



# 2015 – 2016 Proficiency Profile

## Annual Report

### Volume II

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Troy University Department of Institutional Research, Planning and Effectiveness



## Volume Two

# Troy University Proficiency Profile Annual Report

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Proficiency Profile 2015 - 2016

Submitted  
to  
Dr. Hal Fulmer, Dean  
First-Year Studies  
Troy University-Center for Student Success  
Troy, Alabama

By

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To complete the analysis of results from the Proficiency Profile (Measure of Academic Proficiency and Progress) Assessment. This report examines the university’s general education program by assessment to ensure a cycle of continuous improvement in teaching and learning.

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## ABSTRACT

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### Dothan, Montgomery, Phenix City, Troy, Support Locations (Onsite), and Troy Online

The test is designed to evaluate the performance of the university's general studies program. It is assumed that by the end of the sophomore year the typical student has taken the majority of their general studies classes. The test is designed to highlight any changes that need to be made to improve the general studies experience or to fill in any holes there may be in the general studies experience. The school is not interested so much in individual scores as in the overall scores of the students in different areas. It is for this reason the Proficiency Profile test is given at the end of the sophomore year. Associates level students take the test after completion of 48 hours and prior to graduation (exit exam), and Bachelors level students are tested once they reach 60-89 hours.

### Troy Campus

Students on the Troy campus are required to take the Proficiency Profile exam, which is an assessment of the students' current skill levels in reading, critical thinking, writing, and mathematics. As an ongoing effort of the university's mission to help students achieve academic excellence and successful degree completion, this process will play a major role toward achieving these goals. The goals of the university will serve to benefit students' academic goals and successes at TROY.

## Pre-test the following groups as entering freshmen:

- 1) Leadership Scholarship Recipients (Minimum 22 ACT)
    - a. Completion of the Proficiency Profile exam will be a requirement for receiving the scholarship.
  - 2) Conditionally Admitted Students (Below 20 ACT)
    - a. Completion of the Proficiency Profile exam will be a requirement for conditional admits.
  - 3) The Millennium Scholar's Award (Minimum 31 ACT)
    - a. Completion of the Proficiency Profile exam will be a requirement for receiving the scholarship.
  - 4) The Chancellor's Scholar's Award (Minimum 27 ACT)
    - a. Completion of the Proficiency Profile exam will be a requirement for receiving the scholarship.
- 
- I. The Pre exam will begin Fall 2015 with students completing the exam prior to the end of their first semester. The Post exam will be administered, during the Spring semester after the student has obtained at least 60 hours.
  - II. Requirement of the exam for Associate level degree students for Montgomery and Support Locations as an exit exam will continue.
  - III. The exam on the Montgomery, Dothan, Phenix City, and Support Locations campuses will continue to be given to rising juniors who have completed between 60-89 hours.

## Pre-Analysis (Understanding This Report)

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### Using Scores and Reports

Troy University Department of IRPE uses the Proficiency Profile scores to:

- gauge student learning outcomes of traditional, blended learning and distance learning students
- measure and document program effectiveness to meet requirements for accreditation and program funding
- assess student proficiency in core academic skill areas to identify strengths, weaknesses and opportunities to improve curriculum
- compare Troy's own performance against the performance of their peers

### Scores Reported

#### Norm-referenced Scores (Scaled Scores)

Eight scaled scores are reported for students taking the Proficiency Profile test:

- a total score
- four skills subscores (critical thinking, reading, writing, mathematics)
- three context-based subscores (humanities, social sciences, natural sciences)

The total score is reported on a scale that extends from 400 to 500. The seven subscores are reported on a scale that extends from 100 to 130.

#### Criterion-referenced Scores (Proficiency Classifications)

In addition to a total score, proficiency classifications (proficient, marginal or not proficient) measure how well your students have mastered each level of proficiency within three skill areas:

- Reading/Critical Thinking
- Writing
- Mathematics

Within each of these three skill areas, the specific skills tested by the Proficiency Profile test are classified into three proficiency levels, identified simply as Level 1, Level 2 and Level 3. Each proficiency level is defined in terms of a set of specific competencies expected of students.



