Math in Modern Society - Math 123     3 credits    Fall 2007
Burley High School #212, Weds 4:30-6:50
Instructor: Roger Caresia phone: 878-1960
e-mail: carroger@sd151.k12.id.us, Work phone: 878-6606

1. **Course Description:** The course provides an opportunity to acquire an appreciation of the nature of mathematics and its relation to other aspects of our culture. The course is rigorous but not rigid. Core topics include critical thinking, problem solving, number systems, number theory, ratios, proportions, quadratic equations, functions, graphs, consumer math, financial management, metric measurement, set theory, and selected topics from geometry, probability and statistics.

2. **Pre-requisites:** MATH 010 with a "C" or higher or COMPASS Algebra (not Pre-Algebra) score of 46 or higher.


4. **Course Objectives:**
The student will demonstrate a working knowledge of the material covered in Chapters 1-13 of the textbook. A detailed list of course objectives is attached to this syllabus.

5. **Policies and procedures:**
Exam Policy: Plan on attending class when exams are scheduled. If circumstances force you to miss a scheduled exam you must let me know before class. If you miss an exam without prior notification you will not be allowed to make it up. You may reach me at either number above or leave a message on my machine at home. Assignments: Practice is a necessary part of understanding mathematics. Homework assignments will be given each week and due the following week. If the assignment is late it you will lose 10% per week. If you have questions call me or email. Cheating: See 2003-2004 CSI catalog, page 16 under “Honesty”
**Please turn off cell phones, pagers etc in class please!!**

6. **Outcomes Assessment:**
Students will be asked to complete a student evaluation at the end of the semester. Weekly assignments, tests, and a comprehensive final exam will be used to assess how well students achieve the course objectives. 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. 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.

7. **Grading Procedure:** 3 exams (65%) Homework (10%) Final Exam (25%) Letter grade will follow the usual 90, 80, 70, 60% scale.

8. **Aids available to you for this course:** Call or email me if you are having trouble in the course. Tutors are available in the Burley Center, check flyers for times and dates. Videos are available in the office for checkout.

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. CSI
Student Disability Services is located on the second floor of the Taylor Building on the Twin Falls Campus, 208-732-6250 (voice) or 734-9929 (TTY) or aflannery@csi.edu

10. **On-line course evaluation statement:**
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 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!

11. “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 such as Admission and Records, Advising, Financial Aid, Scholarships, etc. will be sent to the students’ CSI accounts (NOT their personal e-mail accounts). **It is the student’s responsibility to check their CSI e-mail accounts regularly.** Failing to do so will result in missing important messages and deadlines. Students can check their CSI e-mail online at **http://students.csi.edu**. Student e-mail addresses have the following format: username@students.csi.edu. At the beginning of each semester free training sessions will be offered to students who need help using their CSI e-mail accounts.”

---

**Math 123 – Math in Modern Society**

**Unit I – Number Theory**

*Aug 29- Chapter 1- Problem Solving and Critical Thinking*

Sect 1.1 Inductive and Deductive Reasoning
p. 9 #1, 4, 7, 10, 14, 28, 36, 41, 50

Sect 1.3 Problem Solving
p. 34 #4, 8, 10, 13, 14, 20, 24, 40, 49, 6

**Chapter 4- Number Representation and Calculation**

Sect 4.1 Our Hindu-Arabic System and Early Positional Systems
p. 201 #6, 14, 16, 28, 36, 48

Sect 4.2 Number Bases in Positional Systems
p. 208 #4, 12, 24, 32, 34, 37, 42

**Sept 5- Chapter 5- Number Theory and the Real Number System**

Sect 5.1 Number Theory: Prime and Composite Numbers
p. 235 #32, 35, 48, 60, 68, 72, 74

Sect 5.2 The Integers: Order of Operations
p. 247 #38, 62, 64, 84, 85, 88, 92, 95, 98, 114

Sect 5.3 The Rational Numbers
p. 260 #27, 38, 50, 79, 84, 88, 90, 94

Sect 5.4 The Irrational Numbers
p. 269 #19, 25, 33, 45, 50, 51, 58, 65

Sect 5.5 Real Numbers and Their Properties
p. 276 #1, 3, 10, 13, 26, 30, 32, 34

Sect 5.6 Exponents and Scientific Notation
p. 285 #2, 7, 11, 15, 28, 32, 58, 67, 73, 105

**Sept 12- Chapter 6 Algebra: Equations and Inequalities**

Sect 6.4 Ratio, Proportion, and Variation
p. 338 #3, 8, 10, 14, 23, 24, 30, 35

Sect 6.6 Solving Quadratic Equations
p. 360 #8, 17, 20, 25, 28, 30, 43, 46, 47, 53, 58, 64

**Chapter 7 Algebra: Equations and Inequalities**

Sect. 7.1 Graphing and Functions
p. 376 #6, 12, 24, 28, 35, 38, 49, 51, 55, 57, 67-70

Sect. 7.2 Linear Functions and Their Graphs
**Sept 19-** Sect. 7.3 Systems of Linear Equations  
Section 7.6 Approximating Reality with Nonlinear Models  
p. 388 #18, 26, 34, 42, 45, 59

**Oct 24-** Sect 10.4 Area and Circumference  
Sect 10.6 Right Triangle Trigonometry  
p. 579 #2, 8, 10, 13, 18, 24, 25, 28

**Oct 31-** Unit II Test

**Unit III – Probability and Statistics**  
**Nov 7-** Counting Methods and Probability Theory  
Sect 11.1 The Fundamental Counting Principle  
p. 612 #1, 4, 8, 13, 15, 17, 22

**Nov 14 -** Chapter 12 Mathematical Systems  
Sect 12.1 Sampling, Frequency Distributions, and Graphs  
p. 689 #1, 3, 10-18, 24, 27

**Nov 21 No Class Thanksgiving**

**Nov 28-** No Class

**Dec 5-** Sect 12.4 The Normal Distribution  
Sect 12.5 Scatter Plots, Correlation, and Regression Lines  
p. 738 1, 6, 9-16, 19-24 all

**Dec 12- Review Day**

**Dec 13-14 -** Unit Test

**Dec 17-20 Final Test**