Math 143: COLLEGE ALGEBRA
MWF 12:00 – 12:50 p.m.
3 Credits – Spring 2008

Instructor: Cindy Dickson, M.S.  Office: Shields 207A
Phone: 732-6544  Office Hrs: MWF 9:00 a.m. – 9:50 a.m.,
1-800-680-0274 x6544  Th 1:00 p.m. – 1:50 p.m. or by appointment
e-mail: cdickson@csi.edu  Math Lab Tutoring SH 207: Tuesday 3:00 – 3:50 p.m.

1. 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.

2. Prerequisite: MATH 108 grade of “C” or better, or Math Placement Test

3. Required Textbook and Supplies:
   b. Calculator: A graphing calculator is Strongly Suggested. The TI-83/84 or TI-83/84 Plus are the only calculators that will be allowed in the Testing Center. The classroom lectures will be geared to the use of the TI-83/TI-83 Plus.
   c. Supplies: 3-ring binder with dividers, paper, pencil, stapler.

4. Course Objectives:
Students who complete Math 143, College Algebra, will have a strong understanding of the topics listed in the course description and in the detailed list of course outcomes. This course will prepare students for Math 144, Math 157, Math 160, Math 253 and other courses which have a College Algebra pre-requisite.

5. Outcomes Assessment:
   Students: Daily assignments, chapter tests, and a comprehensive final exam will be used to assess how well students achieve the expected course outcomes. Exams as well as student evaluations will be analyzed to help improve curriculum and instruction for the course. Also, regular informal feedback will be solicited in an effort to improve the class as it progresses.

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

6. Course Evaluations: Students will be asked to fill out an online course evaluation near the end of the semester. Students have responsibility for completing this as part of their course work before they take the final exam. I take your evaluations seriously as I try to improve my teaching and the course overall. The website to access evaluations is: http://evaluation.csi.edu.

7. Policies and Procedures:
   a. Attendance: Attendance is essential to student success. If you miss a class, you are responsible for material discussed in class as well as any additional assignments and announcements made during class time. Starting this semester, your instructor cannot drop you from the course. If you stop attending the class, it is your responsibility to withdraw yourself from the course either online or by filling out a drop slip in the matrix. If you stop attending the course and do not withdraw, you will receive an F in the course.
b. Homework: Assignments will be given daily and will be collected at the next class meeting. Be sure to read each section before attempting the homework. Late homework will not be accepted under any circumstances. It will be given no credit if turned in after I have collected homework during the first part of class. If you have a planned absence, you may turn homework in early. Your lowest 5 homework scores will be dropped.

c. Exams: Five exams and a comprehensive final will be given. Exams will be taken in the Campus Testing Center (GRM 230). The final will be taken in the classroom with the instructor present. Make-up exams will NOT BE GRANTED unless you have a medical excuse validated by a doctor or the consent of the instructor at least one week prior to the exam. Make-up final exams will NOT BE GRANTED UNDER ANY CIRCUMSTANCES. Your lowest test score can be dropped and replaced by your final exam score if it is to your benefit.

d. Academic Integrity: If a student is caught cheating on an exam or copying another student’s assignment, a student will be subject to a failing grade (0 credit).

g. Classroom Behavior: You as a student are expected to maintain good conduct during 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 in acceptable conduct will 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 that I can conference with any students who are involved. Information regarding student Behavior Policies can be found on p. 16 and 17 of the C.S.I. catalog. See also the Code of Conduct in the Student Handbook.

h. Other Policies: All cell phones and pagers must be turned off or to a vibrate mode during class. No children are allowed in class.

8. Grading Practices:

a. Testing Center: All chapter exams will be taken in the Testing Center. It is located in GRM 230 and is open from 8:00 am – 9:30 p.m. Mon.-Thurs. and from 8:00 a.m. – 5:00 p.m. on Fridays. A picture ID is required to take any test in the Testing Center. You cannot start a test in the Testing Center if closing time is less than one hour away.

b. Evaluation:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Exams</td>
<td>500</td>
<td>90-100%=A</td>
</tr>
<tr>
<td>Homework</td>
<td>100</td>
<td>80-89%=B</td>
</tr>
<tr>
<td>Final Exam</td>
<td>150</td>
<td>70-79%=C</td>
</tr>
<tr>
<td>Total Possible</td>
<td>750</td>
<td>60-69%=D</td>
</tr>
</tbody>
</table>

Below 60% = F

9. 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 at their first opportunity after registration for a class. Student Disability Services is located on the second floor of the Taylor Building on the Twin Falls Campus. Contact Candida Mumford, director, at 208.732.6260 (voice) or 208.734.9299 (TTY), or e-mail cmumford@csi.edu.

