FALL 2007
MCCC – MAT 104 CC Foundations of Mathematics II
Monday-Wednesday-Friday 10:10- 11:05 AM
Room: PH 113

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Office Hours: Monday – Wednesday –Friday 12:15-1:30 PM Thursday 2:15-3:30 p.m.
Policies: There are no make-up exams or quizzes!
There is NO extra credit!

There will be four (4) tests and a final exam. Each is worth 16% of your final grade. There will be twelve (12) quizzes (the top ten will be counted) and the quizzes will count for 16% of your grade. The final 4% of your grade will come from class participation and class attendance. If one test grade is lower than your final exam and a student has missed one or no classes, the lowest test will count only 8% of your final grade with the final exam counting 24% of your final grade. If Test #1, 2 or 3 is missed, your lowest test will count as 32% of your final grade. If test #4 is missed, a grade of zero will be issued. If a student misses a test, the highest grade a student can receive is a "C."

I will sign a withdrawal slip up until the last class.

Students are expected to attend every class!

Evaluation of grade: 90% or higher = A
80% to 89% = B
70% to 79% = C
60% to 69% = D
Below 60% = F

Textbook: *A Survey of Mathematics with Applications*, 7th edition
Angel, Abbott and Runde, Pearson Custom Publishing, 2005

Learning Materials: TI-30X IIS calculator

MONTGOMERY COUNTY COMMUNITY COLLEGE
MAT 104
Foundations of Mathematics II
3-3-0

CATALOGUE DESCRIPTION

This is the second course in the sequence MAT 103, MAT 104. Topics include geometry, measurement, probability, statistics, and problem solving. This course does not satisfy the MAT 100 prerequisite requirement for MAT 125, MAT 131, MAT 140 or MAT 161.

PREREQUISITES: MAT 103 with a minimum grade of "C."

LEARNING OBJECTIVES

Upon successfully completing this course, students should have the knowledge and skills to:

1. Recognize that mathematics has applications that shape the world around them and influence their everyday lives.
2. Solve problems involving two- and three-dimensional geometry involving basic geometric shapes, parallelism, and perpendicularity.
3. Solve problems in geometry using congruence and similarity.
4. Use standard and nonstandard units to measure length, area, surface area and volume.
5. Organize data using simple statistical methods.
6. Solve problems involving measures of central tendency and dispersion.
7. Solve problems involving sampling and standardize test scores.
8. Solve problems involving experimental and theoretical probability.
9. Solve problems using basic probability rules including conditional probability.
10. Solve problems involving expected values and odds.
11. Solve problems in statistics using the normal curve.
12. Solve binomial probability problems using the binomial probability formula.
13. Solve percent application problems including percent change.
14. Add, subtract, and multiply matrices.
15. Solve systems of equations by using 2 by 2 matrices.
16. Work with mathematical systems, understand what is a group, finite mathematical systems and modular arithmetic.

SEQUENCE OF TOPICS

1. Introduction to geometry, parallelism, perpendicularity, angle measures of polygons, congruence, similarity, three-dimensional geometry
2. Metric system, perimeter, area, surface area, volume
3. Statistical graphs and tables, measures of central tendency, measuring the spread, standardize test scores, solve statistical problems using the normal curve
4. Experimental and theoretical probability, basic probability rules, counting, expected value, independent and dependent events, binomial experiments and odds
5. Addition, subtract, multiplication of matrices, inverse of 2 by 2
6. Solve percent type problems using matrix to solve system of equations
7. Introduction to groups, finite mathematical systems and modular arithmetic