

## MATH 481 Abstract Algebra I

1. Catalog Description

**MATH 481, 482 Abstract Algebra I, II (4) (4)**

Introduction to the study of algebraic structures including groups, rings and fields. 4 lectures.  
**MATH 481** Prerequisite: MATH 306 or MATH 341 or consent of instructor. **MATH 482**  
 Prerequisite: MATH 481.

2. Required Background or Experience

Math 306 or Math 341.

3. Learning Objectives

The student should know the basic definitions and theorems of modern algebra and be able to use them. The concept and precise definition of a function will be re-emphasized along with specific examples within the context of modern algebra.

4. Text and References

Any junior-senior level modern algebra text such as:

1. Fraleigh, J., A First Course in Abstract Algebra, 7th ed., Addison-Wesley, 2003.
2. Gallian, Joseph A., Contemporary Abstract Algebra, 6th ed., Houghton-Mifflin, 2006.
3. Herstein, I. N., Abstract Algebra, 3rd. ed., Wiley, 1996.
4. Rotman, Joseph J. A First Course in Abstract Algebra, 2nd ed., Prentice-Hall, 2000.

5. Minimum Student Materials

Paper, pencils and notebook.

6. Minimum University Facilities

Classroom with ample chalkboard space for class use.

7. Content and Method

<u>Topics</u>	<u>Lectures</u>
Groups	20
Rings	10
Fields	<u>4</u>
Total	34

Method

Lecture, discussion, student participation.

8. Methods of Assessment

Homework assignments, class demonstrations, quizzes, and examinations.