## Comparative Data Reports

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Proficiency Profile Comparative Data Guide (CDG) provides invaluable information. This data is used to compare the scores and proficiency classifications of Troy students with those of a large group of students at other institutions.

The annual CDG contains tables of scaled scores and percentiles for individual student scores and institutional means drawn directly from test takers across the nation. The CDG also provides percentiles for individual student subscores and a summary of proficiency classifications. Statistics are provided by class level (freshman, sophomore, etc.) and institution type and include a demographic summary.

### Comparison of Proficiency Profile Test Scores

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#### Freshmen Fall 2014 retested as Sophomores Spring 2016

n = 139

	Possible Range	Mean Score
Total Score	400 to 500	<b>454.33 up 2%</b>
Skills Subscores:		
Critical Thinking	100 to 130	<b>114.87 up 3%</b>
Reading	100 to 130	<b>120.49 up 2%</b>
Writing	100 to 130	<b>117.51 up 2%</b>
Mathematics	100 to 130	<b>115.18 up 1%</b>
Context-Based Subscores:		
Humanities	100 to 130	<b>117.97 up 2%</b>
Social Sciences	100 to 130	<b>116.28 up 3%</b>
Natural Sciences	100 to 130	<b>118.33 up 2%</b>

## Analysis

### Summary of Scaled Scores *(All Students)*

Number of students tested: 448

Number of students included in these statistics: 443

	Possible Range	Mean Score	95% Confidence Limits* for Mean	Standard Deviation	25th Percentile	50th Percentile	75th Percentile
<b>Total Score</b>							
	400 to 500	447.63	447 to 449	20.03	433	445	462
<b>Skills Subscores:</b>							
<b>Critical Thinking</b>	100 to 130	112.38	112 to 113	6.80	107	112	118
<b>Reading</b>	100 to 130	118.70	118 to 119	6.93	113	119	124
<b>Writing</b>	100 to 130	115.95	115 to 117	4.74	113	116	119
<b>Mathematics</b>	100 to 130	113.93	113 to 115	6.07	109	113	119
<b>Context-Based Subscores:</b>							
<b>Humanities</b>	100 to 130	116.15	115 to 117	6.54	111	116	121
<b>Social Sciences</b>	100 to 130	114.12	113 to 115	6.52	108	114	119
<b>Natural Sciences</b>	100 to 130	116.34	116 to 117	6.49	112	117	122

\*The confidence limits are based on the assumption that the questions contributing to each scaled score are a sample from a much larger set of possible questions that could have been used to measure those same skills. If the group of students taking the test is a sample from some larger population of students eligible to be tested, the confidence limits include both sampling of students and sampling of questions as factors that could cause the mean score to vary. The confidence limits indicate the precision of the mean score of the students actually tested, as an estimate of the "true population mean" - the mean score that would result if all the students in the population could somehow be tested with all possible questions. These confidence limits were computed by a procedure that has a 95 percent probability of producing upper and lower limits that will surround the true population mean. The population size used in the calculation of the confidence limits for the mean scores in this report is 443.

Reports based on a sample of fewer than 50 test takers are representative of the performance of **that sample only**. Reports based on **fewer than 50 test takers** should not be considered representative of the larger group of like students, and inferences or generalizations about the larger population or subgroup **should not** be made based on such small samples.

