

**Math 103: 52587**

Mrs. Francilyn A. OBrien

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**Intermediate Algebra**

**REEDLEY COLLEGE**

Fall 2012

**Meeting Room:** CCI-200

**Meeting Times:** MWF 2:00 – 3:30 pm

**NOTE:**

As a part-time instructor for Reedley College, I have neither an office nor office hours. If you need to get a message to me, please use my email address.

**COURSE DESCRIPTION:** This course will deal with many algebraic concepts consistent with a second course in algebra including: equations and inequalities in two variables, rational exponents and roots, quadratic functions, exponential and logarithmic functions, and the conic sections.

**Basic Skills Advisories:** Eligibility for ENGL 126

**Subject Prerequisites:** Math 101 or Equivalent

**REQUIRED TEXT:** Woodbury, Elementary & Intermediate Algebra 3<sup>rd</sup> Edition  
MyMathLab Course ID to register: **obrien12403**

**REQUIRED MATERIALS**

Spiral notebook, pencils, **scientific** calculator, ¼” graph paper, eraser, ruler

**ATTENDANCE:** Students are expected to attend all class meetings, be on time, and be in class the entire class session. Calling me to tell me you will be absent **does not** excuse you. **STUDENTS LEAVING CLASS BEFORE THE END OF CLASS WILL BE COUNTED AS BEING ABSENT! Three (3) absences** may result in a drop from the course. However, **if you decide to drop the course, it is your responsibility to make the drop official in the Administrations and Records office or else possibly receive a grade of F.**

**Behavioral Standards:** Please take care of any personal needs (i.e., using the restroom, getting a drink, sharpening a pencil) before class begins. **Please turn your phone off when entering the class.** You may not use your phone as a calculator. Do not bring guests to class.

**Important dates & Notes:**

**Aug 13:** Classes begin

**Aug 31:** Last day to drop w/o a W in person

**Sept 3:** Last day to drop w/o a W on Web Advisor:

**Sept 3 (Monday) Labor Day:** No class

**Oct. 12:** Last day to drop a full term class

**Nov 12 (Monday) Veteran’s Day:** No class

**Nov 22-23, (Th-F):** Thanksgiving Holiday, No class

**Dec 10:** Final exam from 2:00 – 3:50

**TARDIES:** Students are expected to be on time. It is distracting, rude and unfair to fellow classmates and to the instructor when a student is late. *If you come in late please see me before leaving or you will be counted as absent.*

**HOMEWORK:** All homework will be kept in a spiral notebook. Homework checks will be given during the first five minutes of class. Each homework check is worth **10 points**. No late homework checks will be given.

All work must be shown in order to receive credit. *Note: Being absent the day homework is collected does not entitle you to turn it in late!*

**TESTS/QUIZZES:** There are no makeup exams for missed tests or quizzes. **NO EXCEPTIONS!**

**FINAL EXAM:** A two-hour comprehensive final exam worth 2 tests will be given at the end of the semester during finals week. **Your final exam is on Monday, December 10, 2012 from 2:00 – 3:50 pm.**

Students are required to participate in all class discussions and activities. You may not study for another class or read a book during class.

**GRADING:**     *HOMEWORK & QUIZZES on MyMathLab: 30%; TESTS: 60%; Final Exam: 10%*

| <u>Percent of Total Points</u> | <u>Grade</u> |
|--------------------------------|--------------|
| 90-100                         | A            |
| 80-89                          | B            |
| 70-79                          | C            |
| 60-69                          | D            |
| 0-59                           | F            |

**SPECIAL NEEDS REQUESTS:** If you have a verified need for an academic accommodation or materials in alternate media (i.e., Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact me as soon as possible.

**Academic Dishonesty**

*Students at Reedley College are entitled to the best education that the college can make available to them, and they, their instructors, and their fellow students share the responsibility to ensure that this education is honestly attained. Because cheating, plagiarism, and collusion in dishonest activities erode the integrity of the college, each student is expected to exert an entirely honest effort in all academic endeavors. Academic dishonesty in any form is a very serious offense and will incur serious consequences.*

***Cheating** is the act or attempted act of taking an examination or performing an assigned, evaluated task in a fraudulent or deceptive manner, such as having improper access to answers, in an attempt to gain an unearned academic advantage. Cheating may include, but is not limited to, copying from another's work, supplying one's work to another, giving or receiving copies of examinations without an instructor's permission, using or displaying notes or devices inappropriate to the conditions of the examination, allowing someone other than the officially enrolled student to represent the student, or failing to disclose research results completely.*

***Plagiarism** is a specific form of cheating: the use of another's words or ideas without identifying them as such or giving credit to the source. Plagiarism may include, but is not limited to, failing to provide complete citations and references for all work that draws on the ideas, words, or work of others, failing to identify the contributors to work done in collaboration, submitting duplicate work to be evaluated in different courses without the knowledge and consent of the instructors involved, or failing to observe computer security systems and software copyrights.*

*Incidents of cheating and plagiarism may result in any of a variety of sanctions and penalties, which may range from a failing grade on a particular examination, paper, project, or assignment in question to a failing grade in the course, at the discretion of the instructor and depending on the severity and frequency of the incidents.*

**Course Objectives**

In the process of completing this course, students will:

- A) use function notation and the properties of lines and linear inequalities.
- B) simplify radical expressions and perform operations on radical expressions.
- C) graph parabolas and solve quadratic equations.
- D) use the properties of exponents and logarithmic functions and to change the base of a logarithm.
- E) manipulate and graph the equations of the conic sections.
- F) generalize arithmetic and geometric sequences and find the  $k^h$  term of a binomial expansion.

