

MATHEMATICS 192
PRINCIPLES OF MATHEMATICS (3)
(EFFECTIVE SPRING 2009)

PREREQUISITE: Math 191

NOTE:

1. All students in this course will take the Department of Mathematics and Statistics final exam.
2. This course requires a graphing calculator. The department recommends a calculator of the TI-83, TI-84 series for this course. Calculators with computer algebra systems built in or downloadable are prohibited.

CATALOG DESCRIPTION: Algorithms for four basic operations, systems of whole numbers and integers. Relations and functions. Greatest common factor and least common multiple. Fractions, decimals, percent, ratio and proportion. Statistics and probability. Metric system, measurement, area, volume, informal plane and solid geometry. These are manipulative- and activity-based courses.

OBJECTIVES: The student will:

1. Interpret decimal numbers.
2. Explain the algorithms for operations on decimal numbers.
3. Solve proportions and percentage problems.
4. Calculate simple probabilities.
5. Determine permutations and combinations.
6. Find central measures of tendency.
7. Construct circle graphs, bar graphs, line graphs, stem-and-leaf plots, line plots, and box-and-whisker plots.
8. Measure in the metric system.
9. Measure angles in degrees.
10. Calculate the perimeter and area of circles, polygons, and polyhedra.
11. Calculate the volume of spheres and polyhedra.
12. Construct congruent and similar geometric figures.
13. Apply transformations.
14. Classify regions and figures.

TEXTBOOKS: Title: Mathematical Reasoning for Elementary Teachers (Fifth Edition)
 Author: Calvin T. Long, Duane W. DeTemple, Richard Millman.
 Publisher: Addison Wesley. ISBN 978-0-321-46084-4.
 REQUIRED

Title: Activities for Elementary Mathematics Teachers, (Fifth Edition)
 Author: Dolan, Williamson, & Muri.
 Publisher: Pearson Addison Wesley. ISBN 978-0-321-52862-9.
 REQUIRED

OUTLINE:
 CHAPTER

	TITLE	PERIODS
7	Decimals and Real Numbers (1-4)	6
9	Statistics: The Interpretation of Data (1-3)	6
10	Probability (1-4)	5
11	Geometric Figures (1-3)	7
12	Measurement (1-4)	4
13	Transformations, Symmetries, and Tilings (1-2)	6
14	Congruence, Constructions, and Similarity (1-3)	6
	Exams	<u>4</u>
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