

**Mathematics 297B**  
**Seminar in Mathematical Proofs**  
**Spring, 1993**  
**MTh 2:00 - 3:00 p.m.**

**Textbook:** Galovich, Doing Mathematics, an Introduction to Proofs and Problem Solving, Saunders College Publishing, 1993

**Instructor:** William P. McKibben  
Office: Seney 303  
Phone: 4-8333

**Regular Office Hours** (generally in office - no appointments):

*Mondays* 3:30-5:00 p.m.

*Tuesdays* 10:30-11:30 a.m. and 1:30-3:00 p.m.

*Wednesdays* 1:30-3:30 p.m.

*Thursdays* 10:30-11:30 a.m. and 3:30-4:30 p.m.

*Fridays* 1:00-2:00 p.m.

**Course Purpose and Content:** The purpose of this course is to develop the student's understanding of mathematical proofs, thereby providing the student with an appropriate foundation for the deeper study of mathematics. Course content consists of a study of the fundamentals of logic and sets as used in mathematics; proof techniques such as direct proof, proof by contradiction, mathematical induction and case analysis; and application of these techniques in connection with the introductory study of several areas of mathematics such as number theory, relations and functions, and set theory.

**Activities and Expectations:** The students will be expected to study the textbook and other materials, to participate in class discussions of the material, to produce their own proofs, to present proofs to the class, and to submit written proofs for grading.

**Grading:** The student's grade will be based on class participation, including formal presentations (50%) and on written work submitted (50%). The final letter grade will be based on standard percentages of the plus-minus grading system.

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