

COURSES

RESEARCH

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SYLLABUS – MAS 4301

This syllabus is subject to change.

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TENTATIVE VERSION UNDER CONSTRUCTION

Section	Period	Meeting Time	Room
1074	MWF 6th	12:50pm – 1:40pm	LIT 235

Dr. Frank Garvan

408 Little Hall
(352) 294-2305
fgarvan@ufl.edu

Office Hours (in person and zoom)

Monday 4th Period (10:40-11:30am),
Wednesday 8th Period (3:00-3:50pm), and
Friday 5th Period (11:45-12:35pm).
To arrange a ZOOM MEETING send email to Dr.G. in advance.

Prerequisites

Grade of B or better in MAS 3300 or MHF 3202, or
a grade of C or better in MAS 4105.

Textbook

Contemporary Abstract Algebra, 9th Edition, by Joe Gallian.
**Students are expected to read the relevant sections of the text in
preparation for class and to supplement the material covered in lectures.**

Reading examples in the textbook is important preparation for doing homework.

Course Description

MAS 4301 is a 3 credit course on Abstract Algebra which focuses mainly on group theory and ring theory. Topics include sets and mappings, groups and subgroups, homomorphisms and isomorphisms, permutations, rings and domains, arithmetic properties of domains, and fields. This course requires facility in writing proofs.

Course Objectives and Goals:

For the student to master the definitions and theory of groups and rings.

For the student to write clear and logical proofs.

Tentative Weekly Course Schedule

WEEK 1: Preliminaries

WEEK 2: Groups

WEEK 3: Finite Groups and Subgroups

WEEK 4: Cyclic Groups

WEEK 5: Permutation Groups

WEEK 6: Isomorphisms

WEEK 7: Cosets and Lagrange's Theorem

WEEK 8: External Direct Product

WEEK 9: Normal Subgroups and Factor Groups

WEEK 10: Group Homomorphisms

WEEK 11: Fundamental Theorem of Finite Abelian Groups

WEEK 12: Rings

WEEK 13: Integral Domains and Ideals

Homework

Homework will be assigned weekly, and should be uploaded in CANVAS. Doing all the homework is essential for success in this class as the exams test your conceptual understanding of the homework assignments. Some homework problems involve elementary proofs. The solution to all homework problems should be clear, logical and complete. Students are encouraged to check their work with their instructor. See **Tokens** below.

Assessment

Assessment will be based on the following

Exam 1	35%
Exam 2	35%
Homework and Quizzes	30%

Makeup Exams

Documentation required for Makeup Exams

In Class Exams

Exam 1: Wednesday, October 9

Retake One Question Opportunity: Wednesday, October 16

Exam 2: Friday, November 22

Retake One Question Opportunity: Wednesday, December 4

Attendance

Attendance is required.

Over 50 % attendance is required for a passing grade.

Grading

Grading scale:

A: 90% Exams and Homework and 70% Attendance

B: 80% Exams and Homework and 65% Attendance

C: 67% Exams and Homework and 60% Attendance

D: 57% Exams and Homework and 55% Attendance

Green and Pink Quizzes:

Each regular class begins with a Green Quiz, this is a short, no-stakes quiz which is usually based on material from the prior class. The Green Quiz is not graded but a solution will be provided. Each regular class ends with a Pink Quiz. The Pink Quiz provides an opportunity to ask questions about class material. Dr. Garvan gathers the Pink Quiz questions from the entire class and creates an answer sheet which is then posted to CANVAS.

Tokens:

There are 3 ways to earn a Dr. G token: 1) attendance (white token), 2) coming to office hour (red token), and 3) submitting homework (blue token) to CANVAS by 11:59 pm on each Thursday when it is due. Attendance and Homework tokens can be picked up during class. Office hour tokens are given when a student attends an office hour. Tokens can be redeemed after each exam for

the opportunity to redo ONE of the four exam questions. A student needs 10 white attendance tokens, 2 red office hour tokens, and 4 blue homework tokens in order to redo an EXAM 1 question. Tokens cannot be “rolled over”, e.g., tokens to redo a question from Exam 2 must be earned in the period after Exam 1. Required number of tokens for Exam 2 to be announced later. Tokens may NOT be shared with other students.

Friday In-Class Homework Session and Weekly Graded Homework Problem:

A portion of Friday’s class will be devoted to working in small groups to collectively check the week’s homework assignment. These problems will not be graded, but through the review process at the Friday In-Class Homework Session, it will be checked for correctness. **After the homework session an additional problem will be released and will be due by 11:59PM that evening. It WILL BE GRADED and returned in the following class period.**

UF Grading Policies

See [THIS LINK](#)

Academic Honesty

The course will be conducted in accordance with the University honor code and academic honesty policy

*UF students are bound by The Honor Code Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code.” On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “**On my honor, I have neither given nor received unauthorized aid in doing this assignment.**” **The Honor Code** specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have questions or concerns please consult with the instructor.*

Accommodations for students with disabilities

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center. [Getting Started with the Disability Resource Center](#)
It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

Online course evaluation process

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via

GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results>.

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