

Spring 2015 Texas A & M-Commerce Math 544 – Abstract Algebra II

This is the syllabus for Math 544, Section 01S (41R) for the Spring 2015. Please read it carefully. You will be responsible for all information given in the syllabus, and for any modification to it that may be announced in the classes.

Instructor: Dr. Yelin Ou

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Office hours: MW: 11:00am-12:00 pm, T: 10:00am-12:00pm,
R: 4:00pm-6:00pm.

Class meetings and room: TR 6:20pm -7:35pm, BA 244.

Text and references: Abstract Algebra, 3rd Edition, by D. Dummit and R. Foote.

Course Description: Introduction to Rings, Euclidean Domains, Principal Ideal Domains, and Unique Factorization Domains Polynomial Rings, and Fields Theory. Prerequisite: Math 543.

Learning Outcomes: Upon successful completion of this course, the students will be able to:

1. Define and explain the basic concepts, examples, and properties of rings, ring homomorphism, quotient rings, rings of fractions.
2. Understand and explain various ideals and their characterizations using quotients, irreducibility and unique factorization property of polynomial rings, and some basic theory of field extensions.
3. Understand and prove some basic theorems including The Chinese Remainder Theorem, the 1st isomorphism Theorem of rings, and the Theorems that characterize a maximal and a prime ideal.

Instruction: Instruction will include lectures, discussions, and some group work projects, based on time available.

Computer & supplies: Using of Mathematica (a computer algebra system available in computers in Math Lab located in 328 Binnon Hall) is helpful but not required for this course.

Attendance: Attendance will be checked and it is your responsibility to sign the daily roll sheet. It is your benefit to attend the class.

Tests: There will be two midterm and a final exams for the course. The tentative schedules for the exams are:

Test 1: Feb. 26, Thursday 6:20pm-7:35pm.

Test 2: April. 16, Thursday 6:00pm-7:35pm.

Final exam: The comprehensive final exam is scheduled on
May 14, Thursday, 5:00pm-7:00pm.

No makeup exam will be given unless you have verifiable evidence showing an acceptable reason to have to miss a test and, in that case, you must notify the instructor before the test or in the earliest possible time.

Homework & Quizzes: Homework assignments are attached to this syllabus. You are strongly recommended to work out homework assignments on a regular basis since **No one can learn mathematics without doing it!** The assigned homework will be collected for grading on Feb. 6, Apr. 3, and May. 1. Some homework problems or their similar forms will be used as test questions.

Course grades: The course grade consists of

Homework & Quizzes:	15%
Two Tests :	50%
Final exam:	35%.

The letter grades will be assigned using the following scale:

A: 90-100% B: 80-89% C: 70-79% D: 60-69% F: 0-59%

Withdrawal Policy: Concerning the deadlines and consequences of withdrawals please check on: <http://www.tamuc.edu/admissions/registrar/academicCalendars/>

Basic Tenets of Common Decency: “All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment.” (Student’s Guide Handbook, Policies and Procedures, Conduct.) This means that rude and/or disruptive behavior will not be tolerated.

The information for students with disability: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services/ Gee Library
Room 132 . Phone (903) 886-5150 or (903) 886-5835, Fax (903) 468-8148, and
Web: StudentDisabilityServices@tamuc.edu

Getting help: A better way to learn math is to keep progress and leave no gaps in one's study. So please get help as soon as you need it. You are welcome to come to me or use email communication for help.

Math 544 Some Homework assignments

Section 7.1: 2, 3, 4, 7, 8, 21

Section 7.2: 2, 6, 12.

Section 7.3: 2, 3, 6, 7, 17, 18.

Section 7.4: 4, 6, 7, 8, 9, 24

Section 7.5: 1, 4

Section 7.6: 1, 2, 4, 5, 7.

Section 8.1: 1 (b), 2 (c), 5(c), 11

Section 8.2: 3, 4

Section 8.3: 1, 2

Section 9.1: 1, 3, 4

Section 9.2: 2, 3, 11

Section 9.3: 2, 3

Section 9.4: 1 (b), 1(c), 2 (b), 2(c), 2nd question of 5.

To be continued/extended