

## Praxis II: Content Disaggregated Data

### Elementary Education

#### Overall Praxis II Score

Year	Number of Candidates	Number Passing	Percent Passing	High	Low	Mean
2012-2013 (Cut score 140)	45	45	100%	182	149	165.2
2013-2014 (Cut score 140)	51	50	98%	187	136	161.8
2014-2015 (Cut score 140)	33	33	100%	188	143	162.3

#### Analysis of Data Findings

Students who complete the Elementary Education degree at DSU have had consistently high passing scores on the Praxis II content exam. Praxis II content exam scores help provide one measure of candidates' general knowledge, skills, and competence in content knowledge. The overall number of program completers has consistently surpassed the state's 80% pass-rate standard and averages. The average passing mean score is directly in line with national averages as well, which was measured at 165 (Gitomer & Yi, 2010).

Students are permitted to retake the examinations when not passed on their first trial. When that occurs, DSU has a COE Student Support Specialist whom they are connected with and encouraged to work with to obtain necessary remediation prior to retaking the assessment. When students struggle on specific portions (such as social studies or mathematics), they are encouraged to get remediation directly from social studies and/or mathematics faculty.

The Praxis II content exam is built from assessments in each of the four major disciplines taught in the elementary classroom – language arts, mathematics, social studies, and science. The tables below show the sub-scores aligned with each of those domains and show the DSU candidate scores including the high score, the low score, the mean score, and the range. The maximum score possible in each sub-section is 30.

#### Sub-Scores - Academic Year 2012-2013 (n=45)

	High (Max 30)	Low	Mean	Range
Language Arts	29	16	22.25	13
Math	29	13	21.75	16
Social Studies	27	13	19	14
Science	25	12	19.5	13

#### Sub-Scores - Academic Year 2013-2014 (n=51)

	High (Max 30)	Low	Mean	Range
Language Arts	28	12	20.75	16
Math	29	12	20.75	17
Social Studies	28	11	19.25	17
Science	28	13	21.75	15

**Sub-Scores - Academic Year 2014-2015 (n=33)**

	<b>High (Max 30)</b>	<b>Low</b>	<b>Mean</b>	<b>Range</b>
Language Arts	29	17	23	2
Math	28	14	22	14
Social Studies	24	11	17	13
Science	29	14	21	15

**Interpretation of data to meet standards:**

Elementary Education program completers' scores on the Praxis II content exam document that our candidates have sufficient knowledge, as defined by the test, to be considered highly qualified to teach elementary education in South Dakota, as well as in other states. The data suggest that DSU teacher candidates possess the content knowledge to meet the standards established by the South Dakota Department of Education for certification as elementary educators.

Furthermore, the results also provide empirical evidence aligned with the ACEI standards. The design of the Praxis II content exam helps provide tangible evidence of ACEI 2.1 (competence in English language arts and reading), 2.2 (knowledge, understanding, and use of fundamental concepts in the sciences), 2.3 (knowledge, understanding, and use of fundamental concepts of mathematics), and 2.4 (knowledge, understanding, and use of fundamental concepts of social studies). It has been noted by ETS itself that this exam alone is insufficient to demonstrate content competency and thus needs additional evidence. Assessment 2 is provided as supplemental evidence that provides data corroborating these general findings.

**Elementary Education/Special Education**

**Praxis II - Special Education: Content Knowledge**

<b>Year</b>	<b>Number of Candidates</b>	<b>Number Passing</b>	<b>Percent Passing</b>	<b>High</b>	<b>Low</b>	<b>Mean</b>
2012-2013 (Cut score 145)	11	11	100%	186	156	172.0
2013-2014 (Cut score 145)	14	14	100%	182	149	171.2
2014-2015 (Cut score 145)	10	10	100%	185	149	170.8

