MA 437 SECTION 01
MODERN ALGEBRA I
FALL 2012, MWF 9:00 – 9:50, MAB 5

INSTRUCTOR: Dr. Jessica Stovall
OFFICE: MAB 102
EMAIL: jstovall@una.edu
PHONE NUMBER: 256-765-4762

OFFICE HOURS: MWF 10:00 – 11:00, 12:00 – 1:00
TR 9:00 – 9:30
Also by Appointment

HOW TO CONTACT ME: Send me an email, catch me at my office, or give me a call.

PREREQUISITES: MA 126 (Calculus II) and MA 325 (Discrete Mathematics).

CREDIT HOURS: 3

TEXTBOOK: Elements of Modern Algebra by Gilbert and Gilbert, 7th Edition

You must purchase the required materials immediately so you do not get behind in the course and/or miss any assignments. There are no make-ups allowed for missed homework, quizzes or tests!

WEBPAGES: ANGEL (una.angellearning.com)

COURSE OBJECTIVES:

1. The student shall demonstrate knowledge of abstract algebra.
2. The student shall demonstrate ability to construct logical arguments for mathematics statements that are consistent within an axiomatic framework.
**COURSE CONTENT:** A formal study is done of topics in abstract algebra. Emphasis is placed on formal definitions, proofs of theorems, inductive and deductive reasoning, and exercises which will help develop the student’s ability to construct a logical and rigorous argument. Specified topics are: sets, functions, inverse functions, quotients sets, binary operations, universal elements, quality, integers Modulo n, finite sets, morphisms, partial order and lattices, semigroups and Monids, recursion, groups and symmetry, cyclic groups, subgroups, symmetric groups, transformation groups, cosets, kernel and image, quotient groups, LaGrange’s theorem.

**CLASS ETIQUETTE:**

Class will begin and end on time, as determined by my watch.

It is requested that cell phones be turned off or turned on silent during class time. If a problem develops with cell phones going off in class, I will institute a grade deduction.

During exams, there will be a designated place for all belongings…do not bring anything to an exam that you are uncomfortable placing away from your desk. No cell phones will be allowed in sight during exams.

Sleeping in class will not be tolerated. Reading newspapers, books, headphones, and so on are similarly forbidden. Personal conversations should take place outside of class time.

Disregard of any of these policies may result in your removal from the course.

**ATTENDANCE:**

Daily attendance is expected in this class and is necessary to learn the material. Attendance will be taken every day. You must be on time and stay the entire class in order to get credit for the day’s attendance. If you exceed 6 unexcused absences, no credit may be earned for the course. You will either need to withdraw from the course or you will receive an F for your course grade. To receive an excused absence you must notify me as soon as possible and bring documentation the day you return.

**HANDBOUTS:**

Handouts for the lectures will be posted on ANGEL. You will need to be sure to print them and bring them with you to class. These are vital to following the lecture, since examples and word problems will not be written separately on the board.
**CALCULATOR POLICY:** You will be allowed to use a simple scientific calculator for this course. I recommend the TI-30X IIS. Any calculator capable of graphing, symbolic differentiation, or integration will not be allowed.

**OFFICE ETIQUETTE:**

“Office Hours” mean that I will be in my office, and you are welcome to walk in for help.

“Appointment” means “previously-arranged and mutually-convenient meeting time.”

You can always try your luck, and stop by my office to see if I am available, but keep in mind that I often have other responsibilities.

Please come prepared to office hours. Try to formulate specific questions to ask, or show me where you got stuck in solving a problem. It will make our time together more effective!

**EMAIL ETIQUETTE:**

Please include your name and class time with your emails.

Be very specific with your questions. Tell me where you are stuck and what you are trying on a problem. This will allow me to understand what is troubling you and will result in a more efficient response.

When trying to set up an appointment via email, be sure to include times you are available, and an estimate of how much time you think you may need.

