

MATH 6423 Advanced Modern Algebra II, Section 01 , Fall 2015
COURSE INFORMATION

Class Hours: TuTh 5:30 pm - 6:50 pm

Classroom:: Boyd 302

Instructor: Dr. Jeong-Hyun Kang

Course webpage: www.westga.edu/~jkang/6423.html

This is NOT CourseDen but my departmental website.

E-mail Address: jkang@westga.edu

Office: Boyd 328

Office Hours: TuTh 11:45–12:30, 2:15–3:30, 5–5:30, 7–7:30; Fri 11:45–1, 4–5

Textbook: *Not required. Reserved in the Ingram Library*

- D.Dummit and R.Foote, Abstract Algebra
- Hungerford, Algebra

Course Description This is the second course in Abstract Algebra for graduate studies

Course Contents (including):

- Riview on Group theory for the first a few weeks (super fast!)
- Ring theory – Unique factorization, Principal ideal domains, Euclidean domains
- Field theory – Field extensions, Finite fields

Learning outcomes: The student will be able to

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Homework: Homework will be assigned during class as well as from Exercises. They will not be collected nor graded.

Quiz: On Tuesdays, we will have 15–minute quizzes in the beginning of the classes.

It usually covers the materials from the previous week. **Missed quizzes cannot be made up for any reason**, and instead, **two lowest scores** will be dropped at the end of the semester: These two lowest grades include all the missed quizzes due to your being sick or going out for official university trips. If you have to miss more than two quizzes due to official university field trips, I can drop one more missed quiz but not more than that.

Hour Exam: There will be **2** one-hour exams. If the student has a **provable excuse** (such as an official university field trip or doctor’s note) and **notify me well in advance** (at least one week earlier), then missed hour exams may be made up **prior** to the actual test date. Somebody’s wedding or gathering with a boy/girl friend after several months are **NOT** appropriate excuses.

In case an unforeseen case occurs (such as sudden illness the day before the exam) and you cannot take an hour exam, notify me **before** the exam starts.

- Exam #1 on Tue. mid-October
- Exam #2 on Tue. 12/1

Final Exam: The final exam is scheduled for **Tuesday, Dec. 8, 5:00-7:30 pm**

If you have a conflict, let me know within the first week of the semester.

No make-up final!!!

Grading Policy:

- Quiz 100 points (The quiz total may be scaled to 100 points if necessary at the end of the semester.)
- Each hour exam 50 points so that 100 points total for the whole hour exams).
- Final will count for 100 points of the grade
- 300 points total

Letter Grades: 81-100% A; 61-80% B; 41-79% C; 0-40% F

Advice for Students: There are eight levels of mathematical understanding, according to Dudley:

1. Being able to do arithmetic.
 2. Being able to substitute number in 'formulas'.
 3. Given 'formulas', being able to get other 'formulas'.
 4. Being able to understand hypotheses and conclusions of theorems.
 5. Being able to understand the proofs of theorems, step by step.
 6. Being able to really understand proofs of theorems: that is, seeing why the proof is as it is, and comprehending the underlying ideas of the proof and its relation to other proofs and theorems.
- 6 1/2. Non-trivial applications of math can be placed here.—
7. Being able to generalize and extend theorems
 8. Being able to see new relationships and discover and prove entirely new theorems.
- Calculus courses focus on level 1&2.
 - Lower level undergrad math courses (such as elementary linear algebra) focus on 3&4.
 - Upper level undergrad focuses on 3,4,&5 with some of 6.
 - Levels 5&6 are considered as basic mathematical abilities for math majors.
 - Levels 7&8 are researching mathematics.

REMEMBER THAT ABSTRACT ALGEBRA IS NOT ARITHMETIC BUT PROOF-BASED MATHEMATICS!! YOUR LOGICAL ARGUMENTS WILL COUNT THE MOST.

Other Class Policies:

- Email communications regarding the course should be done only in the domain of westga.edu.
- ATTENDANCE: I don't count attendance in each class. However, if you miss weekly quizzes in a row in the beginning of the semester, your attendance will be recorded as "never attended" on BanWeb.
- CLASSROOM BEHAVIOR: You are expected not to disturb your classmate's learning.