**Praxis II – Elementary Education: Content Knowledge**

<b>Year</b>	<b>Number of Candidates</b>	<b>Number Passing</b>	<b>Percent Passing/1<sup>st</sup> attempt</b>	<b>High</b>	<b>Low</b>	<b>Mean</b>
2012-2013 (Cut score 140)	11	11	100%	182	153	161.9
2013-2014 (Cut score 140)	14	14	100%	187	143	166.1
2014-2015 (Cut score 140)	10	10	100%	188	144	161.1

----- **Praxis II Content Sub-Scores – Special Education: Content Knowledge** -----

**Praxis II Sub-Scores/SPED - Academic Year 2012-2013**

	Max	High	Low	Mean
Development and Characteristics of Learners	18	16	8	13.6
Planning and the Learning Environment	24	21	13	18.4
Instruction	26	24	12	19.8
Assessment	19	15	8	12.6
Foundations and Professional Responsibilities	21	20	14	17.3

**Praxis II Sub-Scores/SPED - Academic Year 2013-2014**

	Max	High	Low	Mean
Development and Characteristics of Learners	18	15	12	13.6
Planning and the Learning Environment	24	18	17	18.4
Instruction	26	19	18	20.1
Assessment	19	14	9	12.6
Foundations and Professional Responsibilities	21	16	17	17.3

**Praxis II Sub-Scores/SPED - Academic Year 2014-2015**

	Max	High	Low	Mean
Development and Characteristics of Learners	17	17	5	13
Planning and the Learning Environment	25	21	14	18
Instruction	24	24	13	19
Assessment	21	18	8	13
Foundations and Professional Responsibilities	20	20	11	17

----- *Praxis II Content Sub-Scores – Elementary Education: Content Knowledge* -----

**Praxis II Sub-Scores/ELED - Academic Year 2012-2013**

	High (Max 30)	Low	Mean
Language Arts	28	18	21.9
Math	29	17	23.5
Social Studies	22	12	16.9
Science	24	13	20.5

**Praxis II Sub-Scores/ELED - Academic Year 2013-2014**

	High (Max 30)	Low	Mean
Language Arts	26	18	23.0
Math	27	15	20.9
Social Studies	28	15	19.9
Science	28	13	21.1

**Praxis II Sub-Scores/ELED - Academic Year 2014-2015**

	High (Max 30)	Low	Mean	Range
Language Arts	27	18	23	9
Math	27	14	21	13
Social Studies	22	14	17	8
Science	26	17	21	9

### Analysis of Data Findings:

Elementary education/special education completers have had consistently high passing scores on Praxis II Content Exams for the past three years. Those receiving the elementary/special education composite degree must take the special education and elementary education content knowledge exams. Praxis II Content Exam scores provide one measure of candidates' knowledge and skills. All elementary education/special education program completers passed the test on the first attempt.

### Interpretation of data to meet standards:

Elementary education/special education program completers' scores on Praxis II Content Exam document that our candidates have sufficient knowledge, as defined by the tests, to be considered highly qualified to teach elementary education/special education in South Dakota, as well as other states. The data suggest that teacher candidates possess the content knowledge to meet the standards established by the South Dakota Department of Education for certification as elementary education/special education teachers.

The scores indicate DSU students taking the Praxis II content exams in both elementary education and special education possess the knowledge needed to teach, as evidenced by the 100% pass rate. Completers in the elementary education/special education program have consistently met South Dakota standards for licensure on the Praxis II exam.

In order to facilitate ongoing student success, faculty provide support to candidates through individual consultation, information sessions, tutoring opportunities, study materials, and have access to a retention specialist who works specifically with students in need of assistance. Faculty also continually evaluate content, teaching strategies, and program activities to ensure that students learn current research, methodology, and best practices.

