MAT 110-CONTEMPORARY PROBLEM SOLVING
Section 03
Fall 2008
Missouri Western State University
Department of Computer Science, Mathematics, and Physics

Instructor: Mr. Steve Saffell                                      Phone: 816-271-4532
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Office Hours: MTW from 3-4:30 p.m. and by appointment

Course: MAT 110, Section 03 meets MWF 2:00 – 2:50 p.m. in Agenstein 106
Website: http://staff.missouriwestern.edu/~saffell/mat11003 (on campus)
          www.missouriwestern.edu/cas then link CAS Staff, then link on my photo, then link my fall teaching schedule (off campus)

Description:
Mathematics for solving selected real-world problems using elementary graph theory, data analysis, techniques of decision making, and mathematics of finance.

Prerequisites:
The prerequisites for this course are an ACT Math score of at least 20 or a grade of C or better in MAT 095. (Not open to students with credit in MAT 167 or MAT 130.) If you do not satisfy the prerequisite, contact the Developmental Math Program or your academic advisor to determine which mathematics course you are prepared to enroll in.

Textbook:

Technology:
Use of scientific calculators will be required throughout the course and each student must have access to a suitable scientific calculator. The scientific calculator must have logarithmic and exponential capabilities. Recommended calculator is TI-36X Solar.

Grading Policy:
60 points, Fifteen 4-Point Homework Assignments
100 points, Four 25-Point Quizzes
400 points, Four 100-Point Tests
130 points, Final Exam Wednesday, December 10, 2:00 p.m. – 3:50 p.m.
690 points, TOTAL possible

The final exam is considered to be a comprehensive exam.
Any student who accumulates 621 or more points is guaranteed an A. A total of 620-552 points guarantees a B, 551-483 points guarantees a C, 482-414 points guarantees a D, and fewer than 414 points is a F.

Attendance Policy:
In order to improve student learning as well as to achieve compliance with federal financial aid policies, Western has a mandatory attendance policy for all 100- and 200-level courses.
You will be given an excused absence when acting as an official representative of the university, provided you give prior written verification from the faculty/staff supervisor of the event. The only other form of excused absence is a doctor’s visit with an official note including signature, message, date, and office phone number. Doctor visit excuse notes must be shown to instructor during the first returning class visit or else all days of absence concerned will become unexcused absences.
All other absences will be deemed unexcused. The maximum number of unexcused absences allowed for this class before the midterm report, October 15 is 5. Thus, when you have 6 unexcused absences you will be reported to the Registrar’s Office, who will automatically withdraw you from this class. The Financial Aid Office will reduce financial aid as appropriate.
Quizzes, Tests, and Homework:

Five quizzes and five tests are given during class. I will keep the four highest quiz grades and drop the lowest quiz grade when calculating your final grade. If you have an excused absence you must make arrangements to take the quiz or test before the class session in which the graded quizzes or tests are returned or a score of zero will be given. If you have an unexcused absence a make-up quiz or test will not be allowed without documented proof of illness or emergency. Contact the instructor immediately if you miss a quiz or test. Arrangements to take a make-up quiz or test for an unexcused absence must be made before any graded quizzes or tests are returned to the class or a score of zero will be given. Selected problems in the text will be assigned for you to work outside of class. The assigned problems are available on the course website and will be mentioned in class. Fifteen homework assignments chosen at random will have specific problems to be turned in and the instructor will then select four homework problems to grade from each assignment. Homework points are based on showing your organized, legible work to get the correct answer or an approximately correct answer. You are encouraged to complete all suggested homework assignments and problems since understanding these problems should increase your success on quizzes and tests. Late homework assignments will only be accepted for excused absences and must be turned in the first day of return to class. You are also encouraged to ask questions concerning the type of problems you don’t understand. You may get help with these problems during office hours and, as time permits, during class. Additional help is available through the Center for Academic Support in Hearnes Center 213.

Important Notes:

- You are responsible for all announcements and material presented during the class period.
- Academic honesty is required in all academic endeavors. Violations of academic honesty include any instance of plagiarism, cheating, seeking credit for another’s work, falsifying documents or academic records, or any other fraudulent activity. Violations of academic honesty may result in a failing grade on the assignment, failure in the course, or expulsion from the University. When a student’s grade has been affected, violations of academic honesty will be reported to the Provost or designated representative on the Academic Honesty Violation Report forms. Please see the 2008-09 Student Handbook and Calendar on page 21 for specific activities identified as violations of this policy and the student due process procedure. This handbook is also available online at http://www.missouriwestern.edu/handbook/index.pdf
- Appropriate behavior is required in the classroom. Behavior disruptive to the instructor or other students is grounds for dismissal from the classroom. The use of cell phones and text messaging devices is not allowed. Refer to the current Student Code of Conduct for further information.
- If you have a disability which may impair your performance in this course, please discuss it with me (or contact Michael Ritter of Disability Services in Eder Hall 203N) so that appropriate arrangements may be made.

Course Objectives:

Mathematics is important in the life of every citizen and, in particular, in the life of every college graduate. Colleges and universities should strive to ensure that every graduate has achieved quantitative literacy in the sense of being able confidently to analyze, discuss, and use quantitative information; to develop a reasonable level of facility in mathematical problem solving; to understand connections between mathematics and other disciplines; and to use these skills as an adequate base for life-long learning. (FOCUS, Volume 13, Number 3, June 1993)

Course Goals:

The primary goal of the course is to produce mathematically literate citizens by illustrating practical applications of mathematics. In order to meet this goal, students will learn how to:
- Recognize real-world problems as network problems; translate these problems into graph theoretical language; choose an appropriate technique for solving the problem
- Construct various visual displays of data; calculate the measures of central tendency and dispersion; understand properties of normal distribution and calculate its probabilities
- Determine the winner of an election using various voting methods as well as recognize defects in these methods
- Find coalitions of a weighted voting system and calculate the power indices associated to the weighted voting system
- Use the mathematics of finance to compute interest, future value, finance charges, monthly payments, and present value
- Communicate mathematical ideas correctly both symbolically and verbally
- Recognize an apportionment problem and use various methods to solve the problem

The instructor may determine additional objectives based on additional material that may be covered in the course.