

# Math 4413: Abstract Algebra I

## Fall Semester 2018

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**Office Hours:** Monday, Wednesday, Friday 10am-11am and 3:30pm-4:30pm.

If you would like to talk to me but cannot make it during one of these times, please call first or make an appointment.

**Class Time and Place:** Monday and Wednesday 2pm-3:15pm, Boyd 304

**Hours Credit:** 3 hours

**Prerequisites:** MATH 3003 (A Transition to Advanced Calculus)

**Textbook:** A first course in Abstract Algebra, 7th edition by John B. Fraleigh,  
Publisher: Addison-Wesley.

**Topics:** The first of a two-course, in depth, rigorous study topics in the theory of groups, rings and fields.

### We will cover:

Chapter 1: Groups and Subgroups (**Sections 1, 2, 3, 4, 5, 6, 7**)

Chapter 2: Permutations, Cosets, and Direct Products (**Sections 8, 9, 10, 11, 12**)

Chapter 3: Homomorphisms and Factor Groups (**Sections 13, 14, 15, 16, 17**)

**Attendance:** If you miss a class, you are responsible for obtaining any information that you missed. If you miss a test or an exam, you must have a *university-approved excuse* and you must **make arrangements with me in advance** in order to take a make-up test/exam. If you miss four classes or more without a *university-approved excuse*, you may get an F in this course.

**Calculators:** You **are not** allowed to use “**advanced**” calculators such as TI-84 or better in your tests or final exam.

**Homework:** The following selected questions from the textbook are not to be turned in and graded but that are meant to reflect the sort of questions you can expect on tests

and the final. I encourage you to use my office hours if you have any questions about them.

**Selected Questions:**

Exercises 0: Questions 3, 4, 7, 8, 11, 12, 17, 24, 26, 31, 32, 36

Exercises 1: Questions 6, 8, 9, 11, 14, 20, 21, 26, 27, 31, 34, 35, 37, 40, 41

Exercises 2: Questions 3, 8, 12, 13, 19, 23, 26, 28, 34, 35, 36, 37

Exercises 3: Questions 6, 10, 13, 15, 16, 18, 25, 26, 27, 28, 33, 34

Exercises 4: Questions 3, 6, 10, 13, 17, 18, 19, 29, 30, 31, 32, 35, 39, 40, 41

Exercises 5: Questions 4, 6, 12, 13, 17, 20, 21, 22, 24, 26, 28, 31, 33, 35, 41, 42, 43, 46,  
47, 51, 53, 55, 56

Exercises 6: Questions 3, 7, 10, 15, 16, 17, 20, 21, 23, 28, 33, 35, 40, 44, 46, 49, 50, 51,  
52, 55

Exercises 7: Questions 2, 3, 6, 7, 8, 9, 10, 11, 12, 13, 14

Exercises 8: Questions 2, 5, 7, 10, 13, 17, 19, 20, 21, 33, 34, 40, 46

Exercises 9: Questions 2, 3, 6, 8, 9, 11, 13, 16, 17, 23, 29, 30, 36

Exercises 10: Questions 1, 3, 6, 8, 12, 14, 16, 19, 20, 24, 27, 28, 29, 30, 32, 39, 40, 43,  
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Exercise 11: Questions 2, 3, 5, 7, 10, 13, 14, 15, 18, 20, 23, 26, 29, 32, 34, 36, 37, 38,  
39, 40, 44, 46, 47

Exercise 13: Questions 1, 4, 6, 8, 10, 12, 15, 17, 18, 21, 23, 24, 26, 27, 29, 32, 33, 37, 41,  
48, 49, 50, 53

Exercise 14: Questions 1, 2, 5, 8, 9, 10, 13, 15, 16, 18, 20, 21, 23, 24, 27, 30, 31, 34

Exercise 15: Questions 1, 2, 5, 9, 10, 12, 13, 14, 15, 17, 19, 30, 31, 34, 35, 36

**Tests:** There will be 3 class tests. Each will be worth 25% toward your final grade.

Test 1: Wednesday September 12, 2018

Test 2: Wednesday October 10, 2018

Test 3: Wednesday November 7, 2018

*The dates for tests are subject to change*

**Final exam:** The final exam will be worth 25% toward your final grade.

Final exam will be on Monday, December 10, 2018, 2:00-4:00 pm

**Grading Scale:** A: 90-100%, B: 80-89%, C: 70-79%, D: 60-69%, F: 0-59%.

**Grading:** Your final grade will be determined as follows: Tests; 75% and Final: 25%.

## **ACADEMIC DISHONESTY**

Academic dishonesty is NOT tolerated. It will result in failure on assignment(s) as well as possible disciplinary sanction(s) as stipulated by university rules. The University of West Georgia Student Conduct Code defines academic dishonesty as cheating, fabrication, plagiarism, and facilitating or allowing academic dishonesty in any academic exercise.

**Cheating:** Using or attempting to use unauthorized materials, information or study aids;

**Fabrication:** Falsification or unauthorized invention of any information or citation;

**Plagiarism:** Representing the words or ideas of another as one's own. Direct quotations must be indicated and ideas of another must be appropriately acknowledged.

Academic dishonesty in any form compromises your grade and lowers the quality of your diploma. A fellow student who cheats may actually lower your grade, sometimes causing unfair and inflated grading scales. I hope each of you values your college education enough to protect yourself from dishonest classmates.

Students, please carefully review the following information at this link

[http://www.westga.edu/assetsDept/vpaa/Common\\_Language\\_for\\_Course\\_Syllabi.pdf](http://www.westga.edu/assetsDept/vpaa/Common_Language_for_Course_Syllabi.pdf).

It contains important material pertaining to your rights and responsibilities in this class.

Because these statements are updated as federal, state, university, and accreditation standards change, you should review the information each semester.