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## K-12 and Secondary Certifications

### Biology

Praxis II Content Scores – Biology Education (South Dakota Qualifying Score = 147)

Academic Year	Number of Test-Takers	Number Passing	Percent Passing	High	Low	Mean
2012-2013	4	4	100%	182	150	164
2013-2014	1	1	100%	162	-	-
2014-2015	0	-	-	-	-	-

Praxis II Content Sub-Scores – Biology Education

Test Category Sub-Scores	Academic Year	Number of Test Takers	Possible	High	Low	Mean
Basic Principles of Science	2012-2013	4	12	10	8	9
	2013-2014	1	12	11	11	11
	2014-2015	0	-	-	-	-
Molecular & Cellular Biology	2012-2013	4	38	25	14	19.5
	2013-2014	1	38	21	21	21
	2014-2015	0	-	-	-	-

<b>Genetics &amp; Evolution</b>	2012-2013	4	23	16	13	14.5
	2013-2014	1	23	14	14	14
	2014-2015	0	-	-	-	-
<b>Diversity of Life and Organismal Biology</b>	2012-2013	4	44	33	25	29
	2013-2014	1	44	27	27	27
	2014-2015	0	-	-	-	-
<b>Ecology: Organisms and Environments</b>	2012-2013	4	22	19	18	18.5
	2013-2014	1	22	16	16	16
	2014-2015	0	-	-	-	-
<b>Science, Technology, &amp; Social Perspectives</b>	2012-2013	4	10	9	8	8.5
	2013-2014	1	10	7	7	7
	2014-2015	0	-	-	-	-

**Analysis:** Overall pass rate for the 5 test takers is 100%. Sub-scores for each category are consistent for the majority of categories. In general, the average score for most sub-score categories indicates that students have a solid knowledge in the discipline. Sub-scores in Molecular & Cellular biology tended to be lower than other categories.

**Interpretation:** As defined by the Praxis II Biology Test, these data suggest that the Biology Education candidates at Dakota State University have sufficient knowledge to be considered highly qualified to teach 7-12 biology education by the state of South Dakota.

## **Business Education**

### **Scores of Program Completers for Praxis II Content Exam**

<b>Year</b>	<b>Number of Program Completers</b>	<b>Number Passing</b>	<b>Percent Passing</b>	<b>High</b>	<b>Low</b>	<b>Mean</b>
2012-2013 (Cut score 148)	2	1	50%	192	147	169.5
2013-2014 (Cut score 148)	2	2	100%	173	170	171.5
2014-2015 (Cut score 148)	1	1	100%	157	157	157

### **Sub-Scores**

	<b>Year</b>	<b>Max</b>	<b>High</b>	<b>Low</b>	<b>Mean</b>
Accounting and Finance	2012-2013	18	15	11	13
	2013-2014	18	15	14	14.5
	2014-2015	18	10	10	10
Communication and Career Development	2012-2013	17	17	9	13
	2013-2014	17	15	13	14
	2014-2015	17	12	12	12
Economics	2012-2013	12	7	5	6
	2013-2014	12	10	9	9.5
	2014-2015	12	5	5	5

	Year	Max	High	Low	Mean
Entrepreneurship	2012-2013	11	10	7	8.5
	2013-2014	11	10	9	9.5
	2014-2015	11	8	8	8
Information technology	2012-2013	18	16	12	14
	2013-2014	18	16	15	15.5
	2014-2015	18	15	15	15
Law and International Business	2012-2013	17	14	7	10.5
	2013-2014	17	11	10	10.5
	2014-2015	17	11	11	11
Marketing and Management	2012-2013	11	11	7	9
	2013-2014	11	10	9	9.5
	2014-2015	11	9	9	9
Professional Business Education	2012-2013	12	12	8	10
	2013-2014	12	9	8	8.5
	2014-2015	12	9	9	9

### Analysis of Data Findings

The table shows the numbers of program completers taking the Praxis II Content Exam for Business Education, the mean of the scores, the percent of students passing, range of scores, and the pass score required for teacher program completers in 2011-14. Five completed the business education program at Dakota State University; for those program completers who made it to the student teaching semester, they tend to easily pass the Praxis II content knowledge exam with the required minimum score of 148 as shown by the percent of student passing at 100% except for the one student in 2012. While this report does not include sub-scores, the numbers will be reviewed as part of the over-all assessment plan and included in the future.

