COURSE SYLLABUS
MATH 108, Intermediate Algebra
MTWF (4 credits)

Semester/Year: Fall 2008
Instructor: Estella Elliott
Office: Shields 207B
Office Hours: MTWF, 1-2 pm;
(Tuesday in Math Lab, SHLDS 207)
Email: eelliott@csi.edu
Office Phone: 732-6823

Course Description: This course is designed to prepare the student for college algebra. It covers first-degree equations and inequalities, linear functions, systems of linear equations, polynomials, factorization, rational expressions, negative and rational exponents, radicals, quadratic equations, graphing functions, logarithms, and application problems.

Prerequisite: MATH 025/010 with C grade or higher, or Math Placement Test (COMPASS Algebra score of 41 or higher).

Textbook and Supplies:
- Scientific calculator (Graphing calculators are acceptable, but not required.)

Course Objective: Students who complete Math 108, Intermediate 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 130, Math 143, Math 147 and other courses which have an Intermediate Algebra prerequisite.

Outcomes Assessment: Daily assignments, exams, 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.

The course content includes:
a. Rational numbers (addition, subtraction, multiplication, and division)
b. Variable expressions (simplify, translate, evaluate)
c. Operations on sets of numbers (union, intersection)
d. Set-builder notation and interval notation
e. First degree equations in one variable (solve, translate from application problems such as percent problems, mixture problems, business related problems, uniform motion problems, investment problems)
f. First degree inequalities (solve and graph simple, compound)
g. Linear functions (evaluate, graph, find slope)
h. Find length and midpoint of a segment
i. Write the equations for lines (including parallel lines and perpendicular lines)
j. Solve systems of linear equations (use graphs, substitution method, addition method)
k. Polynomials (add, subtract, multiply, divide using long division and synthetic division, evaluate, factor)
l. Solve polynomial equations by factoring
m. Simplify exponential expressions having integer and variable exponents  

n. Scientific notation  

o. Expressions with rational exponents (simplify, change to radical form)  

p. Radical expressions (simplify, add, subtract, multiply, divide)  

q. Complex numbers (simplify, add, subtract, multiply, divide)  
r. Solve equations containing radicals  

s. Functions (domain, range, graph, use vertical line test, add, subtract, multiply, divide, find inverse, do composition of functions)  

t. Rational expressions (find the domain, simplify, multiply, divide, add, subtract, simplify complex fractions)  

u. Solve rational equations (including application problems like work problems, uniform motion problems, proportions, variations, and literal equations)  

v. Solve quadratic equations (use factoring, completing the square, and quadratic formula)  

w. Solve equations that are quadratic in form  

x. Solve quadratic and rational inequalities  

y. Parabolas (find axis of symmetry, vertex, x-intercepts, graph)  

z. Exponential functions (evaluate, graph)  

aa. Logarithms (log notation, properties of logarithms, evaluate logs with and without a calculator, solve log equations, graph log functions using ordered pairs)  

These additional, optional topics may be covered by some instructors:  

a. Absolute value equations  

b. Absolute value inequalities  

c. Evaluate determinants (2 x 2 and 3 x 3)  

d. Solve a system of equations using Cramer’s Rule  

e. Solve a system of equations using Gaussian elimination with matrices  

f. Application problems with systems of equations  

g. Application problems with quadratic equations and functions  

h. Application problems with exponential equations and functions  

i. Application problems with logarithmic equations and functions  

As part of departmental analysis of outcomes in this course and its place in the Mathematics program, student completion of the prerequisite, 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.

**On-line 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](http://evaluation.csi.edu). Evaluations open up 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 in 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.
Policies and Procedures:

- **HOURS OF LECTURE:** Monday, Tuesday, Wednesday, and Friday from 10-10:50 am (C16), 11-11:50 am (C05), or 2-2:50 pm (C17).

- **ATTENDANCE:** All students are responsible for the material presented in class whether they are there or not. Dropping or withdrawing from the course is the student’s responsibility. During the first two weeks of the term, a student may drop a course or completely withdraw without its being recorded on the student’s official transcript. After the first two weeks a “W” will be recorded in any course the student drops. No course may be dropped or withdrawn from after 75% of the course or twelve weeks of the term has elapsed, whichever is earlier. Although students will not be graded on attendance, the instructor may or may not give extra credit points for attendance.

- **EXAMS:** Regular exams will be given at the Campus Testing Center. The Twin Falls Center is located in the Meyerhoeffer Building, Room 230 and is open Monday through Thursday, 8:00 am – 9:30 pm; and Friday, 8:00 am – 5:00 pm. You must have a CSI ID and arrive at least one hour before closing times. There will be no make-up exams given! If you have an unforeseeable and unavoidable emergency, I will replace that exam score with the final exam score, weighted to 100 points. Only the first exam you miss under extenuating circumstances will be replaced – any others will receive a score of 0. The comprehensive, common final exam will be given in the classroom with the instructor present.

- **HOMEWORK:** Homework will be assigned during most class sessions and will be due at the beginning of the next class session. Late homework will not be accepted under any circumstances! At the end of the semester, the 10 lowest homework scores will be dropped and the remaining scores will be averaged to give your overall homework grade. You must show your work to receive full credit!

