Math 4106 (MY3) [Abstract Algebra II] Fall 2024

Prerequisites: Math 3101 (Abstract Algebra I)

Instructor: Dr. Anthony E. Clement

Email: aclement@brooklyn.cuny.edu

Office hours: Mondays and Wednesdays: 2:30 - 3:30 PM
in room 1317 IH and or by appointments.

Textbook: A First Course In Abstract Algebra
Eight Edition
Authors: John B. Fraleigh and Neal E. Brand

Lectures:	Mondays	Wednesdays
Time:	3:40 - 5:20 PM	3:40 - 5:20 PM

Room: 236 IA (Ingersoll Hall Extension)

Attendance and Punctuality: Students are required attend
all classes and to be punctual.

Exams: There will be a midterm and a final exam. The midterm counts
50% and the final counts 50%.
Tentative Dates:
Review Midterm Exam: Monday October 21st 3:40-5:20 PM, 236 IA;
Midterm Exam: Monday October 28th 3:40-5:20 PM, 236 IA;
Review Final Exam: Wednesday December 11th, 3:40-5:20 PM, 236 IA;
Final Exam: Monday December 16th, 3:30-5:30 PM, 236 IA;

Grading Scale: < 60 (F),
60 - 62 (D-), 63 - 66 (D), 67 - 69 (D+),
70 - 72 (C-), 73 - 76 (C), 77 - 79 (C+),
80 - 82 (B-), 83 - 86 (B), 87 - 89 (B+),
90 - 92 (A-), 93 - 97 (A), 98 - 100 (A+)

Homework Assignments: A number of selected problems will be
assigned every class. These problems should be prepared to be
sent in, if requested. There will be in class and the end of the week
homework assignments discussions/presentations.

Extra Credits: Homework assignments, when collected, together with
attendance, will count as 4 points extra into the final class grade.

Goals and Objectives: Students will
(1) demonstrate a conceptual understanding of groups, rings, and fields in particular to, polynomials over a field, factorization, field extensions and applications and introduction to Galois theory
(2) use the language of Abstract Algebra (notations and terms) accurately and appropriately in verbal and written form - learn and work with the abstract notions of groups, rings, and fields using familiar examples.
(3) understand and apply fundamental algebraic methods and reasoning.
(4) learn the importance of mathematical rigor - improve their ability to think and learn to read and write correct mathematical proofs.
(5) participate in class discussions.

The following techniques are taken from an excerpt in "Promoting Student Metacognition" (Kimberly Tanner):

For each class ask yourself: (Planning-Monitoring-Evaluating)
(1) What do I already know about the topic and what more do I need to know?
(2) What questions or insights do I have during class?
(3) How did the materials of today's class relate to previous classes?

For each homework assignment ask yourself: Planning-Monitoring-Evaluating
(1) What resources do I need to complete this task?
(2) What is most challenging about the task?
(3) To what extend did I use resources available to me to complete the task?

For each exam ask yourself: (Planning-Monitoring-Evaluating)
(1) What strategies will I use to study (Instructor's notes, homework assignments, office hours, study groups)?
(2) Am I struggling with my motivation to study? If so, do I remember why am I taking the course?
(3) How did my answers compare with the suggested correct answers?

For the overall course ask yourself: (Planning-Monitoring-Evaluating)
(1) Why is it important to learn the materials in this course? What do I want to be able to do by the end of this course?
(2) How interested am I in this course? How confident am I in my learning? What could I do to increase interest and confidence?
(3) What have I learned about how I learn in this course that I could use in my future courses? In my career? What will I still remember 5 years from now that I learned in this course?

A few Study Tips:
(1) Keep organized notes of class lectures.
(2) Review class notes <u>daily</u> in order to reinforce understanding.
(3) Spend at least 5-6 hours every week (outside class lectures) on
reviewing course materials and doing problems.
(4) Write (in 3-4 sentences) a summary of each class lesson with
supporting examples.
(5) Read the textbook in order to provide background for class lectures.
(6) Do the homework assignments.
(7) Allow adequate time to review before the midterm and final exams.

Some Information Regarding Certain Dates for Fall 2024:

Wednesday, August 28th: First day of classes for fall 2024
Monday September 2nd: College closed
Tuesday, September 3rd: Last day to add a course
Tuesday, September 17th: Last day to drop a course
Wednesday October 2nd: No classes
Monday October 14th:: College closed
Tuesday October 15th: Classes follow a Monday schedule
Wednesday November 6th: Last day to withdraw from a course with W grade
Wednesday November 27th: Classes follow a Friday schedule
Thursday November 28th - Sunday December 1st: Thanksgiving
Wednesday December 11th: Last day of classes
Sunday December 15th - Saturday December 21st: Final Exams

Center for Student Disability Services:
In order to receive disability-related academic accommodations students
must first be registered with the Center for Student Disability Services.
Students who have a documented disability or suspect they may have
a disability are invited to set up an appointment via (Zoom or Blackboard
Collaborate Ultra) or in person in room 138 Roosevelt Hall with the
Assistant Director of the Center for Student Disability Services,
Ms. Josephine Patterson email **Josephine.Patterson@brooklyn.cuny.edu**
or **testingcsds@brooklyn.cuny.edu** (718-951-5538). If you have
already registered with the Center for Student Disability Services please
provide your professor with the course accommodation form and discuss
your specific accommodation with him/her.

University's policy on Academic Integrity:
The faculty and administration of Brooklyn College support an
environment free from cheating and plagiarism. Each student is
responsible for being aware of what constitutes cheating and plagiarism
and for avoiding both. The complete text of the CUNY Academic
Integrity Policy and the Brooklyn College procedure for implementing
that policy can be found at this site: http://www.brooklyn.cuny.edu/bc/policies.

Academic Integrity Pledge:

I ———————————————————————- pledge that I will not:
* use notes/cheat during a closed book examination.
* use any electronic devices such as cell phones, computers, or other technologies to retrieve or send information during an examination.

Student Name: ——————————————————————

ID No: ————————————————————

Signature: ——————————————————— Date :———————

A First Course in Abstract Algebra 8th ed
by John B, Fraleigh and Neal E. Brand

Part I-III: **A Brief Review of**: Certain of Groups and
Subgroups; Homomorphism of groups; Cosets; Lagrange Theorem
Normal subgroups; Kernel of a homomorphism; Factor groups
<u>and</u> **Part V: Rings and Fields; Integral Domains; Ideals**