

MATH 103: INTERMEDIATE ALGEBRA

Math103-52703

REEDLEY COLLEGE

Rajwant Kaur

Fall 2012

Office Hours: By Appointment

Meeting Room: CCI 205

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TTH /3:15pm -5:30pm

Course ID: _____

COURSE DESCRIPTION: Study of functions; linear, absolute value, quadratic, radical, rational, exponential, and logarithmic. Conic sections, applications, inequalities, systems of equations, matrices, sequences, series, and the Binomial Theorem.

SUBJECT PREREQUISITE: Successful completion (grade of C or better) of Math 101 or equivalent.

TEXT: (Optional) George Woodbury: Elementary and Intermediate Algebra, Pearson/Addison Wesley.

REQUIRED WEB ACCESS: Course Compass can be purchased from the bookstore with text or from www.coursecompass.com.

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) Generalize arithmetic and geometric sequences and find the k^{th} term of a binomial expansion.
- F) Manipulate and graph the equations of the conic sections.

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) Expand binomial expressions using Pascal's triangle and the binomial coefficient formula; find the n^{th} term of a sequence of numbers.
- F) Graph each of the conic sections by translations; put conic equations and inequalities into the standard form.

MATERIALS NEEDED:

- Preprinted note packet
- 3-ring binder
- Binder Paper
- Pencil(s)
- calculator

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!** 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.

HOMEWORK: Homework is extremely important. Your success in this class is dependent upon your ability to work and understand the homework problems. Do not fall behind! If you are having difficulty, get help immediately!!! Please let me know if I can help you in anyway.

1. Homework is done using CourseCompass on the computer. **NO LATE HOMEWORK WILL BE ACCEPTED!** Students must be enrolled and satisfactorily completing homework by the end of the first week or they will be dropped. You are required to get 75% on an assignment before moving to the next assignment.
2. Homework is due within a day or two of the date the lecture was given. All due dates are listed on CourseCompass.
3. Late homework will only be accepted up to a certain date. You can check dates on course compass. If late homework is accepted, the penalty is at least a 25% point reduction.

TESTS: Six tests, worth 100 points each, will be given. There are **NO MAKEUPS** for missed tests. **NO EXCEPTIONS!!**

FINAL EXAM: A two hour comprehensive final exam worth 100 points will be given at the end of semester on the final day. This final exam is mandatory and counts as another exam. However, it may also be used to replace a low test score or a missed test. The final may not be used to replace the homework grade or participation grade.

EXPECTED BEHAVIOR AND ATTENDENCE

You can be dropped from the class or have participation/homework points deducted for any of the following behaviors.

- A) Any behavior that is disrespectful of fellow students or the instructor.
- B) Talking while I am talking and/or any distracting behavior.
- C) Failure to cooperate/ participate in group activities.
- D) Leaving class early without prior instructor notification.
- E) Excessive tardiness and/or absences.
- F) Cellular phone use or leaving beeper on in class.

GRADING:

- **HOMEWORK:** All of your homework scores will be added up and divided by the total possible points for the semester. This number is then multiplied by 100 to give a score between 0 and 100. Homework counts for 20 of your overall grade.
- **TESTS:** All of your test percentages will be averaged. This will give you a score between 0 and 100. Tests count for 70% of your overall grades.
- **ONLINE TESTS:** All of your online test percentages will be averaged. The online tests are worth 10% of your overall grade.

Example: If your homework grade average is 75, online Tests is 90, and your exams grade average is 90, and your overall grades are 150, then you would compute your overall grade as follows:

$$(.20)(75) + (.10)(90) + (.70)(90) = 15+9+63 =87$$

GRADING SCALE:

Your grade will then be determined by the following grading scale:

- 89 - 100 % = A
- 79 - 88% = B
- 69 - 78 % = C
- 59 - 68 % = D
- 0 - 58% = F

BLACKBOARD: This course will utilize blackboard for announcements, handouts, assignments, etc. You can access blackboard from the Reedley College homepage or at <http://blackboard.reedleycollege.edu> .

Your login and password to blackboard is as follows:

Login ID: “your student ID#”
Password: “your student ID#”

Academic Dishonesty: Academic dishonesty in any form is a very serious offense and will incur serious consequences, including but not limited to receiving a grade of F in the course. For the college policy on cheating and plagiarism, see Page 51 of the college catalog

SPECIAL NEEDS REQUEST: 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.

Important Dates

- August 13 (M) Start of Fall semester
- August 24 (F) Last day to drop a full-term class for a full refund
- August 31 (F) Last day to register for a full-term fall class in person
- August 31 (F) Last day to drop a fall full-term class to avoid a “W” in person
- September 3 (M) Last day to drop a fall full-term class to avoid a “W”
- September 3 (M) Labor Day holiday (no classes held, campus closed)
- September 14 (F) Last day to change a Fall 2012 class to/from a Pass/No-Pass grading basis
- October 12 (F) Last day to drop a full-term class (letter grades assigned after this date)
- November 12 (M) Veterans Day observed (no classes held, campus is open)
- Nov 22-23 (Th-F) Thanksgiving holiday (no classes held, campus closed)
- Dec 10-14 (M-F) Final exams week

COURSE OUTLINE OF TOPICS

- A. WEEKS 1-3: Chapter-Sections 8.1,8.2, 8.3, and 8.4; Review of solving equations and factoring, equations, functions and inequalities with absolute value, graphing linear and absolute value functions.
- B. Weeks 4-7: Chapter-Sections 9.1, 5.1-5.2 Review, 9.2-9.6; Radicals and complex numbers, review of laws and properties of exponents, rational exponents, radical equations and their applications.
- C. Weeks 8-10: Chapter-Sections 10.1- 10.6; Quadratics and their graphs.
- D. Weeks 11-12: Chapter-Sections 11.1-11.6; Review of functions and their graphs. Algebra of functions and inverse functions.
- E. Weeks 13-14: Chapter-Sections 12.1-12.6; Exponential & Logarithmic Functions.
- F. Weeks 15-17: Chapter-Sections 13.1-13.4 (14.1 &14.4); Graphs of conics, Binomial Theorem and sequences if time allows, and review for final.
- G. Final Week : Wednesday, December 14, 2011

The final is a test and cannot be dropped or replaced. Be sure you plan to be there!

Note: The syllabus is subject to change under the discretion of the instructor.