**ANNOUNCEMENTS:**

You are expected to regularly check your UNA email for information relating to this class. Not reading these announcements and thus not learning about the necessary information is not a valid excuse, even if it affects your grade.
ACCOMMODATIONS:

In accordance with the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973, the University offers reasonable accommodations to students with eligible documented learning, physical and/or psychological disabilities. Under Title II of the Americans with Disabilities Act (ADA) of 1990, Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Amendment Act of 2008, a disability is defined as a physical or mental impairment that substantially limits one or more major life activities as compared to an average person in the population. **It is the responsibility of the student to contact Disability Support Services to initiate the process to develop an accommodation plan.** This accommodation plan will not be applied retroactively. Appropriate, reasonable accommodations will be made to allow each student to meet course requirements, but no fundamental or substantial alteration of academic standards will be made. Students needing assistance should contact Disability Support Services (256-765-4214).

ACADEMIC HONESTY POLICY:

Students are expected to be honorable and observe standards of conduct appropriate to a community of scholars. Additionally, students are expected to behave in an ethical manner. Individuals who disregard the core values of truth and honesty bring disrespect to themselves and the University. A university community that allows academic dishonesty will suffer harm to the reputation of students, faculty, and graduates.

Incidents of possible student academic dishonesty will be addressed in accordance with the guidelines found at the following link:

http://www.una.edu/student-conduct/policies-and-procedures/academic-honesty.html

HOMEWORK:

Several homework problems will be assigned. You can access the homework assignments on the web page. It is in your best interest to complete the homework on the day the material is covered. **DO NOT** fall behind!!!

Like all mathematics, abstract algebra is not a spectator sport; you will learn only by doing!

Homework questions will be addressed during office hours or via email, not during class time. Don’t hesitate to contact me if you have questions!!!
GRADES:

There are 750 points available for this course; they are distributed as described below.
General guidelines for letter grades are as follows:

A: 675 – 750  (90% – 100%)
B: 600 – 674  (80% - 89%)
C: 525 – 599  (70% - 79%)
D: 450 – 524  (60% - 69%)
F: 449 and below  (59% and below)

GRADE DISTRIBUTION: Grades are determined based on points as follows:

1. Four In-Class Exams worth 100 points each  400 points
2. Final Exam worth 200 points  200 points
3. Homework  100 points
4. Attendance and Participation  50 points

TOTAL:  750 points

IN – CLASS EXAMS (400 points):

There will be 4 in class exams. Each exam will be worth 100 points.
There are NO make-up exams. If a test is missed, you should notify me as soon as possible on
the day of the exam. If you have a legitimate and documented excuse, we will then discuss your
options.

FINAL EXAM (200 points):

You will be taking a COMPREHENSIVE final exam. This exam will be worth 200
points. The exam is scheduled for Friday, December 7, 2011 from 8:00 – 9:45. Make
necessary arrangements now to attend as NO exceptions will be made.
My Expectations:

- I expect you to work hard. In fact, I expect you to work very hard. Abstract algebra comes naturally to very few people. I give homework for a reason. And the best problems are the “hard” ones. Why? Because they force you learn something!
- I expect you to ask and answer questions in class. Don’t be shy! If you think your question/answer is silly, ask/say it anyway! You certainly won’t be the only one who was thinking it.
- I expect you to treat me and all of your classmates with respect.
- I expect you to get help. Whether it’s from your peers via a study group, a math tutor, or my office hours; get help before you think you need it!
- I expect you to learn to think “outside the box.” Mathematics is not just a subject; it’s a way of thinking.
- I expect you to pass this class!

My Responsibilities:

- My main responsibility is to help you learn abstract algebra. I promise I will not give all of my tricks away in class. If I did, you would be memorizing, not learning.
- I am also responsible for maintaining a positive learning environment.
- I am here to help you earn the grade you want.
- I am responsible for guiding you towards the answer and the way of thinking necessary for this course.

The list can go on, but mainly, I am here to help you as much as I can, but YOU are the one who must do the work and learn the math.

SIGNIFICANT DATES:

- August 22 – First Day of Class
- August 29 – Last Day to Receive 100% Refund
- September 3 – NO CLASS – Labor Day
- October 12 - Midterm
- October 19 – NO CLASS – Fall Break
- October 22 – Last Day to Drop a Class with a “W”
- November 21 – 25 – NO CLASS – Thanksgiving Holiday
- November 26 – Last Day to Drop a Class with a “WP/WF”
- December 5 – Last Day of Fall Classes
- December 6 – NO CLASS – Study Day
- December 7 – 12 – Final Exams

DISCLAIMER:
This is a general policy statement and is subject to change by the instructor at any time.