

Course Syllabus
MATH 4330-001& MC1: Modern Algebra
Spring 2016

Instructor: Dr. Angela Brown
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Email Address: abrown4@sulross.edu
Office Hours: M 3-5, T 3:30-5, W 9-11, 4-5, R 3:30-5, others by appointment.
Time and Place of Class Meetings: TTh 2:00-3:15 ACR 206

Prerequisites: Math 2414 and Math 2318

Required Textbooks: *Contemporary Abstract Algebra, 6th Edition* Gallian, J., 2006. ISBN 0-618-51471-6.

Other Equipment Needed: paper and pencils.

Course Content: We will cover group theory in depth and introduce the topics of rings and fields. This will be adjusted as necessary.

Mathematics Program Learning Objectives:

The graduating student should be able to:

- Apply knowledge of basic mathematics principles.
- Identify and provide valid proofs or solutions for theorems or problems.
- Recognize and dispute invalid mathematical statements by using counter-examples.

Grading Scale: 90-100 A, 80-89 B, 70-79 C, 60-69 D, 59-Below F

Grading Policy: The grade weighting will be as follows:

Homework: 30%

Exams : 40%

Final Exam: 30%

Homework will be assigned periodically throughout the semester. Homework assignments must be complete and will be turned in on Tuesdays during class. Not all problems will be graded for content, but the assignment grade is contingent on completeness. If you use outside references, make sure to properly source the material.

There will be three exams in addition to the final exam. All exams will be closed notes, closed book, and no calculators allowed. No make-up exams will be given unless due to a school function. If you miss an exam with a valid excuse, the grade you make on the final exam can replace this grade.

The final exam is on Tuesday May 10 at 12:30 pm.

General Policies: Class will start at the designated time and run for 1 hour and 15 minutes with no breaks. You are expected to be on time, attend every class meeting, stay for the duration of class time and come to learn. Do not schedule any appointments that will conflict with class time; if you have done so then I need documentation of the appointments.

You are expected to bring all necessary materials and take notes and participate. You are expected to turn-off and not to access any electronic, non-task oriented device such as cell/smart phones/pads and i-pods. Again, a cell-phone cannot be used as a calculator. Devices for recording the lecture are permitted; either audio or video.

If you come to class without your materials then you will be released from class to go get the appropriate materials. If you try to sleep during class or put your head on your desk you will have to leave class and go home and sleep. Working on another class is not allowed. If you sit with your arms crossed, you will be asked to take notes and participate. If you are causing others around you to miss lecture material then you will be asked to leave.

Any personal business must be conducted during office hours or by appointment. I will only discuss grades and attendance issues in my office. Classroom time is for the entire class.

Attendance Policy: Students are expected to attend every class. If class must be missed, the student is expected to get the notes from a classmate, and to check with me or on Blackboard for announcements and updated assignments. You are expected to check your Sul Ross e-mail account. Absences due to school functions should be discussed with me ahead of time.

Students are expected to arrive to class on time. If a student is perpetually late, they will be asked to not attend class unless they arrive on time. If tardiness becomes a problem for the class as a whole, people who arrive late will not be permitted to enter the class. If this stricter policy becomes necessary, there will be an announcement made in class.

It is policy of the university to drop a student with a grade of "F" if 9 hours or more of class are missed. For this course that would be 6 or more class sessions missed.

Americans With Disabilities Act: As an instructor, I am required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with informing the instructor for MATH 4330 of their need for accommodation and in providing authorized documentation through designated administrative channels. If you need to request such accommodations, please contact the ADA Coordinator in Counseling and Accessibility Services, Ferguson Hall 112, 432-837-8203.

Important Dates:

- January 19 First Day of Classes
- January 22 Last Day for Late Registration and Schedule Changes
- February 3 12th class day
- March 14-18 Spring Break
- March 25 Good Friday
- April 8 Last Day to Withdrawal from University or Drop Classes with a Grade of "W" (by 4 pm)
- May 4 Last Day of Classes
- May 6-12 Final Exams
- May 13 Commencement

Tentative Schedule-Subject to Change

Tuesday		Thursday	
Jan 19, 2016	Intro/Chapter 0	Jan 21, 2016	Intro to Groups
Jan 26, 2016	Groups	Jan 28, 2016	Finite Groups
Feb 2, 2016	Subgroups	Feb 4, 2016	Cyclic Groups
Feb 9, 2016	Permutation Groups	Feb 11, 2016	Isomorphism
Feb 16, 2016	Review	Feb 18, 2016	Exam 1
Feb 23, 2016	Isomorphisms	Feb 25, 2016	Cosets
Mar 1, 2016	LaGrange's Theorem	Mar 3, 2016	External Direct Product
Mar 8, 2016	Normal Subgroups	Mar 10, 2016	Group Homomorphisms
Mar 15, 2016	Spring Break	Mar 17, 2016	Spring Break
Mar 22, 2016	Fundamental Theorem of Finite Abelian Groups	Mar 24, 2016	Fund Thm Cont
Mar 29, 2016	Review	Mar 31, 2016	Exam 2
Apr 5, 2016	Intro to Rings	Apr 7, 2016	Rings
Apr 12, 2016	Intregal Domains	Apr 14, 2016	Ring Homomorphisms
Apr 19, 2016	Fields	Apr 21, 2016	Fields
Apr 26, 2016	Review	Apr 28, 2016	Exam 3
May 3, 2016	Finite Fields	May 5, 2016	Dead Day