) and the building blocks of mathematical language (sets, functions, and relations).

• your proofs will be in clear and complete English sentences, accompanied by clarifying diagrams where necessary.

• You will be prepared for further study of other specific topics in proof-based mathematics.

• Unlike calculus and differential equations, where you mostly performed computations to solve problems, you will mainly emphasize making convincing arguments using mathematical language (proving) about the correctness of statements and your answers, and not just finding answers. These are the skills that almost all your future advanced math courses will require.
Course Activities/Assignments:

The course is built around student presentations of proofs of results, and solutions to problems, from the textbook, while the instructor serves mainly as a moderator.

Exams: Each exam is comprehensive and no make-up or retakes will be given, except for documented emergencies. Exams will include everything covered/presented in class, in the textbook, on assignments, and discussions. Exams will be administered in parts every two to three weeks.

Homework will be assigned in class or online. Homework may be collected and graded. Hmw questions will regularly be presented in class or may also be given in exams. WeBWork, an online assessment system, may be implemented for homework.

Readings will be assigned and may be assessed.

Elluminate. An online system. We will have office hours and problem solving sessions online using the Elluminate site. For this, we need a Headset (audio and video capability) and internet access. Elluminate may also be used to conduct class if necessary. Instruction to get access to the Elluminate site will be e-mailed. Make sure I have your active e-mail address.

Comprehensive final exam will be given. No make-ups or retakes will be given. Final will include everything covered/presented in class, in the textbook, on quizzes, and assigned on homework. Final is on Monday, December 7, 4:00 pm – 6:45 pm, 2009.

Attendance and Participation: As with every college course, attendance is essential for success. There will be in-class activities that are essential for your learning. Try not to be absent unless absolutely necessary.

Electronic and Wireless Devices: Please do not use cell phones, pagers, IPods, MP3 players, blue tooth devices, etc. during class. Cell phones and pagers should be set to silent or vibrate, and any calls should be taken outside of class. Cell phone calculators may not be used on quizzes or exams.

Grading Policy: Grades will be based on homework, reading assignments, presentations, participation and exams:

- Final: 35%
- Exams: 30%
- Homework, Reading Assignments, and Presentations: 30%
- Attendance: 5%

Attendance Policy: Due to the course structure, attendance is mandatory for both class and online meetings. For every three unexcused absences, you will receive a zero for an in-class presentation.

**Drop Deadline:** The last day to drop the course without a “W” is **October 30, 2009.**

*Please note that the instructor will not drop students with a “W” after the drop date.*

You are responsible with the course material covered/presented in class, in the textbook, on quizzes, and assigned on homework. Seek help early in the semester. Do not wait till the end of the semester for help.

**DO NOT WAIT TILL THE LAST WEEK OF CLASSES TO DISCUSS YOUR OVERALL PERFORMANCE IN THE COURSE.** If you come early in the semester, you may get guidance and help both from the instructor and the Teaching Assistant. **This will not be the case if you come towards the end of the semester.**

It is your responsibility to maintain the grade average required by a scholarship or other financial supports (if you are on one). Course grade will be assigned strictly based on what you earn in class. Your scholarship or financial support requirements will not be the determining factor.

*This syllabus is subject to changes when necessary.*