Math 279: Introduction to Finite Mathematics
Spring 2011

Meetings: MWF 01:30–02:20 in SH 116

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Prerequisite: C or better in Math 190G.

Objectives: The main objective of Math 279 is to teach students what a mathematical proof is, how to perform one formally, and how to make sure that it is indeed valid.

Material: We will cover the basics of logic, set theory, and number theory. All the required material will be covered from the projects based on original historical sources by famous mathematicians. We will learn the basics of logic from the project “Introduction to Symbolic Logic,” based on the original historical source by Bertrand Russell (1872–1970) and Alfred North Whitehead (1861–1947). We will learn the basics of set theory from the project “An Introduction to Naïve Set Theory and the Concept of Infinity: Guided by an Essay of Richard Dedekind,” based on the original historical source by Richard Dedekind (1831–1916). Finally, we will learn the basics of number theory from the project “Treatise on the Arithmetical Triangle,” based on the original historical source by Blaise Pascal (1623–1662).

Grades:

| Project 1 | 20 % |
| Project 2 | 20 % |
| Project 3 | 20 % |
| Midterm   | 15 % |
| Final     | 25 % |

Projects: Each project will have a set of homework problems, which will be assigned routinely and a sample of exercises will be collected periodically for grading. To succeed in this course, daily work on practice problems must be done. A student who can complete all homework
problems will have a good grasp of the course material, and many of the questions on the midterm and final exams will be of a similar nature to those assigned as homework. You are welcome to discuss the homework problems with other members of the class, and you may hand in your solutions in pairs (i.e. one submission bearing two names). Your solutions must be written up in a comprehensible way. Late assignments will not be accepted without a medical certificate or other university approved excuse within a reasonable time of the missed work.

**Midterm:** The midterm exam will roughly consist of 4 problems, and will cover material from the first half of the semester. It will be given sometime in late February or early March.

**Final:** The final exam will take place on **Monday, May 2nd, 1:00–3:00 in SH 116.** It will roughly consist of 8 problems.

**Missed Test Policy:** Students must notify the instructor **before** an exam is missed in order to qualify for a make-up exam. Failure to do so will result in a “0” for any missed exam. The only valid excuses for missing an exam are documented illness, death in the family, or required participation in any university related function. Supporting documentation is required.

**Withdrawals and Incompletes:** You have the primary responsibility for withdrawing from the course. **The last date to drop with a **W** is Tuesday, March 8th.** Under University policy, an **I** grade is allowed only if a student has passed the first half of the course, and is precluded from completion of the second half of the course by a documented illness or family crisis.

**Policies:** Students are expected to attend every class and show up on time.

**Important Notes:**

- At the end of the final examination, the course is over, and there are no more opportunities to submit additional work.
- No extra credit assignments will be composed for students who want to try to compensate for poor results in another component of the course.

**Disabilities and Discrimination:** Feel free to call Diana Quintana, Coordinator of Services for Students with Disabilities, at 575-646-6840 with any questions you may have on student issues related to the Americans with Disabilities Act (ADA) and/or Section 504 of the Rehabilitation Act of 1973. All medical information will be treated confidentially.

Feel free to call Jerry Nevarez, Director of Institutional Equity, at 575-646-3635 with any questions you may have about NMSU’s Non-Discrimination Policy and complaints of discrimination, including sexual harassment.