### Interpretation of Data to Meet Standards

Program completers are required to successfully complete the PRAXIS II Business Education Content Exam prior to student teaching. The data provides evidence in the form of a nationally normed exam that the standards of business education content knowledge are being met by DSU business education program completers. Business education program completers have consistent passing scores on the Praxis II Business Education Content Exam with a 100% passing rate for those who completed the PRAXIS II exam in 2011 and 2013. The standards for possessing a broad background of knowledge in business subjects is met with the average pass rate of 83.3% on the business education content exam. It should be noted that the number of program completers is a small sample so significant results cannot be determined.

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### Computer Education

There is no Praxis II Content Exam for Computer Education

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## **English Education**

### Praxis II Scores for English Education

Year	Number of Candidates	Number Passing	Percent Passing	High	Low	Mean
2012-2013 (Cut score 154)	2	2	100%	192	180	186.0
2013-2014 (Cut score 167)	2	2	100%	180	178	179.0
2014-2015 (Cut score 154)	2	2	100%	176	162	169.0

### **Sub-scores, 2012-13**

	Year	Max	High	Low	Mean
Reading & Understanding Text	2012-13	68	56	49	52.5
Language & Linguistics	2012-13	18	17	12	18.5
Composition & Rhetoric	2012-13	34	33	32	31

### **Sub-scores, 2013-14 and 2014-15**

	Year	Max	High	Low	Mean
Reading	2013-14	41	35	32	33.5
	2014-15	41	28	25	33
Language Use and Vocabulary	2013-14	28	24	19	21.5
	2014-15	28	37	11	24
Writing, Speaking, and Listening	2013-14	38	32	30	31
	2014-15	38	33	24	29

### **Analysis of Data Findings:**

Seven student candidates completed the English education program in the past three years. All of these candidates achieved the required score on the English Praxis II content knowledge exam as shown in the table above.

### **The Data Provide Evidence on Meeting the Standards:**

Candidates at DSU have demonstrated their knowledge of the content needed to teach 7-12 English Education as show in the alignment above. Candidates are required to successfully complete the Praxis II Content Exam for English Language, Literature, and Composition Content Knowledge exam prior to student teaching. Acceptable performance on the test indicates an acceptable level of achievement with regard to the alignment of NCTE indicators. The data provides evidence in the form of a nationally normed exam that the standards of English content knowledge are being met by DSU English program completers. Faculty members, advisors, and members of the Student Assessment and Monitoring Committee at DSU review the scores each semester, confer with students and program faculty, and consult to make changes and consider curricular changes.

## Mathematics Education

### Praxis II Scores for Math Ed

Year	Number of Candidates	Number Passing	Percent Passing	High	Low	Mean
2012-2013 (Cut score 124)	1	1	100%	138	138	138
2013-2014 * (Cut score 124) (Cut score 160)	1 1	2	100%	160 163	160 163	160 163
2014-2015 (Cut score 160)	5	5	100%	186	165	174.4

\* One program completer tested early and took the content exam prior to regeneration, while the other completed the exam after September 1, 2013.

### Academic Year 2012-2013

#0061	High	Low	Mean
Algebra and Number Theory	5	5	5.00
Measurement, Geometry, the Trigonometry	6	6	6.00
Functions and Calculus	4	4	4.00
Data Analysis, Statistics, and Probability	7	7	7.00
Algebra and Discrete Math	3	3	3.00

### Academic Year 2013-2014

#0061	High	Low	Mean
Algebra and Number Theory	7	7	7.00
Measurement, Geometry, the Trigonometry	7	7	7.00
Functions and Calculus	11	11	11.00
Data Analysis, Statistics, and Probability	8	8	8.00
Algebra and Discrete Math	5	5	5.00

### Academic Year 2013-2014

#5161	High	Low	Mean
Quantity, Algebra, Functions, Calculus	21	21	21.00
Discrete Math	12	12	12.00

### Academic Year 2014-2015

#5161	Max (?)	High	Low	Mean
Quantity, Algebra, Functions, Calculus	34	27	23	25
Discrete Math	16	15	10	13

### Analysis of Data Findings

There are few students who complete the mathematics education program at Dakota State University; however for those candidates that took the Praxis II content knowledge exam (test 0061) prior to September 1, 2013, they had no problems meeting the required minimum score of 124 as shown in the data tables above. The only student that graduated in 2013-2014 that took the regenerated Praxis II content knowledge exam (test 5161) needed two attempts to meet the minimum score.

