

Math 103A–02 College Algebra (Part I) 4 Units

Fall 2015

Meeting Times: Monday & Wednesday 6:00 – 7:50 PM **Meeting Place:** Room A211

Instructor: Charlie Lincoln

Email: c.lincoln@sbcglobal.net

Cell Phone: 545-9411

Office Hours: By Appointment

Optional Text: *Precalculus Enhanced With Graphing Utilities* 6e by Sullivan & Sullivan,
Check out the Solutions manual for this course before purchasing it to see if the book meets your needs.

MyMathLab Log-In: (for [MyLab](#)/Mastering): **lincoln53285**

MyMathLab/Mastering is required for this course and a software license is required. You must have a valid e-mail address to use the on-line curriculum. Students have *two choices*. The *first choice* is to purchase the textbook from the bookstore. The textbook comes with the software license. Note: If you purchase a used textbook, it may not have a valid course access code. Be VERY careful when acquiring the text to make sure it is the correct edition. The *second choice* is to purchase the license alone either from the bookstore or online at coursecompass.com. The license gives you access to the textbook online. This is a more economical choice, but is only recommended to students who have online access and feel comfortable reading a computer screen instead of a traditional book. To access our class page, go to www.coursecompass.com and register using your student access code and the course ID for this class: **lincoln53285**

For assistance with MyMathLab: You may get help by calling 1-800-677-6337 during the following hours: Mon – Fri 5:00 AM – 5:00 PM & Sunday 2:00 PM – 9:00 PM. Online assistance is available 24 hours every day at: 247pearsoned.custhelp.com

Course Description: This course is an in-depth study of functions. We will study linear, quadratic and higher order polynomials, rational functions, zeros of polynomial functions and their theorems. We will analyze functions' algebraic and geometric properties. Special emphasis will be placed on application problems and the use of graphing calculators. I will be demonstrating on a Texas Instrument 89 (TI 89) graphing calculator. You may rent a TI-89 from the college with a deposit and fee per quarter. Please see me if you have any questions.

Student Learning Outcomes:

1. Produce and interpret graphs of functions and relations.
2. Apply techniques to solve polynomial and rational equations and inequalities.
3. Model real life situations using algebraic methods.
4. Simplify algebraic expressions using skills obtained in the course.

Prerequisite: A grade of "C" or better in Math 154, or equivalent or appropriate skills demonstrated through the Math Assessment process.

Students with disabilities must identify themselves to me within the first two weeks of class.

Accommodations for Students with Disabilities: Students requiring accommodations for a certain disability that may affect class performance are requested to schedule with a staff member at the

Disability Resource Center to discuss this during the first week of the quarter so that appropriate arrangements can be made.

Grading: Your class letter grade will be based on the usual grading scale:

A: 90% and above, **B:** 80-89%, **C:** 70-79%, **D:** 60-69%, **F:** 59% and under.

| | |
|---------------------------------|----------|
| Homework | 100 pts. |
| 4 Quizzes | 100 pts. |
| Midterm Exam 1 | 100 pts. |
| Midterm Exam 2 | 100 pts. |
| <u>Comprehensive Final Exam</u> | 100 pts. |
| Total | 500 pts |

Homework: The homework assignments to be turned in for credit are due on line **every Friday**. Each homework assignment is considered late if it is not turned in on the assigned date. Late homework receives **reduced credit**. Your work must support your answers. **Each homework section is worth 10 points.**

Quizzes: **There are no make-up quizzes.** There will be five quizzes but only four are counted so your lowest quiz score will automatically be dropped.

Midterm Exams: **You must notify me before** an exam if you will miss the exam. **You can call me, text me or e-mail me.** Exams must be made up within 3 school days after the scheduled date. You may take an exam up to 3 school days before the scheduled date. **Arrangements must be made with me in advance.**

Please contact me if you do not understand these policies.

