TRITON COLLEGE
COURSE OUTLINE

School of  Arts and Sciences  Prepared by  Dr. Ellen O’Connell
Department  Mathematics  CCC approved  Fall 2007  Revision  Fall 2010

Major Curriculum or market served  Those preparing for the Illinois Basic Skills Math test for teaching

Course Data:

<table>
<thead>
<tr>
<th>Prefix</th>
<th>No.</th>
<th>Course Title</th>
<th>Credit</th>
<th>Lecture</th>
<th>Lab</th>
<th>Clin</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT</td>
<td>095</td>
<td>Basic Skills Test Math Review For Prospective Teachers</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Prerequisite(s): None

Catalog Course Description: Provides a review of those skills required to pass the mathematics portion of the Illinois Basic Skills Exam for teachers. This course cannot be used toward any degree requirements or elective credits.

I. Course Objectives: For courses approved by ICCB, it is presumed students will spend a minimum of 2 hours outside study for each hour in class in order to meet the following objectives. Attach additional pages as needed.

1. Solve problems involving integers, fractions, decimals, and units of measurement.
2. Apply mathematical reasoning skills to analyze patterns and solve problems.
3. Solve problems involving algebra and geometry.
4. Understand concepts and procedures related to data analysis and statistics.
5. Solve applied problems using combination of mathematics skills (including word problems involving one and two variables).
II. Resources Utilized:

A. Required textbook(s)/workbook(s) (list title, author, publisher, date of publication):


B. Supplementary texts/and materials:

C. Other resources utilized:

III. Objective Instructional Strategies: Check and comment as needed on the instructional methods utilized to attain the course objectives:

   X Lecture
   _____ Lecture/Demonstration
   _____ Clinical Lab
   _____ Internship
   X Discussion
   _____ Laboratory
   _____ Independent Study
   Other: ____________________________

   Comments: instructional methods utilized (optional): ____________________________

IV. Evaluation: Check the evaluation methods utilized to monitor progress toward attainment of course objectives:

   X Quizzes
   X Examinations
   _____ Mid-term Examination
   _____ Coop experience
   _____ Portfolio
   _____ Laboratory skills
   X Oral participation
   X Projects
   _____ Written assignments
   _____ Clinical progress reports
   _____ Journal
   _____ Progress report
   Other: ____________________________

   Check the evaluation method utilized to determine whether final course objectives have been attained:

   X Final (written) examination
   _____ Final (oral) examination
   _____ Final clinical/laboratory examination
   _____ Final skills test
   _____ Course projects
   _____ Term papers
   _____ Portfolio
   _____ Final coop experience evaluation
   Other: ____________________________
V. **Course Plan:** The distribution of contact hours by topic and session.

**TOPICAL OUTLINE**

**Outline for Basic Skills Math Test Review for Prospective Teachers – 30 contact hours**

**Standard 14 – 4 hours**
Problem solving involving integers, fractions, decimals, units of measurement
1. Fractions
2. Decimals
3. Percents
4. Ratio and Proportion
5. Units of measurement, US, metric, conversions
6. Estimation

**Standard 15 – 3 hours**
Applying mathematical reasoning skills to analyze patterns and solve problems
1. Inductive reasoning
2. Deductive reasoning
3. How-to of problem solving, explanations

**Standard 16 – 4 hours**
Solving problems involving algebra and geometry
1. Number line, less than, greater than relationships
2. Solving one variable equations
3. Formula manipulations

**Geometry – 4 hours**
4. Solving problems with lines and angles
5. Perimeters, areas, volumes, surfaces

**Standard 17 – 4 hours**
Understanding concepts and procedures related to data analysis and statistics

1. Interpreting graphs and charts
2. Representation of data in graphic form
3. Means, medians, modes, correlations, standard deviations
4. Interpretation of percentiles, central tendency, variability, correlations

**Standard 18 – 4 hours**
Solve applied problems using a combination of mathematical skills – word problems in one and two variables
1. Applying math skills to solve multi-step problems
2. Applying equations to solve word problems involving one and two variables

**Geometry and statistics – 4 hours**
3. Applying number concepts and geometric principles to solve practical problems
4. Applying statistics to analyze patterns and trends in data.

Application of formula and test taking skills – 3 hours
1. Definitions and formulae
2. Practice on sample exam questions