Comment: A more thorough review of data for exam 5161 shows that between September 1, 2013 and August 31, 2014, of the 37 math education teacher candidates in South Dakota that took the regenerated test, only 41% met the required minimum score of 160 and of the 4010 test takers nationally only 43% met the 160 benchmark (data



provided by ETS, forwarded by Carla Leingang from the South Dakota Department of Education). The success rates both in South Dakota and nationally in meeting the desired 160 benchmark on the regenerated exam is an area of concern. All of the DSU math education program completers taking the math education Praxis II content exam during this three-year review cycle met the required minimum cutoff score set by the SD Department of Education, thereby demonstrating adequate mathematics content knowledge to be secondary mathematics teachers.

### **The Data Provide Evidence on Meeting the Standards**

Math education program completers at DSU have demonstrated their knowledge of the mathematics content needed to teach 7 – 12 mathematics as show in the alignment above. Alignment with NCTM indicators was determined by an NCTM panel. Candidates are required to successfully complete the Praxis II Math Content Exam prior to student teaching. The data provides evidence in the form of a nationally normed exam that the standards of mathematical content knowledge are being met by DSU mathematics education program completers.

Since the tests have been designed to align very closely with the NCTM Standards, acceptable performance on the tests indicates an acceptable level of achievement with regard to the standards.

### **Physical Education**

The Praxis II Content Exam is designed as a comprehensive examination addressing the standards for a beginning physical education teacher.

#### **0091/5091 – Physical Education: Content Knowledge (Passing Score = 140)**

Year	Number of Candidates	Number Passing	Percent Passing	High	Low	Mean	Range
2012-2013	11	11	100%	169	142	155.4	27
2013-2014	4	4	100%	162	142	149.5	20
2014-2015	4	4	100%	164	150	157.0	14

#### **0091/5091 – Physical Education: Content Knowledge (by Sub-Scores)**

Sub-Score Category	2012-13 (N = 11)		2013-14 (N = 4)		2014-15 (N = 4)	
	Mean score	Percent Correct	Mean score	Percent Correct	Mean score	Percent Correct
Content knowledge and student growth and development	20.5	62.1%	19	57.6%	19	57.6%
Management, motivation, and communication	19.75	73.1%	19.75	73.9%	19	70.4%
Planning, instruction and student assessment	19.75	73.1%	17.75	77.1%	22	78.6%
Collaboration, reflection, and technology	15.50	67.4%	15.25	66.3%	18	81.8%

**Analysis of Data Findings:** Data collected during the last three years show that all students who took the examination (N=18) met the minimum passing score (140). In fact, the mean score exceeded the passing score by an average of 14 points. An examination of sub-score data might also suggest the degree to which students exhibit competence as a result of the professional preparation program. A quick review of the percentage of students correctly answering questions in the first section (content knowledge and student growth and development), and the second section (management, motivation and communication) appear to decline while an apparent

improvement was shown in the third section (planning, instruction and assessment), and the last section (collaboration, reflection and technology). However, the small number of teacher candidates whose scores are reflected in the data is not sufficient to draw any statistical conclusions regarding areas of strength or weakness.

**Interpretation of Data to Meet Standards:** These data suggest that students majoring in Physical Education at DSU have acquired the content knowledge necessary to meet the lower order (“Describe”) cognitive expectations in standards 1.1 through 1.4. Praxis II Content Exam scores show that every teacher candidate taking the exam during the period reflected in this report received a passing score. While the mean scores vary slightly, the low number of exams taken and the relative similarity of the mean scores does not suggest any specific need to modify the program.