Mathematics 123-C09W  
Math in Modern Society  
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 survey 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, and it applies mathematics to real-world problems.

Pre-requisites:  
Math 025/010 with a grade of "C" or better, or Math Placement Test. Current placement test score: COMPASS Algebra score (not Pre-Algebra) of 41 or higher. (Pre-requisites will be enforced.)

Course Objective:  
Math 123, Math in Modern society, is the capstone course in mathematics for those choosing not to continue their formal study of mathematics. This course is specifically geared toward helping diverse students with different career objectives. Successful completion of Math 123 will provide students with solid conceptual understanding and problem solving abilities necessary for practical application of mathematics found in everyday life.

Required Textbooks and Supplies:  
  o ISBN - 10:0-13-134868-X or  
- MyMathLab Student Access Card  
- A scientific calculator will be required for this class. A scientific calculator is determined by its ability to handle logarithms ($ln$, $log$), exponential functions, ($y^x$, $exp$) and statistics. A graphing calculator is not needed for this course, however, you may use one. Only TI-83/84 or TI-83/84 Plus calculators will be allowed. Your Testing Center will clear the memory of these pre-and post-test. If you choose to use a Testing Center calculator, the type and availability cannot be guaranteed at the time of the test.  
- Pencil  
- Paper  
- Graphing paper - free graphing paper is available at  
  [http://mathbits.net/MathBits/StudentResources/GraphPaper/GraphPaper.htm](http://mathbits.net/MathBits/StudentResources/GraphPaper/GraphPaper.htm)
Hardware/Software Requirements:
- **Operating System**
  - Windows 2000 or XP
  - Macintosh OS 9.2, 10.1, 10.2, or 10.3
- **Internet Connection**
  - Minimum of 28.8 kbps (kilobits per second)
- **Browser**
  - Microsoft Internet Explorer, Version 6.0
  - Netscape Navigator, Version 7.0
  - Firefox 1.0.7
  - Safari 1.2 (with Macintosh operating systems only)

What To Do First:
1. Follow the instructions attached as a Word document to the introductory e-mail sent on January 13, 2010. This is your first assignment.
2. In an e-mail, send me your suggestion for a proctor/proctor location for taking exams. (See "Announcements" in CourseCompass.) This is part of your second assignment.
3. If you have problems, e-mail me, cmeade@csi.edu, or call me at 732.6809.

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 daily 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.

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/Online Participation:** Consistent on-line participation is mandatory to meet Federal Financial Aid regulations. It is also required for the successful completion of the course. Your reply to the initial e-mail from me will count as the completion of your first assignment and as your attendance for the first day of class. You cannot proceed with any other assignments in the course until you reply to that e-mail. Plan to be on-line every day. Announcements will be given on a regular basis. These will pertain to tests, quizzes, homework, due dates, or other grade functions.

- **Homework:**
  - **Online:** Homework will be assigned, completed and corrected on-line through CourseCompass. A complete list of assignments and the accompanying due dates will also be posted through CourseCompass. (The best 30 scores from the possible 35 assignments will be averaged. This average will count as one test score.)
  - **Written-Mail-in (electronically):** One problem from the *Work in Progress* and one problem from the *Critical Thinking Exercises* will be assigned from each assigned section in the text. These are required to be submitted to me.
electronically by fax at 1.208.736.4786. I will score these personally, and they will be returned to you electronically as a PDF file. (The best 30 scores from the possible 35 assignments will be averaged. This average will count as one test score.)

No late homework will be accepted, and no make-up homework will be assigned.

Exams: Six 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.

If you live near CSI or one of CSI's outreach centers, you can take the exams there. Otherwise, we'll need to arrange to have the exams proctored at some other location. It is CSI policy that students who cannot take exams at CSI or one of its outreach centers must pay any proctoring fees. Please contact me early on if you can't take the exam at CSI or an outreach center. I reserve the right to change testing accommodations if I feel it is necessary.

If you are taking your exams at the CSI Testing Center or at one of its outreach centers, you must have a photo ID and arrive at least one hour before their closing times.

Final Exam: The final exam will be comprehensive, and it will be taken at your regular proctoring site. This exam will count as one test 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.

Proctor: It is the student's responsibility to identify a proctor. Please initiate this process as soon as possible. An approved list of proctors may be found at [http://www.csi.edu/ip/adc/testing/protocinfo.htm](http://www.csi.edu/ip/adc/testing/protocinfo.htm)

Your second assignment will be to identify and receive approval from me for a proctoring site. It is your responsibility to contact this proctoring site and receive their consent to proctor. Remember, you are required to pay any proctoring fees.

