Mathematics 143-C01
College Algebra
Course Syllabus
3 Credit Hours

Spring 2010
Instructor: Constance Meade
Office: Shields 207-D
E-mail Address: cmeade@csi.edu

Office Hours: 12:00-12:50 MT
11:00-11:50 WF
10:00-10:50 R
Lab Hour: 12:00-12:50 M
Office Phone: 732.6809
1.800.680.0274 x 6809 for
(Idaho & northern Nevada)

Course Description:
This course includes fundamental concepts of Algebra; equations and inequalities; functions and graphs;
polynomial, rational, exponential and logarithmic functions; systems of equations and inequalities; conics;
the Binomial Theorem.

Pre-requisites:
Math 108 with a grade of “C” or better, or Math Placement Test (COMPASS Algebra 62 or higher, ACT
Math 23 or higher).

Required Textbooks and Supplies:
- A TI-83 Plus graphing calculator is required. You may also use a TI-84/ or TI-84 Plus The use of
any HP, TI-89, TI-92 Plus, or Casio calculators will not be allowed in this course.
- Pencil
- Loose leaf paper
- Graphing paper – http://mathbits.net/MathBits/StudentResources/GraphPaper/GraphPaper.htm

Expected Outcomes and Outcomes Assessment:
Outcome 1: The student will master course content as presented in lecture and assigned homework.
Assessment 1: The student will demonstrate their understanding of the material by completion of
weekly assignments. Student performance will be further measured by midterm exams
and a comprehensive final exam.

Outcome 2: The student will apply mathematics to real world situations.
Assessment 2: The student will demonstrate this skill by completion of individual or group projects that
require mathematical reasoning.

Outcome 3: The student will display the use of technology to enhance their understanding of
mathematics.
Assessment 3: The student will display this skill by completing an individual or group project that
requires the use of a graphing calculator and/or use of the computer lab.

As part of departmental analysis of outcomes in this course and its place in the Mathematics program,
student completion of the pre-requisites, success in the current course, success in subsequent courses
and student satisfaction will be reviewed by the instructor. A report containing this information will be
submitted by the department faculty to determine what, if any, changes can be made to improve the
course in terms of content, focus, and instruction.
Policies and Procedures:

Attendance: Attendance may, or may not, be taken on a daily basis. However, you are expected to be in attendance each class period. If, for one reason or another, you are unable to attend, you will still be responsible for all material covered that day.

Hours of lecture each week: 1:00 - 1:50 Monday, Wednesday, & Friday in Shields 209

Homework: Homework will be assigned. It is expected to be completed at the beginning of the following class meeting, unless otherwise stated. This homework will be collected and graded on a random basis. You may be notified at the beginning or at the end of class on the day that it is collected. No late homework will be accepted. The average of your homework assignments will count as one test score.

Exams: At least four exams will be given during the semester. There will be no make-up or re-take exams given. If you must miss one, that grade will be replaced by your score on the final exam. These will be taken in the classroom.

Final Exam: The final exam will be comprehensive. This exam will be given on Tuesday, May 11, 2010 from 12:00 PM - 2:00 PM in Shields 209. This will count as one exam score.

Note: To earn a grade of a "C" or higher in this course, each student must earn a score of a 60% or higher on the final exam.

Grading: Your percentage will be calculated as follows: \[
\text{Your Total Percentage Points} = \frac{\%}{\text{Total Percentage Points Possible}}
\]

Although I reserve the right to revise this scale downward, 90% of the possible points, or above, will always be and 'A', 80%-89% a 'B', etc.

Coverage: Chapter 1: 1.1-1.8, Chapter 2: 2.1-2.7, Chapter 3: 3.1-3.4, Chapter 4: 4.1-4.4, Chapter 5: 5.1-5.5, Chapter 6: 6.1-6.3 & 6.5, Chapter 8: 8.5

Cheating: See page 34 of the current CSI catalogue. A violation of the policy will be dealt with severely, including but not limited to, being dismissed from the class and/or given a grade of "F" for the course.

Cellular Telephones/Palm Pilots/Lap Tops: These are expected to be turned off during class time.

General Classroom Behavior: See pages 34-36 of the current CSI catalogue. As a student, you are expected to maintain appropriate conduct during the class, treating fellow students with respect and demonstrating a cooperative attitude toward the instructor. Inappropriate behavior will not be tolerated. After one warning, further breaches of acceptable conduct may result in your being dropped from the course, and the matter will be referred to student services for college discipline. If there is a situation creating a problem for you in this class, please let me know so I can conference with any students who are involved.
Aids for the Course:

- **Study Groups** - Being an active member of a study group will be extremely helpful as you learn and master the course content.

- **Student Solutions Manual** - all odd numbered problems are worked "briefly" in this document, and are generally related to the previous or following even-numbered problems. If you have difficulty working the even-numbered problems, the solutions to the odd-numbered problems may provide some insight to a method of solution.

