Marshall University
Syllabus

Course Title / Number	MTH 452/552: Modern Algebra II (CRN 3926/3925)
Semester/Year	Spring 2014
Days/Time	MWF 3PM – 3:5PAM
Location	Smith Hall 516
Instructor	Dr. Michael Schroeder
Office	742F Smith Hall
Phone	(304) 696-6643
E-Mail	`schroederm@marshall.edu`
Office/Hours	MWF 9AM (Smith Music 115) & MW 2PM (Smith 742F)

University Policies	By enrolling in this course, you agree to the University Policies listed below. Please read the full text of each policy be going to
	`www.marshall.edu/academic-affairs`
	and clicking on "Marshall University Policies." Or, you can access the policies directly by going to
	`http://www.marshall.edu/academic-affairs/?page_id=802`
	Academic Rights and Responsibilities of Students
	Excused Absence Policy for Undergraduates
	Academic Probation and Suspension
	Computing Services Acceptable Use
	Students with Disabilities
	Academic Forgiveness
	Academic Dishonesty
	Affirmative Action
	Inclement Weather
	Sexual Harassment
	Dead Week

Course Description: From Catalog

Continuation of MTH 450. (PR: C or better in MTH 450)

The table below shows the following relationships:
How each student learning outcomes will be practiced and assessed in the course.

Course Student Learning Outcomes	**How students will practice each outcome in this Course**	**How student achievement of each outcome will be assessed in this Course**
Successful students will ...		
further practice with various methods of proof	low-stakes quizzes, homework, classwork	midterms and final exam
conclude our exposition of group theory	low-stakes quizzes, homework, classwork	midterms and final exam
become familiar with different types of rings and fields and their properties	low-stakes quizzes, homework, classwork	midterms and final exam
learn about mappings between rings (homomorphisms).	low-stakes quizzes, homework, classwork	midterms and final exam
receive an introduction to field theory.	low-stakes quizzes, homework, classwork	midterms and final exam

Required Texts, Additional Reading, and Other Materials

1. Gallian, Joseph A. *Contemporary Abstract Algebra, 8th Edition*. (ISBN: 9781133599708)

Course Requirements / Due Dates

1. Homework will be assigned almost every day. Assignments will be due one week from their assignment date. Each homework will be graded as a percentage, and the lowest few assignments will be dropped. Your homework (and presentations) will constitute 35% of your final grade. Graduate student homework must be typeset using LaTeX.
2. There will be short warm-up assignments at the beginning of class, requiring that you can recall the definitions and theorems discussed in the previous class. This will constitute 5% of your final grade.
3. We will have three mid-term exams and a final exam in this course. The weights of the midterms are each $13\frac{1}{3}$% The weight of the final is 20%. An unexcused absence for an exam will result in a **zero (0)** for that grade. An excused absence as determined by the Office of Student Affairs (location at MSC2W38) will warrant a makeup exam. Undergraduates have the opportunity to take the average of their midterms in lieu of taking the final.

Grading Policy

Homework is worth 35% of your final grade.

In class work / warmups are worth 5% of your final grade.

The midterms each count for $13\frac{1}{3}$% of your final grade.

The final exam counts for 20% of your final grade.

The course is graded on a 10-point scale – 90% is an A, 80% is a B, etc.

Attendance Policy

You are responsible for everything that is said and covered in class each day. Attendance is strongly recommended. Attendance and participation will be key factors in border-line grades getting bumped. Graduate students will be required to present problems throughout the semester.

Course Topics

Topics discussed will include: Group homomorphisms, the fundamental theorem of finite abelian groups, rings, integral domains, ideals and factor rings, ring homomorphisms, polynomial rings, unique factorization domains, vector spaces, extension fields, algebraic extensions, and finite fields. We will attempt to cover Chapters 10-22 in this course.

Course Schedule

There is approximately one homework assignments due each week.
Their due dates are given in class.

There are five (3) midterms given throughout the semester.
Their dates will be announced at least one (1) week beforehand.

The final exam will be given on Monday, May 5, 2014 at 3PM.

MTH 452/552: Modern Algebra II

Specific Class Information

Semester:	Spring 2014	**Instructor:**	Dr. Michael Schroeder
CRN:	3926 (201) MTH 452	**Email:**	schroederm@marshall.edu
	3925 (201) MTH 552	**Office (Phone):**	Smith Hall 742F, (304) 696-6643
Meeting:	MWF 3:00PM - 3:50PM	**Classroom:**	Smith Hall 516

Required Text: Gallian, Joseph A. *Contemporary Abstract Algebra, 8th Edition.* (ISBN: 9781133599708)
Prerequisites: Math 450

Learning Outcomes, Methods, and Assessment

Each learning outcome is listed below. Students will complete homework and graduate students will present problems to practice these skills. Assessment will be done through midterm and final exams.

Desired MTH 452/552 Learner Outcomes/Objectives
Successful students will ...

- further practice with various methods of proof
- conclude out exposition of group theory
- become familiar with different types of rings and fields and their properties
- learn about mappings between rings (homomorphisms).
- receive an introduction to field theory.

Course Description

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Course Policies

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Homework

Homework will be assigned almost every day. Assignments will be due one week from their assignment date. Each homework will be graded as a percentage, and the lowest few assignments will be dropped. Your homework (and presentations) will constitute 35% of your final grade. Graduate student homework must be typeset using LaTeX.

In-Class Assignments

There will be short warm-up assignments at the beginning of class, requiring that you can recall the definitions and theorems discussed in the previous class. This will constitute 5% of your final grade.

Exams

We will have three mid-term exams and a final exam in this course. The weights of the midterms are each 12% The weight of the final is 20%. An unexcused absence for an exam will result in a **zero (0)** for that grade. An excused absence as determined by the Office of Student Affairs (location at MSC2W38) will warrant a makeup exam. Undergraduates have the opportunity to take the average of their midterms in lieu of taking the final.

Grade Scale

The course is graded on a 10-point scale – 90% is an A, 80% is a B, etc.

University-Wide Policies

You are responsible for knowing all university policies, which can be found at

`http://www.marshall.edu/academic-affairs/?page_id=802`