MA 109.10: College Algebra-Syllabus

Instructor: Ryan Walker
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Office Hours: MTWRF: 9:00 AM-10:00 AM; TR: 11:20 AM-12:20 PM.
Course Meeting Dates: 5/6/2008-6/17/2008
Course Meeting Times: MTWRF 10:00 AM-11:20 AM
Location: CB 337

Required Materials:

- Workbook: MA 109 Lecture Notes, by A. Corso.

Introduction: Welcome to MA 109! This course will cover essential topics in basic algebra and analytic geometry. The goal of the course is to provide students with a solid foundation in the quantitative tools necessary for success in future mathematics courses, especially calculus. Because this course lasts only six weeks, the pacing is necessarily accelerated. It is essential that you stay on top of the course material and homework. Don’t get left behind.

Objective: At the end of this course you should be prepared to apply basic algebraic concepts to problems in business and social sciences. Students should also be well-prepared to begin MA 123: Elementary Calculus.

Expectations: Though summer classes are fast paced they are often more informal and relaxed than regular courses. I like teaching informal classes and I hope that you enjoy the benefits of a relaxed atmosphere and more individual attention. I ask that you work to keep the classroom a positive environment by being respectful of your fellow classmates and your instructor.

Grading: Your grade in MA 109 will be based on the scores from the three exams, a final exam, on-line homework, and participation. A total of 500 points is available. The maximum number of points available for each component is:

Exams 3 @ 100 points each  
Final 100 points  
Homework 75 points  
Attendance 25 points

Final letter grades will be awarded based on the sum of your scores from each component:
A: 450-500
B: 400-449
C: 350-399
D: 300-349
E: 0-299

Attendance: You really need to come to class everyday to succeed in a summer math course. We will move very fast and missing even a single day will put you at a disadvantage. If you don’t think you can attend regularly, I strongly recommend you consider taking this course some other time. I will take attendance 5 times randomly during the semester. If you are absent no more than once for these random spot checks, you will get the full 25 attendance points. Otherwise, you’ll get no points. There are no excused absences except for absolute emergencies and these must be documented.

Homework: All of your homework for this course will be done on-line through the Web Homeworks System (WHS). You can access this system at https://www.mathclass.org/. I’ll discuss how to sign in on the first day of class and tell you about some of the features included with this system. Because of the way WHS is administered all homework must be submitted before the deadline; there are no extensions available. At the beginning of each class I will remind you of any upcoming homework due dates.

Exams: There will be three exams and a comprehensive final for this course. I will incorporate periodic review of old material into the class and I will provide you with a study outline for each exam. Except in the case of absolute emergency there can be no make-up exams. Plan accordingly.

Disability Statement: If you have a disability and are entitled to accommodations in the classroom please let me know about it.

Cheating: Don’t. It’s a really bad idea and there are very serious consequences if you are caught. If you are struggling so much that you are considering this option, please come and talk to me.

How to succeed in this class: Here are my suggestions for how to do well in this course:

• Stay on top of the course material. Read the book and review your notes regularly. You should try to spend a few hours each day working on course material. Make a study schedule.

• Work on problems. For topics like factoring or solving equations, the only way to get better is to practice.

• Work with other students in the class. Study with other students.
• Ask questions when you don’t understand something in class. Tell me if I am not being clear in my explanations.

• Come to my office hours if you are having trouble with something. Better yet, send me an email anytime. I’ll respond in less than a day.

Schedule:

Week 1:
May 6: Introduction to the course; Using math class; Basic Equations (A8,1.1).
May 7: Modeling with Equations (A9, 1.2).
May 8: Quadratic Equations (A12, 1.3); Other Types of Equations (A13,1.5).
May 9: Inequalities (A14, 1.6). HW 1.1-1.2 Due by Midnight

Week 2:
May 12: Absolute Value Equations and Inequalities (A15,1.7). HW 1.3,1.5 Due by Midnight
May 13: The Coordinate Plane (A16, 2.1).
May 14: Graphs of Equations in Two Variables (A17, 2.2).
May 15: Review for Exam I (A10,A11,A21,A22). HW 1.6,1.7 Due by Midnight
May 16: EXAM I (Covers all the material from A7-A15/Sections 1.1-1.7).

Week 3:
May 19: Lines (A18,2.4). HW 2.1,2.2 Due by Midnight
May 20: Systems of Equations (A19, 6.1).
May 21: Systems of Linear Equations in Two Variables (A20,6.2).
May 23: Graphs of Functions (A24, 3.2). HW 2.4, 6.1/6.2 Due by Midnight

Week 4
May 26: Increasing and Decreasing Functions/Average Rates of Change (A25,3.3). HW 3.1, 3.2 Due by Midnight
May 27: Review for Exam II (A21,A22).
May 28: EXAM II (Covers all material from A16-A24).
May 29: Transformations of Functions (A26,3.4).
May 30: Quadratic Functions; Maxima and Minima (A27, 3.5). HW 3.3 Due by Midnight
Week 5

**June 2:** Polynomial Functions and Their Graphs (A28,4.1). **HW 3.4,3.5 due by Midnight**

**June 3:** Dividing Polynomials (A29, 4.2); Real Zeros of Polynomials (A30,4.3).

**June 4:** Rational Functions (A31 & A7, P.7 & 4.5). **HW 4.1 Due by Midnight**

**June 5:** Combining Functions (A34, 3.6); One-to-One Functions and Their Inverses (A35,3.7). **HW 4.2 Due by Midnight**

**June 6:** Review for Exam III (A32,A33). **HW 4.3, P.7, & 4.5 due by Midnight on Saturday**

Week 6

**June 9:** EXAM III (Covers all material from A25-A31).

**June 10:** Exponential Functions (A36, 5.1). **HW 3.6,3.7 Due by Midnight**

**June 11:** Logarithmic Functions (A37,5.2); Laws of Logarithms (A38, 5.3).

**June 12:** Exponential and Logarithmic Equations (A39, 5.4).

**June 13:** Modeling with Exponential and Logarithmic Functions (A40, 5.5). **HW 5.1, 5.2, 5.3 due by Midnight**

Week 7

**June 16:** Review for Final (A41,A42,A43). **HW 5.4,5.5 due by Midnight**

**June 17:** FINAL EXAM (Comprehensive but weighted more heavily towards the material from A34-A40).