## More than 90 semester hours

Number of students tested: 18

Number of students included in these statistics: 17

	Possible Range	Mean Score	National Mean Score	95% Confidence Limits* for Mean	Standard Deviation	25th Percentile	50th Percentile	75th Percentile
<b>Total Score</b>								
<b>Total Score</b>	400 to 500	448.06	440.8	445 to 451	22.61	432	439	468
<b>Skills Subscores:</b>								
<b>Critical Thinking</b>	100 to 130	111.41	111.0	109 to 113	7.31	106	109	116
<b>Reading</b>	100 to 130	120.53	117.3	119 to 123	5.97	116	121	127
<b>Writing</b>	100 to 130	115.88	113.6	114 to 117	4.81	112	115	120
<b>Mathematics</b>	100 to 130	113.41	112.1	112 to 115	7.10	108	113	117
<b>Context-Based Subscores:</b>								
<b>Humanities</b>	100 to 130	116.47	115.3	114 to 119	6.82	111	116	121
<b>Social Sciences</b>	100 to 130	114.35	113.4	112 to 116	6.22	108	114	118
<b>Natural Sciences</b>	100 to 130	117.06	114.6	115 to 119	6.70	110	114	122

## 61 – 90 semester hours

Number of students tested: 31

Number of students included in these statistics: 28

	Possible Range	Mean Score	National Mean Score	95% Confidence Limits* for Mean	Standard Deviation	25th Percentile	50th Percentile	75th Percentile
<b>Skills Subscores:</b>								
<b>Total Score</b>	400 to 500	447.07	437.0	444 to 450	26.27	423	442	473
<b>Skills Subscores:</b>								
<b>Critical Thinking</b>	100 to 130	112.96	110.1	111 to 115	7.97	105	112	121
<b>Reading</b>	100 to 130	117.79	116.2	116 to 119	8.20	110	115	127
<b>Writing</b>	100 to 130	115.57	112.9	114 to 117	5.73	111	117	122
<b>Mathematics</b>	100 to 130	113.64	111.0	112 to 115	8.33	106	112	121
<b>Context-Based Subscores:</b>								
<b>Humanities</b>	100 to 130	115.61	114.5	114 to 117	6.85	109	113	123
<b>Social Sciences</b>	100 to 130	114.18	112.5	112 to 116	8.00	106	112	123
<b>Natural Sciences</b>	100 to 130	116.54	113.7	115 to 118	7.83	110	117	123

## 30 – 60 semester hours

Number of students tested: 93

Number of students included in these statistics: 93

	Possible Range	Mean Score	National Mean Score	95% Confidence Limits* for Mean	Standard Deviation	25th Percentile	50th Percentile	75th Percentile
<b>Skills Subscores:</b>								
<b>Total Score</b>	400 to 500	454.02	434.1	452 to 456	18.71	439	453	470
<b>Skills Subscores:</b>								
<b>Critical Thinking</b>	100 to 130	114.94	109.3	114 to 116	6.39	109	116	120
<b>Reading</b>	100 to 130	120.68	115.4	120 to 122	6.11	116	122	125
<b>Writing</b>	100 to 130	117.48	112.3	117 to 118	4.35	115	117	121
<b>Mathematics</b>	100 to 130	114.83	110.4	114 to 116	6.16	110	114	119
<b>Context-Based Subscores:</b>								
<b>Humanities</b>	100 to 130	117.91	113.9	117 to 119	6.47	114	119	122
<b>Social Sciences</b>	100 to 130	116.52	111.8	115 to 118	5.83	112	116	121
<b>Natural Sciences</b>	100 to 130	118.41	113.0	117 to 120	5.84	114	120	122

## Fewer than 30 semester hours

Number of students tested: 61

Number of students included in these statistics: 61

	Possible Range	Mean Score	National Mean Score	95% Confidence Limits* for Mean	Standard Deviation	25th Percentile	50th Percentile	75th Percentile
<b>Skills Subscores</b>								
Total Score	400 to 500	444.77	432.8	443 to 447	20.18	435	443	458
<b>Skills Subscores</b>								
Critical Thinking	100 to 130	111.43	109.1	110 to 113	6.70	106	111	116
Reading	100 to 130	117.33	114.7	116 to 119	7.39	111	118	123
Writing	100 to 130	115.39	112.0	114 to 116	5.03	112	116	119
Mathematics	100 to 130	113.79	110.2	113 to 115	6.04	109	113	118
<b>Context-Based Subscores</b>								
Humanities	100 to 130	115.61	113.4	114 to 117	7.15	109	117	121
Social Sciences	100 to 130	112.64	111.5	111 to 114	6.65	107	112	116
Natural Sciences	100 to 130	115.21	112.7	114 to 117	6.02	110	115	120

