My wife Linda is also a member of the Math and CIS faculty, so there are two Drs. Iseri. Call me Howard.

Office: 213B Elliott Hall. Email: hiseri@mansfield.edu. Web page: http://faculty.mansfield.edu/hiseri.
Phone: 662-4701 (I like email messages a lot more than phone messages).

Office Hours: 12:30 MWF, 2:30 TTh.

Text: My Lecture Notes.

Catalog Description: Foundations of mathematics emphasizing fundamental concepts in abstract mathematics and deductive reasoning. Topics include logic, mathematical induction, graph theory, recurrence relations, difference equations, Boolean algebra, sets, functions, relations, cardinality, number systems, and algorithms. (Addresses NCTM Standard 1.5.11 for Mathematics Education majors.)

NCTM evidence for Mathematics Education Majors: Mathematics Education majors are required to compile an electronic portfolio including evidence that supports NCTM accreditation of this program. You should include your tests and final exam in your portfolio addressing NCTM Standards 1.5.11.

Program Assessment Evidence: The Objectives and Outcomes listed below address the Content Knowledge, Proof and Justification, and Abstract Reasoning Program Objectives. The final exam will be retained and analyzed (anonymously) for assessment purposes.

Calculator: You may want to use a calculator for this class, and you will be allowed to use it on tests. A $10-$15 scientific calculator or statistical calculator should be sufficient.

Assignments: 10% total Homework and quizzes.
22% each Three Tests (Thursdays, Sept. 20th, October 11th, November 8th).
24% Final Exam (Thursday, December 13th at 10:45).

Letter Grades: I will assign letter grades based on the following percentages. An A is 93% or better. An A- is 90% or better. An B+ is 87% or better. A B is 83% or better. A B- is 80% or better, A C+ is 77% or better, A C is 73% or better, A C- is 70% or better, A D+ is 67% or better, A D is 63% or better, and a D- is 60% or better. Anything below 60% is an F.

Material to be covered: See Course Calendar. (http://faculty.mansfield.edu/hiseri/MA3260/MA3260.htm)

Course Goals: To begin to indoctrinate students to the reasoning, language, and practice involved in higher-level mathematics.

Course Objectives:
1. Develop a foundation of set theory concepts and notation
2. Explore a variety of various mathematical structures by focusing on mathematical objects, operations, and resulting properties
3. Develop formal logical reasoning techniques and notation
4. Demonstrate the application of logic to analyzing and writing proofs
5. Develop techniques for counting, permutations and combinations
6. Develop the concept of relation through various representations (digraphs, matrices, lists)

Student Learning Outcomes: Students will be able to:
1. Demonstrate a proficient understanding and ability to use basic concepts and notation of sets.
2. Establish properties and identities of mathematical structures.
3. Determine the truth value of compound statements
4. Demonstrate simple proofs using standard rules of inference: direct, indirect, contradiction, and induction
5. Demonstrate correct application of algorithms for counting permutation and combination for given contexts.
6. Solve recurrence relations
7. Determine properties of an abstract relation (reflexive, irreflexive, symmetric, etc) and establish equivalence relations.

**MU Americans-with-Disabilities-Act Statement:** Any students with documented psychological or learning disorders or other significant medical conditions that may affect their learning should work through Mr. William Chabala in our Counseling Center (South Hall 216, Phone: 662-4798; e-mail wchabala@mansfield.edu) to provide me with the appropriate letter so that I may serve their particular needs more effectively. If you have an exceptionality that requires classroom or testing accommodations, Mr. Chabala will work with us to identify and implement appropriate interventions.