

## SECTION IV

### Assessment 1: CONTENT KNOWLEDGE

#### PRAXIS II: Mathematics Content Knowledge

##### 1. Description of the Assessment:

The Praxis II: Mathematics Content Knowledge (0061) offered by the Educational Testing Service (ETS) is the test required for New Hampshire state licensure. The test is 50 multiple-choice questions designed to test the ability to understand and work with mathematical concepts, to reason mathematically, to integrate knowledge of different areas of mathematics and to develop mathematical models of real-life situations. The two-hour test requires a graphing calculator.

##### 2. Alignment of NCTM Standards and Indicators with state licensure exam (Praxis II):

Alignment for revised exam beginning with the Sept. 2005 administration:

Program Standard	Indicators Addressed
Standard 1: Knowledge of Mathematical Problem Solving	1.1, 1.2
Standard 4: Knowledge of Mathematical Connections	4.1, 4.2
Standard 5: Knowledge of Mathematical Representation	5.1, 5.2, 5.3
Standard 9: Knowledge of Number and Operation	9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.7, 9.8, 9.9
Standard 10: Knowledge of Different Perspectives on Algebra	10.1, 10.2, 10.4
Standard 11: Knowledge of Geometries	11.3, 11.5, 11.6
Standard 12: Knowledge of Calculus	12.1, 12.2, 12.3
Standard 13: Knowledge of Discrete Mathematics	13.1, 13.2
Standard 14: Knowledge of Data Analysis, Statistics, and Probability	14.1
Standard 15: Knowledge of Measurement	15.1, 15.2, 15.3

Alignment for exam prior to Sept. 2005 administration:

Topic Area	Indicators Addressed
Arithmetic and Basic Algebra	9.1, 9.2, 9.3, 9.9, 10.1, 10.3
Analytic Geometry	5.1, 10.4, 11.5

Calculus	12.1, 12.2, 12.3, 12.4
Discrete Mathematics	1.1, 13.1, 13.2, 13.3
Functions and Their Graphs	5.1, 5.2, 10.1, 10.5
Geometry	11.1, 11.2, 11.3, 11.6
Linear Algebra	10.2, 10.5
Mathematical Reasoning and Modeling	1.3, 2.1, 2.2, 2.3, 2.4, 3.1, 5.3, 10.4
Probability and Statistics	14.1, 14.2, 14.3, 14.4, 14.5, 14.7

### 3. Data findings:

In the past three years 17 candidates have taken the Praxis II: Mathematics Content Knowledge (0061) and have all passed.

<b>BA with Mathematics: Secondary Teaching Option</b>		
Academic Year	# of Candidates Taking the Praxis II: Math (10061)	# of Candidates Passing
2003-2004	8	100%
2004-2005	5	100%
2005-2006	4	100%

### 4. Data Interpretation:

The teacher candidates completing the program have demonstrated their knowledge of the mathematics content needed to teach secondary mathematics as shown in the alignment above as well as with their achieved a passing score on the Praxis II test. Since the Praxis II test is aligned with the NCTM standards, a high passing rate provides evidence that teacher candidates are meeting the standards.

The Praxis II examination does not appear to include items related to abstract algebra, various technological tools related to mathematics, and the history of mathematics. However, these topics are included and assessed in the candidates' required Mathematics Department Content Knowledge Portfolios.