Note: All of the required assignments and exams are to be taken in a sequential order. Students will be accountable for all on-line activities, their timely implementation, and consequences.

Grading: Your percentage will be calculated as follows: Your Percentage Total Points = %

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

Coverage: Chapter 1: Sections 1.1, 1.3, Chapter 4: Sections 4.1, 4.2, & 4.4, Chapter 5: Sections 5.1-5.6, Chapter 6: Sections 6.4 & 6.6, Chapter 7: Sections 7.1-7.3 & 7.6, Chapter 8: Sections 8.1-8.3, 8.5 & 8.6, Chapter 9: Section 9.2 & 9.3, Chapter 10: Section 10.1, 10.2 & 10.4, Chapter 11: Sections 11.1-11.4, Chapter 12: Sections 12.1-12.3
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.

General Classroom Behavior: See pages 31-33 of the current CSI catalogue.

Aids for the Course:
- Instructor -
  - I have office hours scheduled on a daily basis. Feel free to call me during those hours. However, if you need help outside of my office hours, please call my office number any time. If I am in my office, I will take your call and answer your questions. If I am not available, please leave your name, telephone number and the course that you are taking. I will return your call as soon as possible. I often check my voice mail from home, so I may be able to help you outside of the regular work day.
  - E-mail me any time of day with your questions or concerns. I check my e-mail often, and I will try to address your issues as soon as I possibly can.
- Text book. Read your text book! You paid a significant amount of money for this essential learning tool. Maximize your investment.
- Study Groups - Anyone can form a study group that will fit their schedules. These groups are an excellent way to study, learn, and increase your content knowledge.
- Instructional videotapes and CD's - Instructional CD's and videotapes are available in several locations: CSI Library, in "new" textbooks and at all CSI Outreach Centers.
- Student Solutions Manual - A Student Solution Manual comes packaged with the new textbook. These are not required, but some students find them very useful. They are also on reserve at the CSI Library and Math Lab.
- Math Lab - There are two math lab locations on campus: Shields 207 and the Instruction Lab provided through the Academic Development Center. This is a free service. Their hours may vary, so you will want to contact Paul Morgan at 732.6821 or Kat Powell at 732.6685 to find out when these services are available.
- CourseCompass - As you work on each individual problem in each homework set, CourseCompass provides excellent instructions as to how to solve each problems.

Topical Outline:
- Critical Thinking - Inductive and Deductive Reasoning
- Problem Solving - Understand the problem, devise a plan, carry out the plan, check the answer
- Number Systems - our Hindu-Arabic system, early positional systems, and converting to number bases other than ten
- Number Theory - prime numbers, composite numbers, divisibility, greatest common divisor, least common multiple
- Operations with integers - order of operations, using number lines, absolute value, adding, subtracting, multiplying, dividing, using inequality symbols
- Operations with rational numbers - reducing fractions, changing fractions to decimals, changing decimals to fractions, adding and subtracting fractions
- Operations with irrational numbers - simplify, multiply, add, subtract, and rationalize expressions with square roots
- Expressions with exponents - use positive and negative exponents, write and use scientific notation
i) Real numbers - classify, identify properties
j) Ratios, proportions, direct variations and inverse variations - identify, solve
k) Quadratic equations - solve by factoring and using quadratic formula
l) Graphs - of ordered pairs and equations
m) Functions - evaluate, graph, use vertical line test, analyze the graph of a function to gather information
n) Linear functions - find intercepts, calculate slope, graph, interpret slope and intercepts in applied problems
o) Quadratic functions - graph, find vertex and intercepts, solve application problems
p) Exponential functions - graph, solve application problems
q) Systems of linear equations - solve systems having two variables
r) Consumer mathematics and financial management - percents, simple and compound interest, installment buying, mortgages and the cost of home ownership, investing in stocks, bonds and mutual funds
s) Measurement in metrics - length, area, volume, weight, temperature
t) Early numeration systems - Egyptian, Roman, Chinese, Greek
u) Geometry - points, lines, planes, angles, triangles, area and circumference
v) Probability
w) Statistics - sampling, frequency distributions, graphs, measures of central tendency, measures of dispersion

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.
It is the student’s responsibility to drop this course.

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.

A student desiring to drop a course during the first two weeks of the term may do so on-line. In order to drop or completely withdraw after the first two weeks, the student must complete and submit a drop or complete withdrawal form to the Admissions and Records Office.

