

Instructor: Diane Daniels
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Credit: 3 semester hours

Catalog Description: Three hours lecture. The nature of mathematics; introduction to set theory; the structure and development of the real number system. For Elementary and Special Education majors only. (Prerequisites: a C or better in MA 1313 or an ACT math sub-score of 24)

Conceptual Framework: This course is designed to give pre-service elementary school teachers a working knowledge and understanding of the real number system together with its properties.

Basic Skills Test:

_____ You are required to pass (correctly answer 15 out of 20) a basic skills test in order to pass this class. You will be given four opportunities to successfully complete this. If you do not pass this test on the fourth attempt you will automatically receive an F for the course. You will have one month from the time of enrollment to pass this test.

Instructional Objectives:

- _____ 1. The student will be able perform basic set operations.
2. The student will be able to add, subtract, multiply and divide whole numbers.
3. The student will gain an understanding of the properties of whole numbers.
4. The student will be able to read and write using Roman Numerals.
5. The student will be able to convert base ten numbers into other bases.
6. The student will be able to convert numbers in bases other than ten to base ten.
7. The student will be able to perform basic computations in bases other than ten.
8. The student will be able to add, subtract, multiply, and divide integers.
9. The student will gain an understanding of the properties of integers.

10. The student will understand and be able to use the divisibility properties.
11. The student will be able to distinguish between prime and composite numbers.
12. The student will be able to find and use the greatest common divisor and the least common multiple.
13. The student will be able to add, subtract, multiply, and divide rational numbers.
14. The student will gain an understanding of the properties of rational numbers.
15. The student will gain an understanding of the properties of the entire real number system.

Topics To Be Covered:

1. Sets and Operations
 - a. Basic definitions
 - b. Operations on sets
 - c. Operations on Whole numbers
 - d. Properties of Whole numbers
2. Numeration Systems
 - a. Ancient numeration systems
 - b. Roman numerals
 - c. Bases other than ten
 - d. Basic operations in bases other than ten
3. Integers
 - a. Operations on Integers
 - b. Properties of Integers
 - c. Divisibility tests
 - d. Prime and composite numbers
 - e. Greatest Common Divisor and Least Common Multiple
4. Rational Numbers
 - a. Operations on Rational numbers
 - b. Properties of Rational numbers
5. Decimals
 - a. Operations on decimals
 - b. Properties involving decimals
 - c. Non-terminating decimals

Text:

Mathematics for Elementary School Teachers. 3rd edition. O'Daffer, Charles, Cooney, Dossey, Schielack. Addison Wesley Publishers

Mississippi State University Student Registration for My Math Lab

MyMathLab is an interactive website where you can:
Take tests or do homework assigned by your instructor
Self-test, work practice problems, and get tutorial help to improve your math skills
View videos for further understanding
Explore interactive animations in the Multimedia Textbook
Use customized materials prepared by your instructor

What do you need to get started? MA 1413 Structure of the Real Number System

A Valid Email Address	<i>Don't have it yet?</i> Contact your school's technology center, or set up an e-mail account through a free service such as Hotmail or Yahoo.
Course ID	<i>The Course ID for your section of MA 1413 (Structure of Real Numbers) is:</i>
Student Access Code A sample code looks like this: MMLST-TAROK-THOLE- PICON-SHRIK-PRAWN	<i>Don't have it yet?</i> Your textbook should have been bundled with an access code to MyMathLab. If it wasn't, you need to: Go to your campus bookstore to buy the Student MyMathLab Starter Kit (kit contains access code card and instructions) for your textbook OR Purchase online access with a credit card at http://students.pearsoned.com/get-started.html .

What steps do you take next?

Go to <http://students.pearsoned.com> and click on Student: Register.
Follow the on-screen instructions to enter your student access code and Course ID, provide contact information, and create your own unique login name and password.
Install required plug-ins on EVERY computer from which you plan to access MyMathLab. (The lab computers already have these installed, so you will just need to complete this step if you are accessing My Math Lab from a personal computer.) The plug-ins you will need to install can be found at <http://mathxl.com/bothmmlwiz/default.htm>. or from the link for the "Installation Wizard" on your announcements page when you log in to your course

After you've registered, Log In with your new login name and password at www.mymathlab.com (bookmark this URL).
If you need Technical Support, e-mail support@coursecompass.com or call 1-800-677-6337.

This is the information you will receive when you log into MML after receiving your access code.



Thu, Mar 23, 2006 -- Online Structures of the Real Number System (Math For Teachers 1)

March 23 2006 -- Course Syllabus
-- MSU Structures of the Real Number System Online
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Welcome to Structures of the Real Number System online. This course consists of online homework, quizzes, a midterm and a final exam. The midterm and final are proctored and can be taken wherever you are or in Memorial Hall of the Mississippi State campus. These tests are traditional pencil and paper. If you are not near the MSU campus you can get an approved proctor in your community to give you the tests. (Contact Betty McCoy or Rusty Foster at the MSU continuing education office 662-325-2652 or 662-325-2627 respectively.)

Your grade in this course will be determined as follows:

Homework 20% of final grade
Quizzes 20% of final grade
Midterm 30% of final grade
Final 30% of final grade

Grading Scale:
90-100% A
80-89 B
70-79 C
60-69 D
Below 60 F