

_____SOUTH SEATTLE COMMUNITY COLLEGE_____

Academic Programs

COURSE OUTLINE

Revision: Frank Post, January 2009

DEPARTMENT:	Academic Programs
CURRICULUM:	The Natural World
COURSE TITLE:	Math for Elementary School Teachers I – Number Theory
COURSE NUMBER:	MATH& 131
TYPE OF COURSE:	Academic Transfer
Special Requirement Met:	Mathematics/Quantitative Reasoning
AREA(S) OF KNOWLEDGE:	Science Technology, and The Environment - The Language of Science
COURSE LENGTH:	1 quarter
CREDIT HOURS:	5
LECTURE HOURS:	55
LAB HOURS:	0
CLASS SIZE:	35
PREREQUISITES:	Math 098 with a 2.0 or better or appropriate placement score.

COURSE DESCRIPTION:

Covers the mathematics elementary teachers are responsible for teaching at K-8 levels, including computing with whole numbers, fractions, decimals and percents; multiplicative comparisons and reasoning; ratio, rates, and proportions; negative numbers; algebra and graphing; relationships between time, distance and rate; patterns and functions, simulating probabilistic situations; sampling; and organizing and interpreting data with one and two variables.

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STUDENT LEARNING OUTCOMES ADDRESSED:

May include (depending on chosen course content)

1. Communication – Read and listen actively to learn and communicate. Speak and write effectively.
2. Computation – Identify, interpret, and utilize higher level mathematical and cognitive skills (for those who choose to move beyond the minimum requirements as stated above).
3. Critical Thinking and Problem-Solving – Think critically in evaluating information, solving problems, and making decisions.
4. Technology – Select and use appropriate technological tools for personal, academic and career tasks.

GENERAL COURSE OBJECTIVES:

At the end of the course the student will be able to demonstrate:

1. A basic understanding of numbers and theories, including fractions, decimals, and percents.
2. Knowledge of ratios, rates, and proportions.
3. The theory related to negative numbers.
4. Basic algebraic function and graphing skills.
5. Critical thought with regard to time, distance, rate, and patterns in the form of applied problems.
6. Knowledge of probability and simulated trials.
7. The ability to sample, organize, analyze and interpret data.

TOPICAL OUTLINE:

- I. Mathematical Processes, Operations and Properties
- II. Computation and Estimation
- III. Theories of Numbers
- IV. Working with Integers
- V. Working with Rational Numbers
- VI. Ratios, Proportions and Critical Thought
- VII. Algebraic Functions and Graphs
- VIII. Probability
- IX. Statistics

Total hours:

55

Revision by: F.Post, January 2009

DATE: December 2008

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SLO #	Included in Course Objective Number	SSCC Student Learning Outcomes
SLO 1.1	7	Communication - Read and listen actively
SLO 1.2	7	Communication - Speak and write effectively
SLO 2.1	1, 2, 3, 5, 6	Computation - Use mathematical operations
SLO 2.2	1, 2, 3, 4, 5, 6, 7	Computation - Apply quantitative skills
SLO 2.3	4, 5, 6, 7	Computation - Identify, interpret, and utilize higher level mathematical and cognitive skills
SLO 3.1		Human Relations - Use social interactive skills to work in groups effectively
SLO 3.2		Human Relations - Recognize the diversity of cultural influences and values
SLO 4.1	5, 7	Critical Thinking and Problem Solving -
SLO 5.1	6, 7	Technology - Select and use appropriate technological tools
SLO 6.1		Personal Responsibility - Be motivated and able to continue learning and adapt to change
SLO 6.2		Personal Responsibility - Value one's own skills, abilities, ideas and art
SLO 6.3		Personal Responsibility - Take pride in one's work
SLO 6.4		Personal Responsibility - Manage personal health and safety
SLO 6.5		Personal Responsibility - Be aware of civic and environmental issues
SLO 7.1		Information Literacy - Access and evaluate information
SLO 7.2		Information Literacy - Use information to achieve personal, academic, and career goals, as well as to participate in a democratic society

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