Note: No course may be dropped or withdrawn from after 75% of the course or twelve weeks of the Term has elapsed, whichever is earlier.

Homework Assignment Format for Assigned Problems in the Work in Progress Critical Thinking Exercises

1. Write on the front side of the page only.
2. Show all work necessary to complete the problem. A correct answer with insufficient, no, or incorrect work will receive no credit.
3. Circle your answer when possible.
4. Write legibly. If I cannot decipher your work, it will NOT be graded.
5. No late homework will be accepted.

To submit
Send by fax to: 1.208.736.4786
- On the Cover Page write:
  - To: Connie Meade
  - Math 123

On the first page of your assignment, write
- Your name
- Course title and Section Number
- Chapter and Section Number
- Problem Number

Example
Jane Doe
Math 123-C09W
Section 2.3
#25

You are responsible for all charges related to faxing these documents.
### Schedule for Course Coverage

Note: This is a **tentative** schedule for Course coverage.

<table>
<thead>
<tr>
<th>Week of</th>
<th>Due Date for Homework</th>
<th>Assignments to Finish and/or Test to Take before Due Date</th>
</tr>
</thead>
</table>
| 18-Jan-10 | Sunday, January 24, 2010 11:50 PM | • Reply to initial e-mail  
• Make arrangements, in coordination with the instructor, for exam proctor location  
**Chapter 1**  
Sections 1.1 & 1.3 |
| 25-Jan-10 | Sunday, January 31, 2010 11:50 PM | **Chapter 4**  
Sections 4.1, 4.2, & 4.4 |
| 1-Feb-10 | Sunday, February 7, 2010 11:50 PM | Exam #1: Chapters 1 & 4  
**Chapter 5**  
Sections 5.1 & 5.2 |
| 8-Feb-10 | Sunday, February 14, 2010 11:50 PM | **Chapter 5**  
Sections 5.3-5.5 |
| 15-Feb-10 | Sunday, February 21, 2010 11:50 PM | **Chapter 5**  
Sections 5.6  
Exam #2: Chapter 5 |
| 22-Feb-10 | Sunday, February 28, 2010 11:50 PM | **Chapter 6**  
Sections 6.4 & 6.6  
**Chapter 7**  
Section 7.1 |
| 1-Mar-10 | Sunday, March 7, 2010 11:50 PM | **Chapter 7**  
Sections 7.2, 7.3 & 7.6 |
| 8-Mar-10 | Sunday, March 14, 2010 11:50 PM | Exam #3: Chapters 6 & 7  
**Chapter 8**  
Sections 8.1 & 8.2 |
| 22-Mar-10 | Sunday, March 28, 2010 11:50 PM | **Chapter 8**  
Sections 8.3, 8.5 & 8.6 |
| 29-Mar-10 | Sunday, April 4, 2010 11:50 PM | Exam #4: Chapter 8  
**Chapter 9**  
Sections 9.1 & 9.2 |
| 5-Apr-10 | Sunday, April 11, 2010 11:50 PM | **Chapter 9**  
Section 9.3 |
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Chapter</th>
<th>Sections</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-Apr-10</td>
<td>Sunday, April 18, 2010 11:50 PM</td>
<td>Chapter 10</td>
<td>Sections 10.1 &amp; 10.2</td>
</tr>
<tr>
<td>19-Apr-10</td>
<td>Sunday, April 25, 2010 11:50 PM</td>
<td>Chapter 10</td>
<td>Section 10.4</td>
</tr>
<tr>
<td>26-Apr-10</td>
<td>Sunday, May 2, 2010 11:50 PM</td>
<td>Chapter 11</td>
<td>Sections 11.1</td>
</tr>
<tr>
<td>3-May-10</td>
<td>Sunday, May 9, 2010 11:50 PM</td>
<td>Chapter 11</td>
<td>Sections 11.2-11.4</td>
</tr>
<tr>
<td>5/10/2010</td>
<td>Wednesday, May 12, 2010 9:00 PM</td>
<td>Final exam</td>
<td>Take the final exam in your regular testing place. The final will be comprehensive, i.e. it will cover all of the sections discussed during entire semester. Due to the slow nature of the mail, I may not receive your final exam in time to have it scored and have your grade for the course calculated before grades are due in the Records Office. If I don’t receive your final exam in time, I’ll calculate your grade with a zero for the final. Then, when I get your true grade calculated, I will revise your grade, if necessary.</td>
</tr>
</tbody>
</table>