10. Student e-mail: E-mail is the primary source of written communication with all CSI students. Students automatically get a CSI e-mail account when they register for courses. Messages from instructors and various offices will be sent to the students’ CSI accounts (not their personal e-mail). It is the student’s responsibility to check their CSI e-mail accounts regularly.

11. Do not put off getting help! If you wait until you are totally lost, you might find it impossible to get back on track.
12. **Keys to success in this class:** Show up every day and pay attention; ask questions; practice by doing assignments and forming study groups; don’t quit!

13. **Where to get help:**
   - Ask questions in class or stop by to see me – I’m here to help you!
   - One-on-one instructor and peer tutoring are available at:
     - Math Lab (SHL 207)
     - Instruction Lab (GRM 202)
   - Instructional DVDs come with new textbook purchases and are also available for check out at Library (GRM 131) and Outreach Center
   - Study groups are a great resource and I encourage you to form them to do assignments, study for tests, etc.
   - Student Solutions Manuals for our textbook are packaged with new textbooks. These are not required, but some students find them useful.

14. **Tentative topical outline:**

<table>
<thead>
<tr>
<th>Date</th>
<th>Section</th>
<th>Date</th>
<th>Section</th>
<th>Date</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 14</td>
<td>Syllabus, P1-P7</td>
<td>Feb. 20</td>
<td>2.5 Transformations of Functions</td>
<td>Apr. 2</td>
<td>5.4 Exp &amp; Log Equations</td>
</tr>
<tr>
<td>Jan. 16</td>
<td>1.1 Graphs of Equations</td>
<td>Feb. 22</td>
<td>2.6 Combinations &amp; Composite Functions</td>
<td>Apr. 4</td>
<td>5.5 Exp &amp; Log Models</td>
</tr>
<tr>
<td>Jan. 18</td>
<td>1.2 Linear Equations</td>
<td>Feb. 25</td>
<td>2.7 Inverse Functions</td>
<td>Apr. 7</td>
<td>Chapter 5 Review</td>
</tr>
<tr>
<td>Jan. 21</td>
<td>Martin Luther King Jr. Day - no class</td>
<td>Feb. 27</td>
<td>Review</td>
<td>Apr. 9</td>
<td>4.3 Conics</td>
</tr>
<tr>
<td>Jan. 23</td>
<td>1.3 Modeling with Linear Equations</td>
<td>Feb. 29</td>
<td>3.1 Quadratic Functions</td>
<td>Apr. 11</td>
<td>4.3 Conics, 4.4 Translation of Conics</td>
</tr>
<tr>
<td>Jan. 25</td>
<td>1.4 Quadratic Equations</td>
<td>Mar. 3</td>
<td>3.2 Polynomial Functions</td>
<td>Apr. 14</td>
<td>4.4 Translation of Conics</td>
</tr>
<tr>
<td>Jan. 28</td>
<td>1.5 Complex Numbers</td>
<td>Mar. 5</td>
<td>3.3 Dividing Polynomials</td>
<td>Apr. 16</td>
<td>6.1 Linear &amp; Nonlinear Systems of Equations</td>
</tr>
<tr>
<td>Jan. 30</td>
<td>1.6 Other Types of Equations</td>
<td>Mar. 7</td>
<td>3.4 Zeros of Polynomials Functions</td>
<td>Apr. 18</td>
<td>6.2 Two Variable Linear Systems</td>
</tr>
<tr>
<td>Feb. 1</td>
<td>1.7 Linear Inequalities</td>
<td>Mar. 10</td>
<td>3.5 Mathematical Modeling and Variation</td>
<td>Apr. 21</td>
<td>6.3 Multivariable Linear Systems</td>
</tr>
<tr>
<td>Feb. 4</td>
<td>1.8 Other Types of Inequalities</td>
<td>Mar. 12</td>
<td>4.1 Rational Functions</td>
<td>Apr. 23</td>
<td>6.5 Systems of Inequalities</td>
</tr>
<tr>
<td>Feb. 6</td>
<td>Review</td>
<td>Mar. 14</td>
<td>4.2 Graphs of Rational Functions</td>
<td>Apr. 25</td>
<td>Chapter 4 &amp; 6 Review</td>
</tr>
<tr>
<td>Feb. 8</td>
<td>2.1 Linear Equations in Two Variables</td>
<td>Mar. 17-21</td>
<td>Spring Break</td>
<td>Apr. 28</td>
<td>8.5 Binomial Theorem</td>
</tr>
<tr>
<td>Feb. 11</td>
<td>2.2 Functions</td>
<td>Mar. 24</td>
<td>Chapter 3 &amp; 4 Review</td>
<td>Apr. 30</td>
<td>Review</td>
</tr>
<tr>
<td>Feb. 13</td>
<td>2.3 Analyzing Graphs of Functions</td>
<td>Mar. 26</td>
<td>5.1 Exponential Functions</td>
<td>May 2</td>
<td>Review</td>
</tr>
<tr>
<td>Feb. 15</td>
<td>2.4 A Library of Parent Functions</td>
<td>Mar. 28</td>
<td>5.2 Logarithmic Functions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feb. 18</td>
<td>President’s Day – no class</td>
<td>Mar. 31</td>
<td>5.3 Properties of Logarithms</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
15. Exam Dates:
Exam 1: Ch.1 (sections 1-8) open: Feb. 6-8
Exam 2: Ch.2 (sections 1-7) open: Feb. 27-29
Exam 3: Ch. 3 (section 1-5) & Ch. 4 (sections 1-2) open: Mar. 24-26
Exam 4: Ch. 5 (sections 1-5) open: Apr. 7-9
Exam 6: Ch. 4 (sections 3-4) & Ch. 6 (sections 1-6) open: Apr. 25, 28, 29