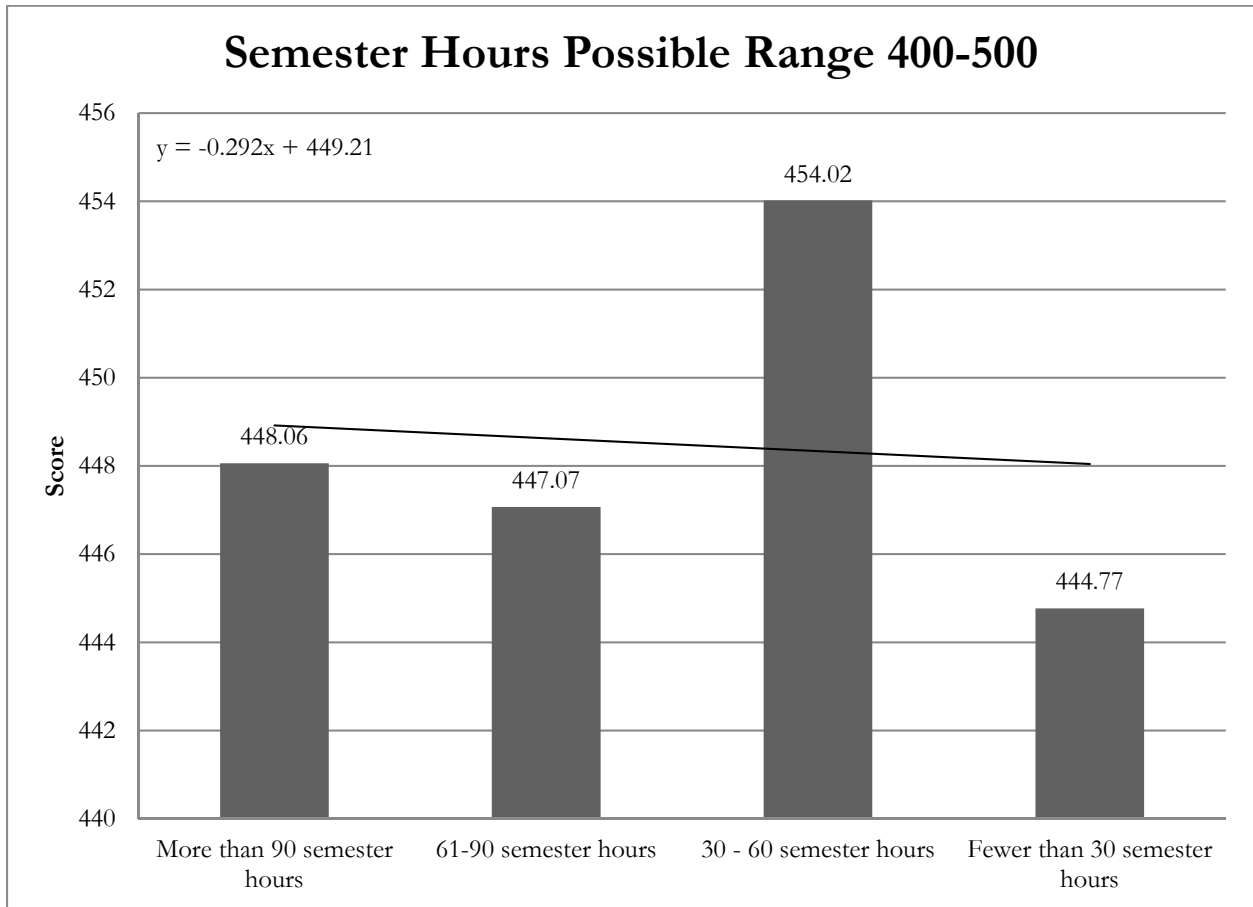


Figure 1