In this class, it is your responsibility to drop the class in order to avoid an unwanted grade. You must go to Admissions & Records.

Friday, October 2nd is the last day for refunds.

Friday, October 2nd is the last day to drop with no record.

Friday, November 6th is the last day to withdraw with a “W” grade.

Tentative Lecture Schedule Math 103A – 2

| <u>Date</u> | <u>Topic</u> | <u>Section</u> |
|----------------|---|----------------|
| Sept 21 | Syllabus, Rectangular Coordinates, Graphing Utilities | 1.1 |
| | Intercepts, Symmetry, Graphing Key Equations | 1.2 |
| | <u>HW 1 Sections 1.1 and 1.2 are due Friday, Sept 25.</u> | |
| Sept 23 | Solving Equations using a Graphing Calculator | 1.3 |
| | Lines | 1.4 |
| Sept 28 | Circles | 1.5 |
| | <u>HW 2 Sections 1.3, 1.4, 1.5 are due Friday, Oct 2.</u> | |
| Sept 30 | Quiz 1 (1.1 – 1.4) | |
| | Functions | 2.1 |
| Oct 5 | The Graph of a Function | 2.2 |
| | Properties of Functions | 2.3 |
| | <u>HW 3 Sections 2.1, 2.2, 2.3 are due Friday, Oct 9.</u> | |
| Oct 7 | Quiz 2 (1.5 – 2.1) | |
| | Library of Functions, Piecewise-defined Functions | 2.4 |
| | Graphing Techniques, Transformations | 2.5 |
| Oct 12 | Mathematical Models: Building Functions | 2.6 |
| | <u>HW 4 Sections 2.4, 2.5, 2.6 are due Friday, Oct 16.</u> | |
| Oct 14 | Quiz 3 (2.2-2.5) | |
| | Linear Functions, Their properties and Linear Models | 3.1 |
| | Hand out Practice Midterm 1 | |
| Oct 19 | Review Midterm Exam 1 | |
| Oct 21 | Midterm Exam 1 (Chapters 1 and 2) | |
| Oct 26 | Building Linear Models from Data | 3.2 |
| | <u>HW 5 Sections 3.1, 3.2 are due Friday, Oct 30.</u> | |
| Oct 28 | Quadratic Functions and Their Properties | 3.3 |
| Nov 2 | Building Quadratic Models | 3.4 |
| | Inequalities Involving Quadratic Functions | 3.5 |
| | <u>HW 6 Sections 3.3, 3.4, 3.5 are due Friday, Nov 6.</u> | |
| Nov 4 | Quiz 4 (3.1-3.3) | |
| | Polynomial Functions and Models | 4.1 |

| | | |
|---------------|--|------------|
| Nov 9 | Veterans Day | |
| Nov 11 | Real Zeros of a Polynomial Function <u>HW 7 Section 4.1, 4.2, are due Friday, Nov 13.</u> Hand out Practice Midterm 2 | 4.2 |
| Nov 16 | Review Midterm Exam 2 | |
| Nov 18 | Midterm Exam 2 (Sections 3.1 – 3.5, Sections 4.1-4.2) | |
| Nov 23 | Complex Zeros, Fundamental Theorem of Algebra Polynomial Division, Synthetic Division | 4.3 A.4 |
| Nov 25 | Properties of Rational Functions <u>HW 8 Sections 4.3, A.4, 4.4 are due Friday, Nov 27.</u> | 4.4 |
| Nov 30 | The Graph of a Rational Function Polynomial and Rational Inequalities | 4.5 4.6 |
| Dec 2 | Quiz 5 (Sections A.4, 4.4, 4.5, 4.6), Review: Comprehensive Final Exam <u>HW 9 Sections 4.5 is due Friday, Dec 4.</u> <u>HW 10 Sections 4.6 is due Friday, Dec 4.</u> | |
| Dec 7 | Comprehensive Final Exam 6:00 – 7:50 PM | |