FINAL EXAM:
12 p.m. class: Tuesday, May 6, from 10 a.m. – 12 p.m. in the classroom

16. Course Outcomes:
Students will demonstrate a working knowledge of the following processes and concepts:
   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, by taking square roots, by 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 equation, model data, 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, model data)
   i. **Graph and analyze common functions** (quadratic, cubic, square root, absolute value, reciprocal, piece-wise, greatest integer)
   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, model data, 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, 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, and asymptotes as applicable, model data and solve application problems)
   p. **Exponential functions and equations** (evaluate, graph, transform, solve equations, model data and solve application problems)
   q. **Logarithmic functions and equations** (log notation, properties of logs, evaluate, graph, solve log equations, change bases, model data and solve application problems)
   r. **Systems of equations** (linear equations in two variables, linear equations in three variables, nonlinear equations in two variables, application problems)
   s. **Systems of inequalities** (linear, nonlinear, linear programming)
   t. **Binomial theorem** (expand binomial raised to a power, find one specified term)
Homework Assignment Format
Math 143
Spring 2008

1. Use loose leaf paper
2. On the top right hand corner of the first page, include the following:
   - Name
   - Course title
   - Date
   - Section
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 little, no, or incorrect work will receive NO credit.
5. Circle your final answer when possible.
6. Write legibly. If I cannot decipher your work, it will not be graded.
7. Do your work horizontally (going down) instead of vertically (going across).
8. Correct all odd number problems using the back of the book. You may rework the problem until you get the correct answer, if possible. Write a “C” for correct by the problem number if it is correct, or a check mark √ if it is incorrect.
9. Staple all pages for each section’s homework assignment together.
10. No late homework will be accepted.

How to Access Outlines for Notes & Chapter Exam Answer Keys
1. Go to www.csi.edu
2. Click on “Directory” – one of the tabs listed across the top.
3. Find my name alphabetically by clicking on D and then scrolling to find “Cindy Dickson”
4. Click to “View Personal Webpage”
5. Click on our class – Math 143 12 p.m.
6. Notes for each section will be posted there, and answer keys for chapter exams will be posted after each exam. Click on any that you want to open and print from there.
Testing Center Hours

Blaine County Center
  Monday, Tuesday, Friday    8 a.m. – 4:30 p.m.
  Wednesday, Thursday       8 a.m. – 7 p.m.

Burley Center
  Monday & Tuesday          11 am – 8:30 pm
  Wednesday & Thursday      8 am – 8:30 pm
  Friday                    8 am – 5:00 pm

Northside Center
  Monday – Friday           8 a.m. – 5 p.m.