Math 393: Abstract Algebra, Autumn 2014

Instructor: Brian Sittinger
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Office: Bell Tower 2840
Office Hours: MW 10:30-11:30 AM and by appointment
Class Times: MW 3:00 - 4:15 PM
Class Location: Bell Tower 2424

Prerequisites: Math 240 or consent of the instructor.

Text: A First Course in Abstract Algebra, Seventh Edition by John B. Fraleigh

Course Website: http://faculty.csuci.edu/brian.sittinger/math393page.html
This may be also directly accessed through Blackboard (CI Learn).

Course Description from the Course Catalog: Topics include: Groups, Rings, $R$-modules, Fields and their extensions, Galois Theory.

Learning Outcomes: Through this course, students will be able to

- Discuss the basic algebraic structures appearing in mathematics today.
- Apply the knowledge of these structure to the analysis of concrete special cases.
- Prove impossibility of certain ruler and compass geometric constructions, e.g. squaring of the circle.
- Parameterize field extensions by groups and vice-versa.
- Determine the solvability of higher degree polynomial equations by radicals.
- Express concepts and techniques of Abstract Algebra in oral and written form.

Grading: Grades will be determined as follows:
Homework (20%), Project (10%), Two Exams (20% each), and Final Exam (35%).
**Homework:** I will assign homework daily to be turned in on every Monday (unless otherwise stated) at the beginning of lecture. The latest you can turn in any assignment is two days after the official due date, no exceptions! Make sure that your presentations are well-organised. If you use more than one sheet of paper, please write your name at the top of each sheet, and be sure to staple them all together. This will make my job to grade them much easier.

**Project:** You will be given a list of possible projects from which you can choose one to work on. The main point of this project is to show how Abstract Algebra can be used outside of the classroom. More details will follow.

**Exams:** The two exams will be given around the sixth and twelfth weeks of lecture. According to the course schedule, the final exam will take place on Monday 15 December at 1:00 PM. Unless you have a genuine doctor’s note, you have to take the exams when they are given.

**Math 399:** Please sign up for Math 399 *Section 7 (or 9).* Further instruction and assistance with the coursework will be given in the lab.

**Academic Honesty:** Cheating and plagiarism will not be tolerated in this class. For information on the University’s policy, please read the University Catalog (“Policies and Regulations” section).

**Disability Statement:** Cal State Channel Islands is committed to equal educational opportunities for qualified students with disabilities in compliance with Section 504 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990. The mission of Disability Accommodation Services is to assist students with disabilities to realize their academic and personal potential. Students with physical, learning, or other disabilities are encouraged to contact the Disability Accommodation Services office at (805) 437-8510 for personal assistance and accommodations.

**Disclaimer Statement:** Information contained within this syllabus, other than that mandated by the University, may be subject to change with advance notice, as deemed appropriate by the instructor.