CASPER COLLEGE COURSE SYLLABUS
MATH 1000-02 Problem Solving

Semester / Year: Fall 2015

Lecture Hours: 3	**Lab Hours**: 0	**Credit Hours:** 3
Class Time: 9-9:50am	**Days:** MWF	**Classroom:** PS 119

Instructor's Name: Teresa Stricklin

Instructor's Contact Information: Please feel free to stop by anytime during my posted office hours. If those office hours do not fit your schedule, please email me through Moodle mail to set up an individual appointment. You are also welcome to leave messages for me on my office phone

Office: PS 342   **Office Phone:** 307-268-2615

Email: tstricklin@caspercollege.edu

Office Hours: M & W 1:00-2:00
                    T & Th 9:30-10:30
                     F   11:00-1:00 (Math Learning Center PS 104)

Course Description: (Casper College Catalog)
MATH 1000 Problem Solving (3L, 3CR)
Focuses on the strategies of problem solving. Topics in the course are taken from financial mathematics, set theory, logic, probability, statistics and discrete mathematics and "just in time" algebra topics, such as exponents that are necessary to students in their success in this class and in their major.

Statement of Prerequisite (Must meet at least ONE of the following):
- MATH 900 with a C or better
- ACT Math score of 19 or better
- COMPASS exam score in the Pre-Algebra domain of 45-100 and Algebra domain of 0-39 or better (within the past year)
- Cumulative high school GPA of 3.7 or better

Goal: Students will be confident, flexible and able to solve authentic problems that apply to their lives. They will be able to understand and reason with mathematical ideas while fostering critical thinking.

Course Objectives/Outcomes: Students who successfully complete this course will:

1. Be able to apply simple financial formulas to solve problems involving compound interest, annuities, loans, etc.
2. Be able to use simple financial formulas to analyze problems that require financial decisions.
3. Be able to use the empirical, experimental, and subjective definitions of probability to do probability problems involving one event.
4. Be able to apply the laws of probability to analyze problems involving multiple events and expected value.
5. Be able to describe a data set using basic simple statistics and graphics.
6. Be able to construct an interval estimate from the normal distribution and understand it has a specified certainty of being correct.

Casper College General Outcome
1. Solve problems using critical thinking and creativity

*Casper College may collect samples of student work demonstrating achievement of the above outcomes. Any personally identifying information will be removed from student work.

Methodology:

This class is taught using ***Thinking Mathematically***, 6th Edition, Robert Blitzer, Pearson Publishing with **MyMathLab**. A variety of learning opportunities will be utilized and may include: classroom discussion, group work, projects, brief lecture, and unit exams. Students will be presented with various problem solving tasks at the beginning of each class. Class time will be devoted to student collaboration on each task. Students will then be asked to complete write-ups for each problem solving task independently outside of class. When questions arise, it is best to send your questions via Moodle and I will either answer them via Moodle or discuss them in the following class discussion.

Evaluative Criteria: Your grade in this course will be weighted using the following categories:
30% Summative Assessments (Exams)
Students will be required to complete 4 exams and 1 final exam. All 5 exams are weighted equally of 100 points each and will not be allowed to be retaken. Students will be allowed to use one 3 x 5 notecard for each exam which could include notes, formulas, or examples. These notecards will be turned in with the exam and must be unique to each student. Exams MUST be taken on the scheduled date unless arrangements have been made PRIOR to the exam date. Exams will be rescheduled only for documented absences cleared through student services.

30% Problem Solving Activities/Mini-Projects
Students will be assigned 1-2 problem solving activities or mini-projects per week. During class, students will collaborate on each activity. Each student will be required to submit his/her OWN solution and write up to the problem given. It is just as important to be able clearly justify the solution as it to arrive at a correct solution. Therefore, activities and mini-projects will be evaluated on accuracy <u>and</u> clarity.

20% Online Practice Problems
Students will be required to complete practice problems using MyMathLab regularly. Due dates for each assignment will be listed on MyMathLab. Assignments that are late will be docked 10% per day up until the day of the unit exam at which time zero credit will be awarded.

20% Class Engagement
In order to earn full credit in this portion of the grade, students must attend class and be fully engaged during that class time. Points for class engagement will be awarded per week and will be based upon student attendance and more importantly, interactions amongst other classmates, the instructor as a means of accomplishing given tasks.

Point Scale:
Points will be totaled and students will be assigned final letter grades based upon the percentage of the total points they earned in the course.
A = 100 – 90%   B = 89 – 80%   C = 79 – 70%   D = 69 – 60%   F ≤60%

Required Materials:
  ➢ MyMathLab (MML) Access is needed for homework assignments. MML comes with electronic version of textbook therefore the actual textbook is NOT required.
  ➢ <u>Graphing</u> calculator – these may be checked out from the MLC for the semester
  ➢ Internet access. There are several locations around campus where the internet can be accessed.
  ➢ Microsoft Excel (This is installed on all campus computers as well!)
  ➢ Grit!