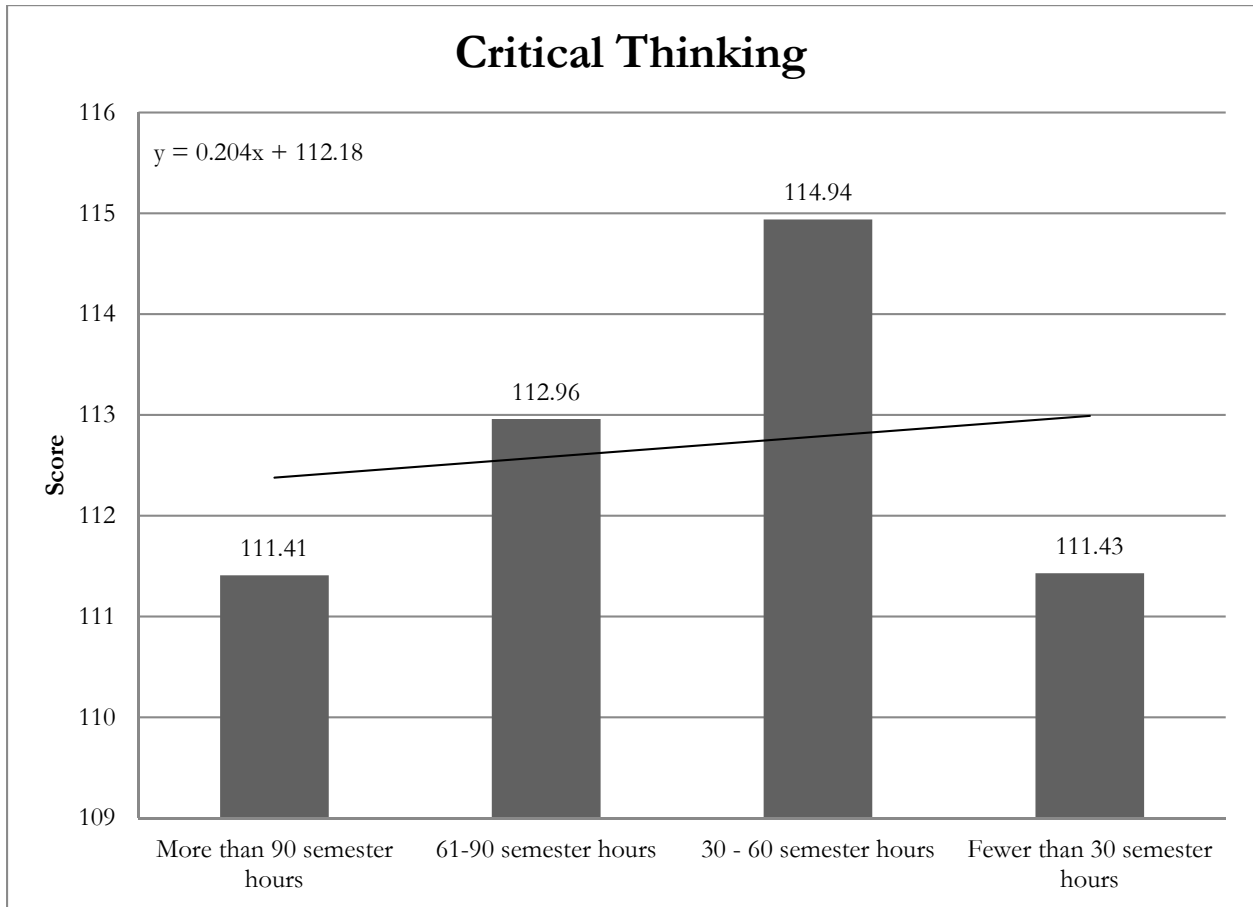


Figure 2