- **GRADING:**
  
<table>
<thead>
<tr>
<th>Points</th>
<th>Grade</th>
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<tbody>
<tr>
<td>810-900</td>
<td>A</td>
</tr>
<tr>
<td>720-809</td>
<td>B</td>
</tr>
<tr>
<td>630-719</td>
<td>C</td>
</tr>
<tr>
<td>540-629</td>
<td>D</td>
</tr>
<tr>
<td>0-539</td>
<td>F</td>
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- **CHEATING:** Cheating is unacceptable. Students caught cheating will be given a 0% for that assignment or exam and may face further disciplinary action.

- **COMMUNICATION:** Because email is the primary source of written communication with students, all registered CSI students get a college email account. Student email addresses have the following format: **username@students.csi.edu.** Students can check
their CSI email online at http://students.csi.edu. Instructors and various offices such as
Admission and Records, Advising, Financial Aid, Scholarships, etc. send messages to
these accounts. Students must check their CSI email 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.

- COMPUTER LITERACY: Please refer to the 2007-2008 College of Southern Idaho
  Catalog under Computer Literacy in the section, “DEGREE AND CERTIFICATE
  REQUIREMENTS”, on page 25. This can also be found online at www.csi.edu.

- STUDENT BEHAVIOUR: Refer to pages 31-33 in the CSI catalog.

- LEARNING ASSISTANCE RESOURCES:
  a. Instructor: If you need extra explanation, stop by my office during office hours or
     set up an appointment for help at another time.
  b. Student Solutions Manual: A Student Solutions Manual comes packaged with
     every new textbook. These are not required, but some students find them useful.
  c. Free Peer Tutoring: Free tutoring is available at the Math Lab (Shields 207) and
     the Academic Development Center Instruction Lab (GRM 202).
  d. DVDs and CDs: DVDs and CDs of the subject matter are available in several
     locations.
     i. CSI Library – Front Desk (overnight checkout or view at the Library)
     ii. All CSI Outreach Centers (overnight checkout)

- STUDENTS WITH 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, Candida Mumford 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. Call 208-732-6250
  (voice) or 208-734-9929 (TTY), or email Candida Mumford, cmumford@csi.edu.

**Course Outline**
(Tentative and subject to change at any time)

<table>
<thead>
<tr>
<th>Date</th>
<th>Section</th>
<th>Topic</th>
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<tbody>
<tr>
<td>January 20-23</td>
<td>1.1 – 1.5</td>
<td>Fundamentals of Algebra</td>
</tr>
<tr>
<td>January 26-30</td>
<td>2.1 – 2.4</td>
<td>Linear Equations and Inequalities</td>
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<tr>
<td>February 2-6</td>
<td>Review, 3.1 – 3.2</td>
<td>Review Chapters 1 and 2, Graphs</td>
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<td></td>
<td>Feb 4, 5, 6 – Take Exam 1 in Testing Center</td>
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<tr>
<td>February 9-13</td>
<td>3.3, 3.4, 3.6</td>
<td>Graphs and Functions</td>
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<td>February 17-20</td>
<td>4.1 – 4.3</td>
<td>Systems of Equations</td>
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<tr>
<td>February 23-27</td>
<td>Review, 5.1 – 5.2</td>
<td>Review Chapters 3 and 4, Polynomials</td>
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Feb 25, 26, 27 – Take Exam 2 in Testing Center

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<th>Date</th>
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<tr>
<td>March 2-6</td>
<td>5.3 – 5.6 Polynomials and Factoring</td>
</tr>
<tr>
<td>March 9-13</td>
<td>Review, 6.1 – 6.2 Review Chapter 5, Rational Expressions</td>
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March 11, 12, 13 – Take Exam 3 in Testing Center

| March 16-20   | Spring Break – No class!      |
| March 23-27   | 6.3 – 6.6 Rational Expressions, Equations, and Functions |
| March 30-31,  | 6.7, Review, 7.1-7.2 Rational Expressions, Equations, and Functions, Review Chapter 6, Radicals |
| April 1-3     |                               |

April 1, 2, 3 – Take Exam 4 in Testing Center

| April 6-10    | 7.3 – 7.6 Radicals and Complex Numbers |
| April 13-17   | Review, 8.1 – 8.2 Review Chapter 7, Quadratic Equations |

April 15, 16, 17 – Take Exam 5 in Testing Center

| April 20-24   | 8.3, 8.4, 8.6, Review Quadratic Equations, Functions, and Inequalites, Review Chapter 8 |
| April 27-29,  | 9.1 – 9.4 Exponential and Logarithmic Functions |
| May 1         |                                             |

April 29, 30, May 1 – Take Exam 6 in Testing Center

| May 4-8       | 9.5, Review Exponential and Logarithmic Functions, Review for Final Exam |

Final Exam – Monday, May 11, 10:00 am to 11:50 am (C16)
Tuesday, May 12, 12:00 pm to 1:50 pm (C05)
Monday, May 11, 2:00 pm to 3:50 pm (C17)

Homework Assignment Format
Math 108
Spring 2009

1. Use loose leaf paper.
2. Write name, course title (Math 108), and homework section in top right corner of first page.
3. Circle or highlight final answer when possible.
4. Show the work necessary to complete each problem. If little, no, or incorrect work is shown, you will not receive credit for that problem even if you have the correct answer.
5. Write legibly. If I cannot decipher your work, you will not receive credit.
6. Staple pages together in top left corner.
7. Fold assignment lengthwise with first page on inside of fold.
8. Write name, course title, and homework section on outside of folded assignment.