

**MATH 4023: Applied Algebra, Summer 2010**

**INSTRUCTOR & CONTACT INFO :** Tadele Mengesha

**E-MAIL:** mengesha@math.lsu.edu,

**OFFICE** 337 Lockett Hall,

**PHONE:** 578-1675

**OFFICE HOURS:** MW 1-2pm or By appointment.

**COURSE WEBSITE:** <https://www.math.lsu.edu/~mengesha/Math4023/math4023.html>

**PREREQUISITE:** MATH 2085 or equivalent.

**LECTURES:** MTWTF 11:00-12:00 in 0226 TUREAUD HALL

**TEXTBOOK:***(Required) Modern Algebra and discrete structures* by Robert F.Lax.

**HOMEWORK/QUIZ:** A list of homework problems in the textbook will be suggested at the end of each section. Quizzes will be given regularly from this list of homework problems. I encourage you to discuss homework problems with classmates.

**GRADING:** There will be three hour-long tests and a comprehensive final exam contributing 55% and 30% towards the final grade respectively. Quizzes cover the remaining 15%.

**Exam dates:**

**Test 1.** Monday June 21

**Test 2.** Wednesday July 7

**Test 3.** Wednesday July 21

**Final Exam.** Thursday July 29( 4:00pm- 6:00pm)

**Grading scale:**

A	B	C	D	F
90-100	80-89	70-79	60-69	<59

**COURSE OUTLINE :** (Catalog Description:) Finite algebraic structures relevant to computers: groups, graphs, groups and computer design, group codes, semigroups, finite-state machines. We will cover the following topics:

1. Introduction: Sets and Counting
2. Relations
3. Groups
4. Rings and Fields
5. Algebraic coding theory
6. Graph theory

Some sections of the chapters listed above may be skipped. The last topic will be covered time permitting.

**Some notes:**

**Attendance:** The Math 4023 attendance policy will follow the University attendance policy.

**Retain** all graded tests, and homework up to the end of the semester. Your grades will be posted on Moodle. Please contact me when you see any discrepancy.

Please do not use **cell phones** during class in any form (voice, text messaging, calculator).

**Information** on this syllabus may change by e-mail or verbal announcement made in class.

**Students with Disabilities:** Any student with a documented disability needing academic adjustments or accommodations is requested to speak with me during the first week of class. All discussions will remain confidential.