

Course Syllabus

Course Prefix, Number, and Title:

MAS 4301 – Modern Algebra

Credits:

3

University name:

Florida Atlantic University

Academic term/year:

Fall 2018

Last date to Drop and receive 100% refund:

Friday, August 24th

Last date to Withdraw without receiving a grade of 'F':

Friday, November 16th

Course meeting time and location:

Wednesday and Friday at 2pm in ED 116

Instructor information:**Name:**

Edoardo Persichetti

Office:

Science Building Room 218

Phone number(s):

561-297-4136

Email address:

epersichetti@fau.edu

Office hours:

Thursday 2-4pm, or by appointment

Course description:**Catalog description:**

The course provides an introduction to basic concepts of algebra. At the end of the course you should be acquainted with the basic concepts of groups, rings, and fields. You should be able to give examples of these algebraic structures, and you should be able to perform computations in the symmetric group, form quotients of polynomial rings and know how to obtain extensions of the field of rational numbers.

Prerequisites:**Course prerequisite(s):**

MAD 2104 Discrete Mathematics and MHF 3202 Introduction to Advanced Mathematics with minimum grade of "C" .

Course materials:

Textbook:

Contemporary Abstract Algebra, by Gallian, 9th edition by Cengage (ISBN 978-1-305-65796-0)

Course delivery and instructional methods:

The course will be delivered using traditional methods, including whiteboards and/or slides.

Communication and Feedback:

Preferred Email Contact Method:

Please contact me **exclusively** via email at epersichetti@fau.edu.

Email Response Time:

I will do my best to reply to all emails within 24 hours on week days and 48 hours during the weekend. If you do not receive a reply within this time, please send me another email or call my office phone.

Evaluation Procedures:

Tests and Final Exam:

There will be three intermediate tests during the semester, distributed as follows:

Test 1: Wednesday, October 3rd

Test 2: Wednesday, October 31st

Test 3: Wednesday, November 21st

The Final Exam will be on Friday, November 30th

Assessments:

The final grade will depend on class tests and a comprehensive final exam, and will be calculated as follows:

Final Grade 100% = Tests: 60% + Final Exam: 40%

No extra credit will be provided.

Performance standards and grading policy:

All work is to be organized and complete, with grading being based both on accuracy and quality of work. The grades will be assigned according to the following table:

Percentage	Final Grade
94-100	A
90-94	A-
87-90	B+
83-87	B
80-83	B-
75-80	C+
65-75	C
60-65	C-
57-60	D+
53-57	D
50-53	D-
0-50	F

Tentative Course Outline and Schedule:

We will cover the following topics from the textbook (not necessarily in the listed order)

Chapter	Topic
0	Preliminaries
1	Introduction to Groups
2	Groups
3	Finite Groups; Subgroups
4-5	Cyclic Groups; Permutation Groups
6	Isomorphisms
7	Cosets and Lagrange's Theorem
8	External Direct Products
9	Normal Subgroups and Factor Groups
10-11	Group Homomorphisms; Fundamental Theorem of Finite Abelian Groups
12	Introduction to Rings
13-14	Integral Domains; Ideals and Factor Rings
15	Ring Homomorphisms
16-17	Polynomial Rings; Factorization of Polynomials
18	Divisibility in Integral Domains
19	Vector Spaces
20-21	Extension Fields; Algebraic Extensions
22	Finite Fields
31	Introduction to Algebraic Coding Theory (if time)

Classroom policies:

Attendance policy:

I strongly advise to attend every class: not only it is your right, but it is also the best way to succeed in the course.

Try to be organized: pay attention to the lecture, take notes regularly and in a tidy manner, **do your homework** and respect the deadlines.

I encourage you to make questions during the lecture and, if something is not clear, to come and seek me out during office hours. Remember, though, that office hours are a support, and not a substitute, to the lectures.

Attendance during test and exam days is required, make-ups are not allowed unless you have a University excused absence or serious illness. You must contact me prior to the scheduled exam time if you are in one of these situations.

Please arrive to class **on time**.

ADA Statement:

In compliance with the Americans with Disabilities Act (A.D.A.) – Students who require special accommodations due to a disability to properly execute coursework must register with the Office for Students with Disabilities (OSD) located in Boca – SU 133 (561-297- 3880), in Davie – MOD I (964-236-1222), or in Jupiter – SR 117 (561-799-8585) and follow all OSD procedures

Counseling and Psychological Services (CAPS):

Life as a university student can be challenging physically, mentally and emotionally. Students who find stress negatively affecting their ability to achieve academic or personal goals may wish to consider utilizing FAU's Counseling and Psychological Services (CAPS) Center. CAPS provides FAU students a range of services – individual counseling, support meetings, and psychiatric services, to name a few – offered to help improve and maintain emotional well-being. For more information, go to <http://www.fau.edu/counseling/>

Code of Academic Integrity policy statement :

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see University Regulation 4.001.

The instructor reserves the right to adjust the content, homework, or pacing of the course as needed. The instructor also reserves the right to amend this syllabus.