Fall 2012 Texas A & M-Commerce
Math 543 – Abstract Algebra I

This is the syllabus for Math 543, Section 01S (41R) for Fall 2012. 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 classes.

Instructor: Dr. Yelin Ou
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Office hours: MF: 11:00am-12:00 pm,
TR: 10:00am- 11:00am, 5:00-6:00pm, and by appointment.

Class meetings and room: TR 6:00pm -7:15pm, EDS 101.

Text and references: Abstract Algebra, 3rd Edition, by D. Dummit and R. Foote.
Course Description: Groups, Subgroups, quotient Groups and Homomorphisms, Group Actions. Prerequisite: Math 334.

Course Objectives: Upon successful completion of this course, the students will acquire a solid knowledge of group theory. They will be able to work with, prove, and use the basic concepts, examples, and properties of groups, subgroups, group homomorphisms, quotient groups, and group actions. The students will also be able to verify and prove some important theorems in group theory including Lagrange's Theorem, Cayley's Theorem, isomorphism theorems, and the classification of finite groups with small number of elements. The students will develop skills, competencies, and mathematical ideas on analyzing and using algebraic structures needed by professionals and in further study and applications of group theory in sciences.

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: Sept. 27, Thursday 6:00pm-7:15pm.
Test 2: Nov. 08, Thursday 6:00pm-7:15pm.
 Final exam: The comprehensive final exam is scheduled on
Dec 11, 6:00pm-8:00pm.

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 Sept. 20, Nov. 01, and Nov. 29. Some homework problems or their similar forms will be used as test questions. Pop quizzes are expected from time to time.

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://web.tamu-commerce.edu/admissions/registrar/academicCalendars/20122013academiccalendar.pdf

Students with Disabilities: 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.

Homework assignments for Math 543:

Section 0.1: 1-4, 7
Section 0.2: 1.a, c, e; 2, 5, 7
Section 0.3: 1, 2, 3, 10, 11, 14, 15
Section1.1: 5, 6 a, c, e; 8, 9, 10, 11, 12, 17, 20, 32
Section 1.2: 1 b, 2, 3, 8, 15
Section 1.3: 1, 3, 4 b), 5, 9(a)
Section 1.4: 2, 4, 10
Section 1.5; 1,2
Section 1.6: 1, 2, 3, 14, 19
Section 1.7: 1, 2, 4, 15

Section 2.1: 1 (b), (d), 3 (a), 9, 10, 12
Section 2.2: 2, 3, 5, 7, 11
Section 2.3: 1, 2, 3, 7, 9, 18
Section 2.4: 2, 4, 5, 13
Section 2.5: 2 a), c), 4, 9 a), 10
Section 3.1: 1, 3, 7, 16, 22, 41.
Section 3.2: 1,3, 5, 8, 12

Section 3.3: 2, 4, 7, 8
Section 4.1: 1, 2
Section 4.2: 2, 3, 7 a, 9, 10
Section 4.3: 1, 2, 4.
Section 4.4: 1, 17

To be continued