- **Instructor** - I have office hours scheduled on a daily basis. If you need to meet with me and cannot do so during those scheduled times, please feel free to schedule another time that is convenient for you.

- **Graphmatica** - This is a free computer software program that is extremely user friendly. I strongly recommend that you use this.

- **Math Lab** - The Math lab will be open the first week of the semester. However, the hours will be limited to 8:30 - 12:30 for the first week.

Topical Outline:

a. **Linear Equations** - solve all types, simple to complex, model data and solve application problems

b. **Formulas** - solve problems using formulas, isolate a specified variable

c. **Quadratic Equations** - solve by factoring, taking square roots, completing the square, using the quadratic formula, solve application problems

d. **Solve other types of equations** - polynomial, radical, absolute value, equations that are quadratic in form, equations with rational exponents

e. **Inequalities with one variable** - graph and solve linear, compound, absolute value, quadratic and rational inequalities

f. **Lines** - find slope, graph, write equations, use idea of parallel and perpendicular
g. **Circles** - equation, center, radius, graph, convert equation to standard form

h. **Functions** - definition, domain, range, zeros, use vertical line test, evaluate, intervals for increasing and decreasing, odd, even, symmetry

i. **Graph and analyze common functions** - quadratic, cubic, square root, absolute value, reciprocal, piece-wise defined

j. **Transformations and combinations of functions** - vertical shifts, horizontal shifts, reflections, vertical stretching and shrinking, add, subtract, multiply, divide, composition, inverse

k. **Quadratic functions** - graph, standard form, vertex, intercepts, solve application problems

l. **Polynomial functions** - end behavior, Leading Coefficient Test, graph, Remainder Theorem, Factor Theorem, find all zeros

m. **Rational Functions** - vertical asymptotes, horizontal asymptotes, oblique (slant) asymptotes, intercepts, graph, solve application problems

n. **Variations** - direct, inverse, joint, combined

o. **Conic Sections** - analyze and graph ellipses, hyperbolas and parabolas, find vertices, foci, axis of symmetry, directrix, eccentricity, asymptotes, as applicable, solve application problems

p. **Exponential functions and equations** - evaluate, graph, transform, solve equations, solve application problems

q. **Logarithmic functions and equations** - log notation, properties of logs, evaluate, graph, solve logarithmic equations, change bases, solve application problems

r. **Systems of equations** - linear equations in two variables, linear equations in three variables, non-linear equations in two variables, application problems

s. **Systems of inequalities** - linear, nonlinear

t. **Binomial Theorem** - expand binomial raised to a power, find one specified term
Course Evaluation:

Students are strongly encouraged to complete evaluations at the end of the course. Evaluations are very important to assist the teaching staff to continually improve the course. Evaluations are available online at: http://evaluation.csi.edu. Evaluations open up to two weeks prior to the end of the course. The last day to complete an evaluation is the last day of the course. During the time the evaluations are open, students can complete the course evaluations at their convenience from any computer with Internet access, including the open lab in the Library and in the SUB. When students log in they should see the evaluations for the courses in which they are enrolled. Evaluations are anonymous. Filling out the evaluation should only take a few minutes. Your honest feedback is greatly appreciated.

Disabilities:

Any student with a documented disability may be eligible for related accommodations. To determine eligibility and secure services, students should contact the coordinator of Disability Services as soon as possible. Student Disability Services is located on the second floor of the Taylor Building on the Twin Falls Campus: 208.732.6260 (voice) or 208.734.9299 (TDD), or 800.680.0274 (Idaho & Nevada). Please refer to the 2009-2010 College of southern Idaho Catalog under "student Disability Services", on page 38.

E-Mail:

Because email is the primary source of written communication with students, all registered CSI students get a college email account. Student e-mail addresses have the following format: <address>@eaglemail.csi.edu where <address> is a name selected by the student as a part of activating his/her account. Students activate their accounts and check their CSI e-mail online at http://eaglemail.csi.edu. Instructors and various offices send messages to these student accounts. Students must check their CSI e-mail accounts regularly to avoid missing important messages and deadlines. At the beginning of each semester free training sessions are offered to students who need help in using their accounts.
**Tentative Schedule for Coverage**  (Subject to Change)

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Homework Assignment Format
Mathematics 143

1. Use loose leaf paper.
2. Write on the front side of the page only.
3. Do all homework in pencil. Work done in pen will not be graded.
4. Show all work necessary to complete the problem. A correct answer with insufficient, no, or incorrect work will receive no credit.
5. Circle your answer when possible.
6. Write legibly. If I cannot decipher your work, it will Not be graded.
7. No late homework will be accepted.

To submit:
Fold entire document in half, lengthwise.

On the outside of the document, write
- Your name
- Course title
- Chapter and Section number of assignment

Example
Jane Doe
Math 143-C01
Section 7.3