

## Section IV Evidence for Meeting Standards

### #1 Content Knowledge

#### 1. Description of Assessment: ETS PRAXIS II #0061 Mathematics

The PRAXIS II: Mathematics Content Knowledge (#0061) offered by Educational Testing Service (ETS) is the overall content examination required of candidates for initial certification in Rhode Island College's (RIC) Secondary Education – Mathematics program. The two-hour examination consists of 50 multiple choice questions that tests competence in working with mathematical concepts, reasoning mathematically, making conjectures, identifying patterns, justifying statements with informal logical arguments, and constructing simple proofs. Test-takers are also expected to be able to integrate areas of mathematics to solve problems, represent concepts in various ways, solve problems that have multiple solution paths, develop mathematical models and use them to solve real-world problems. A graphing calculator is required. Teacher candidates must earn a minimum score of 140.

The state of Rhode Island does not require a content examination for licensure. However, thirty-six states require this test for state licensure, and only six have a passing score that is higher than RIC's, placing it in 83<sup>rd</sup> percentile.

#### 2. Alignment of ETS PRAXIS II #0061 Mathematics with NCTM Standards and Indicators (determined by NCTM)

Program Standard	Indicators Addressed
Standard 1: Knowledge of Mathematical Problem Solving	1.1, 1.2
Standard 2: Knowledge of Reasoning and Proof	None
Standard 3: Knowledge of Mathematical Communication	None
Standard 4: Knowledge of Mathematical Connections	4.1, 4.2
Standard 5: Knowledge of Mathematical Representation	5.1, 5.2, 5.3
Standard 6: Knowledge of Technology	None
Standard 7: Dispositions	None
Standard 8: Knowledge of Mathematics Pedagogy	None
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

#### 3. Data Results

RIC requires that all candidates pass this exam in order to student teach; RITE and MAT candidates must pass the exam as part of their admission process. Thus, there is a 100% pass rate for the 34 program completers (undergraduate, RITE, MAT candidates). Of those, 11 earned scores of 165 or higher, making

them eligible for the ETS Recognition of Excellence (ROE) Award, awarded to test takers who meet or exceed the ROE target score determined by the top 15% of candidates who took the test between 1998 and 2003.

#### 4. Data Interpretation

RIC’s Secondary Education – Mathematics teacher candidates are held to very high standards in mathematics. The 100% pass rate demonstrates consistently that they understand mathematics content. The passing score required by RIC is exceeded only by six states of the 36 that require the test for licensure. In addition, nearly one-third of the candidates received an ETS ROE Award.

#### 5. Assessment Documentation

##### a. PRAXIS II: Mathematics Content Knowledge Test (#0061)

The PRAXIS II: Mathematics Content Knowledge Test was reviewed by an expert panel and reviewers aligned the content with the NCTM Indicators for NCATE. The alignment provided by NCATE/NCTM is used here.

##### b. Scoring Guide for PRAXIS II: Mathematics Content Knowledge Test (#0061)

Exams are scored by ETS; details of scoring procedures are not made available. Results on the exam are reported as a number that is based on the number of correctly-answered items. The mathematics education faculty at RIC set the passing score at 140 after examining scores set by states that use the exam for licensure.

##### c. Data for Completers (undergraduate, RITE, graduate candidates) from PRAXIS II: Mathematics Content Knowledge Test (#0061)

Information in the table below was compiled by the Secondary Education – Mathematics program and verified with results sent to RIC by ETS.

Secondary Education – Mathematics Program Completers (undergraduate, RITE, MAT candidates) for years 2008 – 2010 on PRAXIS II: Mathematics Content Knowledge Test (#0061)				
Years	Number Taking Exam	Number Passing Exam	Institutional Pass Rate	Mean Score
2007-2008	18	18	100%	161
2008-2009	8	8	100%	163
2009-2010	8	8	100%	159