Class Policies

Electronics:

As a general respect for others, your cell phone needs to be silenced and hidden during class time. Your full participation and engagement is required. Should your cell phone or other electronic device become a distraction, I will simply ask you to step out into the hallway and take care of the issue independently.

Attendance, Preparedness & Participation:

a. Daily attendance is crucial for your personal success. However, just being in class does not guarantee a passing grade. Students will be asked to participate in classroom discussions regularly which greatly enhances understanding. If you must miss a class due to college-activities or illness, it is your responsibility to keep up with the material as well as assignment due dates. Speak with a classmate regarding notes and/or stop by during my office hours if additional help is needed.

b. No makeup work will be allowed for assignments, group activities or quizzes completed during class without instructor permission. Permission to complete makeup work is at the discretion of the instructor and seeking permission for make-ups is the student's responsibility.

c. Class time will be primarily devoted to asking questions over previous material and learning new material. All homework assignments and some quizzes must be completed outside of the class time. Our goal as a team is for you to truly learn the material in order to access it and use it correctly in future math classes and in your career of choice.

Last Day to Withdraw: Nov. 12, 2015

Student Rights and Responsibilities: Please refer to the Casper College Student Conduct and Judicial Code for information concerning your rights and responsibilities as a Casper College Student.

Chain of Command: If you have any problems with this class, you should first contact the instructor to attempt to solve the problem. If you are not satisfied with the solution offered by the instructor, you should then take the matter through the appropriate chain of command starting with the Department Head/Program Director, the Academic Dean, and lastly the Vice President for Academic Affairs.

Official Means of Communication: Casper College faculty and staff will employ the student's assigned Casper College email account as a primary method of communication. Students are responsible to check their account regularly.

Academic Dishonesty - Cheating & Plagiarism: Casper College demands intellectual honesty. Proven plagiarism or any form of dishonesty associated with the academic process can result in the offender failing the course in which the offense was committed or expulsion from school. See the Casper College Student Code of Conduct.

ADA Accommodations Policy: If you need academic accommodations because of a disability, please inform me as soon as possible. See me privately outside of class, or during my office hours. To request academic accommodations, students must first consult with the college's Disability Services Counselor located in the Gateway Building, Room 344, (307) 268-2557, bheuer@caspercollege.edu. The Disability Services Counselor is responsible for reviewing documentation provided by students requesting accommodations, determining eligibility for accommodations, and helping students request and use appropriate accommodations.

Fall 2015

Tentative Course Schedule

Week	Dates	Topics
1	Aug. 24-Aug. 28	Chapter 1: Inductive and Deductive Reasoning "Mind Reading" "The Magic Cards"
2	Aug. 31-Sept. 4	Chapter 1: Problem Solving Strategies Problem Solving Exercises "Drowning in M&Ms"
3	Sept. 7-Sept. 11 {7th Labor Day}	Chapter 9: Units of Measurement/Conversions "Striping Yellowstone"
4	Sept. 14-Sept. 18	Chapter 10.6: Indirect Measurement (Similarity & Right Triangle Trig) "Just How High is That?"
5	Sept. 21-25	Exam #1: Chapters 1, 9, 10.6 Research for Career choice
6	Sept. 28-Oct. 2	Chapter 12.1-12.3: Statistics "Analyzing the Presidents"
7	Oct. 5-Oct. 9	Chapter 12.4-12.5: Normal Distributions "Is it a Fair Coin?"
8	Oct. 12-Oct.16	Chapter 12.6-Linear Regressions "Are Women Catching Up?" Exam #2: Chapter 12
9	Oct. 19-Oct. 23 (19th & 20th Fall Break}	Chapter 8.1-8.3: Interest, Discounts, Tax
10	Oct. 26-Oct. 30	Chapter 8.4-8.5: Compounded Interest, Annuities "Using Excel to Analyze Annuities"
11	Nov. 2-Nov. 6	Chapter 8.6-8.8: Owning homes, cars and Credit Cards "Using Excel to analyze home ownership"
12	Nov. 9-Nov. 13	Exam #3: Chapter 8 Chapter 11.1: Fundamental Counting Principal
13	Nov. 16-Nov. 20	Chapter 11.2-11.4: Permutations & Combinations "Rock, Paper Scissors Game"
14	Nov. 23 {25th-27th Thanksgiving Break}	Chapter 11.5:Multiple Tools Required "Probabilities & Birthdays"
15	Nov. 30-Dec. 4	Chapter 11.6-11.8: Probability with and, or and Expected Value "Let's Play Roulette"
16	Dec. 7-Dec. 11	Exam #4: Chapter 11
	Dec. 14-Dec. 18 FINALS WEEK	Mon. Dec. 14th PS 119 8:00-10:00 OR 1:00-3:00