COURSE OUTLINE
Revision: Frank Post, January 2009

DEPARTMENT: Academic Programs
CURRICULUM: The Natural World
COURSE TITLE: Math for Elementary School Teachers II – Geometry
COURSE NUMBER: MATH& 132
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& 131 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 polyhedra, polygons, symmetry, tessellations, size changes, curves, curved surfaces, transformations, length, angles, area and surface area, volume, measure formulas.
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 two-dimensional geometric shapes.
2. Knowledge of angles and quadrilaterals.
3. The ability to calculate size throughout two-dimensional geometry.
4. Knowledge of geometric patterns and transformations.
5. Comprehensive understanding of polyhedra and polygons.
6. Concepts and theories related to measurement.
7. Knowledge of three-dimensional geometry – volume and surface area.
8. The ability to use coordinate geometry in relation to algebra.
9. The relationship between algebra and geometry.

TOPICAL OUTLINE:

I. Basic Two-Dimensional Geometry
II. Angles and Shapes
III. Perimeter and Area
IV. Rotations and Reflections, Translations and Tessellations
V. Three-Dimensional Geometry and Polygons
VI. Polyhedra and Special Polygons
VII. Surface Area and Volume
VIII. Measurement in Two and Three Dimensions
IX. Coordinate Geometry
X. Linear Graphing on a Geometric Plane

Total hours: 55

Revision by: F. Post, January 2009
### Course Objective

<table>
<thead>
<tr>
<th>SLO #</th>
<th>Included in Course Objective Number</th>
<th>SSCC Student Learning Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLO 1.1</td>
<td>9</td>
<td>Communication - Read and listen actively</td>
</tr>
<tr>
<td>SLO 1.2</td>
<td>9</td>
<td>Communication - Speak and write effectively</td>
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<tr>
<td>SLO 2.1</td>
<td>2, 6, 7</td>
<td>Computation - Use mathematical operations</td>
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<tr>
<td>SLO 2.2</td>
<td>2, 6, 7</td>
<td>Computation - Apply quantitative skills</td>
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<tr>
<td>SLO 2.3</td>
<td>1, 3, 4, 5, 6, 8, 9</td>
<td>Computation - Identify, interpret, and utilize higher level mathematical and cognitive skills</td>
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<tr>
<td>SLO 3.1</td>
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<td>Human Relations - Use social interactive skills to work in groups effectively</td>
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<tr>
<td>SLO 3.2</td>
<td></td>
<td>Human Relations - Recognize the diversity of cultural influences and values</td>
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<tr>
<td>SLO 4.1</td>
<td>2, 4, 7, 9</td>
<td>Critical Thinking and Problem Solving -</td>
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<tr>
<td>SLO 5.1</td>
<td>1, 4, 5, 8</td>
<td>Technology - Select and use appropriate technological tools</td>
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<tr>
<td>SLO 6.1</td>
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<td>Personal Responsibility - Be motivated and able to continue learning and adapt to change</td>
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<tr>
<td>SLO 6.2</td>
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<td>Personal Responsibility - Value one's own skills, abilities, ideas and art</td>
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<tr>
<td>SLO 6.3</td>
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<td>Personal Responsibility - Take pride in one's work</td>
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<td>SLO 6.4</td>
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<td>Personal Responsibility - Manage personal health and safety</td>
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<td>SLO 6.5</td>
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<td>Personal Responsibility - Be aware of civic and environmental issues</td>
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<tr>
<td>SLO 7.1</td>
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<td>Information Literacy - Access and evaluate information</td>
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<tr>
<td>SLO 7.2</td>
<td></td>
<td>Information Literacy - Use information to achieve personal, academic, and career goals, as well as to participate in a democratic society</td>
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</tbody>
</table>

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