**Course Outcomes**

Upon completion of this course, students will be able to:

- A) create a linear equation given a slope and a point or two points; graph linear equations and inequalities and use function notation to find the value of expressions.
- B) add, subtract, multiply, and divide radical expressions and use exponent properties and conjugate properties to simplify and solve radical expressions.
- C) complete the square of a quadratic equation and use the quadratic formula to solve any quadratic equation; graph quadratic equations using translations.
- D) solve exponential and logarithmic equations by using equivalent expressions; use exponential and logarithmic properties to convert between common logarithms, natural logarithms and other bases.
- E) graph each of the conic sections by translations; put conic equations and inequalities into the standard form.
- F) expand binomial expressions using Pascal's triangle and the binomial coefficient formula; find the  $n^{\text{th}}$  term of a sequence of numbers.

**COURSE CONTENT OUTLINE:**

- A) Equations and Inequalities in Two Variables
  - 1) Slope of a line
  - 2) The equation of a line
  - 3) Linear inequalities in two variables

- 4) Algebra using function notation
- B) Rational Exponents and Roots
  - 1) Rational exponents
  - 2) Simplified form for radicals
  - 3) Addition, subtraction, multiplication, and division of radical expressions
  - 4) Equations with radicals
  - 5) Complex numbers
- C) Quadratic Functions
  - 1) Completing the square
  - 2) The quadratic function
  - 3) Graphing Parabolas
  - 4) Quadratic Inequalities
- D) Exponential and Logarithmic Functions
  - 1) Exponential Functions
  - 2) The Inverse of a function
  - 3) Logarithms and their properties
  - 4) Exponential equations and change of base
- E) Conic Sections
  - 1) Circle
  - 2) Ellipses and Hyperbolas
  - 3) Second-degree inequalities and non-linear systems
- F) Sequences and Series
  - 1) Arithmetic and geometric sequences
  - 2) Series
  - 3) Binomial Expansion

**Math 103: 52587 Fall 2012, OBrien**  
**PACING GUIDE AND ASSIGNMENTS**

*EOO = every other odd, EOE= every other even, A=all*

|                                     |                                     |                                    |
|-------------------------------------|-------------------------------------|------------------------------------|
| Aug 13: 8.1 PP424-425; 1-85 EOO     | Aug 15: 8.2 PP 434-436, 1-71 EOO    | Aug 17: 8.3 PP 444-450, 5-81 EOO   |
| Aug 20: 8.4 PP 456-458, 2-94 EOE    | Aug 22: 8.5A PP 468-469, 9-33 EOO   | Aug 24 8.5B PP469-470; 35-65 EOE   |
| Aug 27:Chap 8 Exam                  | Aug 29: 9.1 pp 488-489, 9-111 eoo   | Aug 31: 9.2 pp 494-495, 5-77 eoo   |
| Sept 3: NO CLASS                    | Sept 5: 9.3 pp 499-500, 4-70 eoo    | Sept 7: 9.4 pp507-509, 5-99 eoo    |
| Sept 10: 9.5 pp 516-518, 8-82 eoe   | Sept 12: 9.6 pp525-527, 7-113 eoo   | Sept 14: Chap 9 EXAM               |
| Sept 17: 10.1 pp 545-546, 5-115 eoo | Sept 19: 10.2 pp 555-557, 7-103 eoo | Sept 21: 10.3 pp 563-564, 3-71 eoo |
| Sept 24: 10.4 pp 573-575, 7-71 eoo  | Sept 26: 10.5 pp 579-581, 6-48 eoe  | Sept 28: 10.6 pp 590-591, 5-71 eoo |
| Oct 1: Chap 10 EXAM                 | Oct 3: 11.1 pp 602-603, 1-22 all    | Oct 5: 11.2 pp 619-622, 5-47 eoo   |
| Oct 8: 11.3 pp 631-634, 9-77 eoo    | Oct 10: 11.4 pp 645-647, 3-37 eoo   | Oct 12: 11.5 pp 654-656, 7-71 eoo  |
| Oct 15: 11.6 pp 664-667, 7-77 eoo   | Oct 17:Review pp 680-681, 1-26      | Oct 19: Chapter 11 EXAM            |
| Oct 22: 12.1 pp 693-694, 1-67 eoo   | Oct 24: 12.2 pp 704-705, 9-93 eoo   | Oct 26: 12.3 pp 713-715, 5-97 eoo  |
| Oct 29: 12.4 pp723-724, 3-121 eoo   | Oct 31: 12.5 pp733-735, 7-67 eoo    | Nov 2: 12.6 pp743-746, 7-69 eoo    |
| Nov 5: Chap 12 EXAM                 | Nov 7: 13.1 pp766-771, 7-63 eoo     | Nov 9: 13.2 pp779-784, 9-79 eoo    |
| Nov 12: No Class                    | Nov 14: 13.3 pp791-797, 9-63 eoo    | Nov 16: 13.4 pp 806-813, 9-61 eoo  |
| Nov 19: 13.5 pp 821-822, 3-59 eoo   | Nov 21: Review pp 829-831, 1-59 eoo | Nov 23: No Class                   |
| Nov 26: Chap 13 Exam                | Nov 28: 14.1 pp 841-843, 13-75 eoo  | Nov 30: 14.2 pp 847-849, 7-61 eoo  |
| Dec 3: 14.3 pp 855-867, 7-67 eoo    | Dec 5: 14.4 pp861-862, 5-61 eoo     | Dec 7: Review pp 867-868, 4-15 all |
| Dec 10 FINAL EXAM 2:00-3:50 PM      |                                     |                                    |