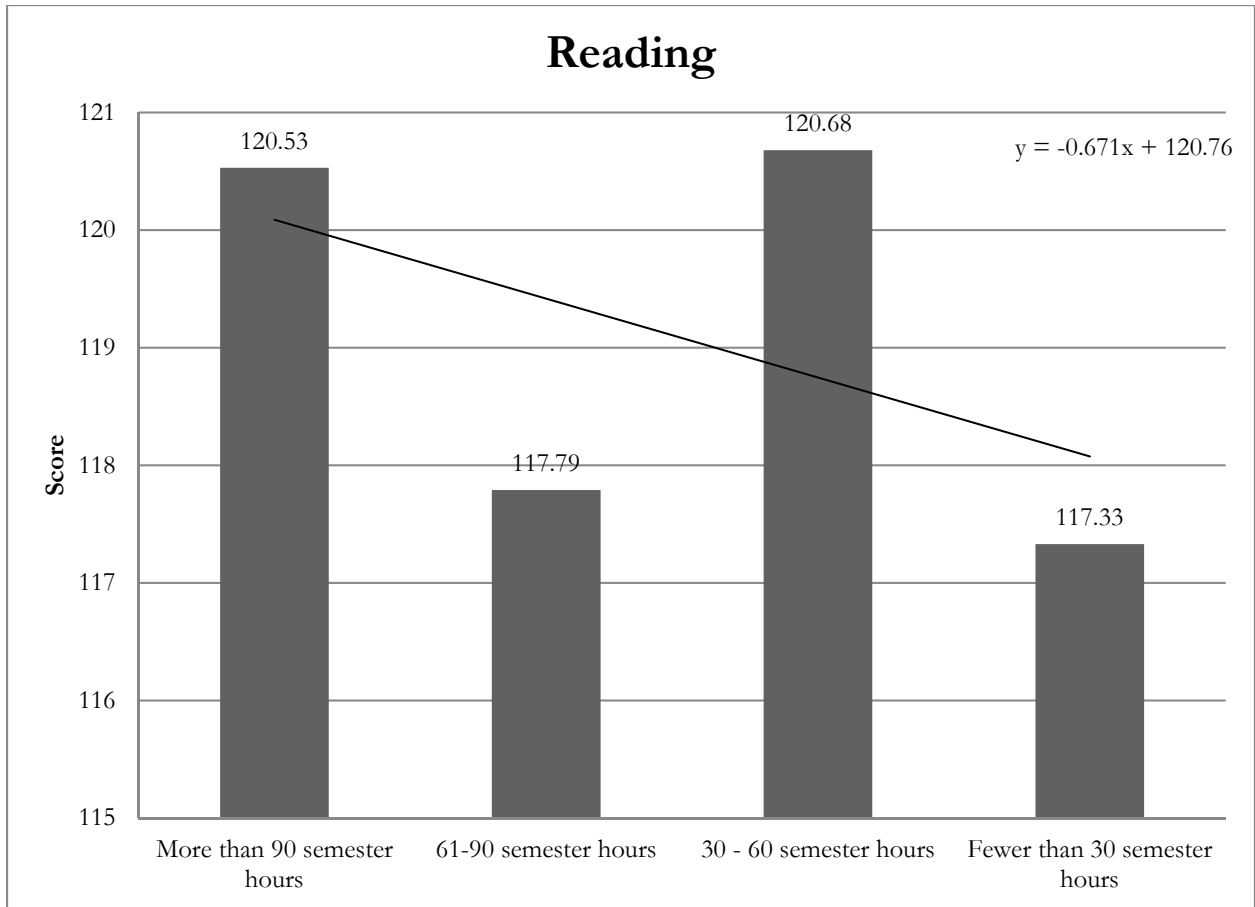


Figure 3

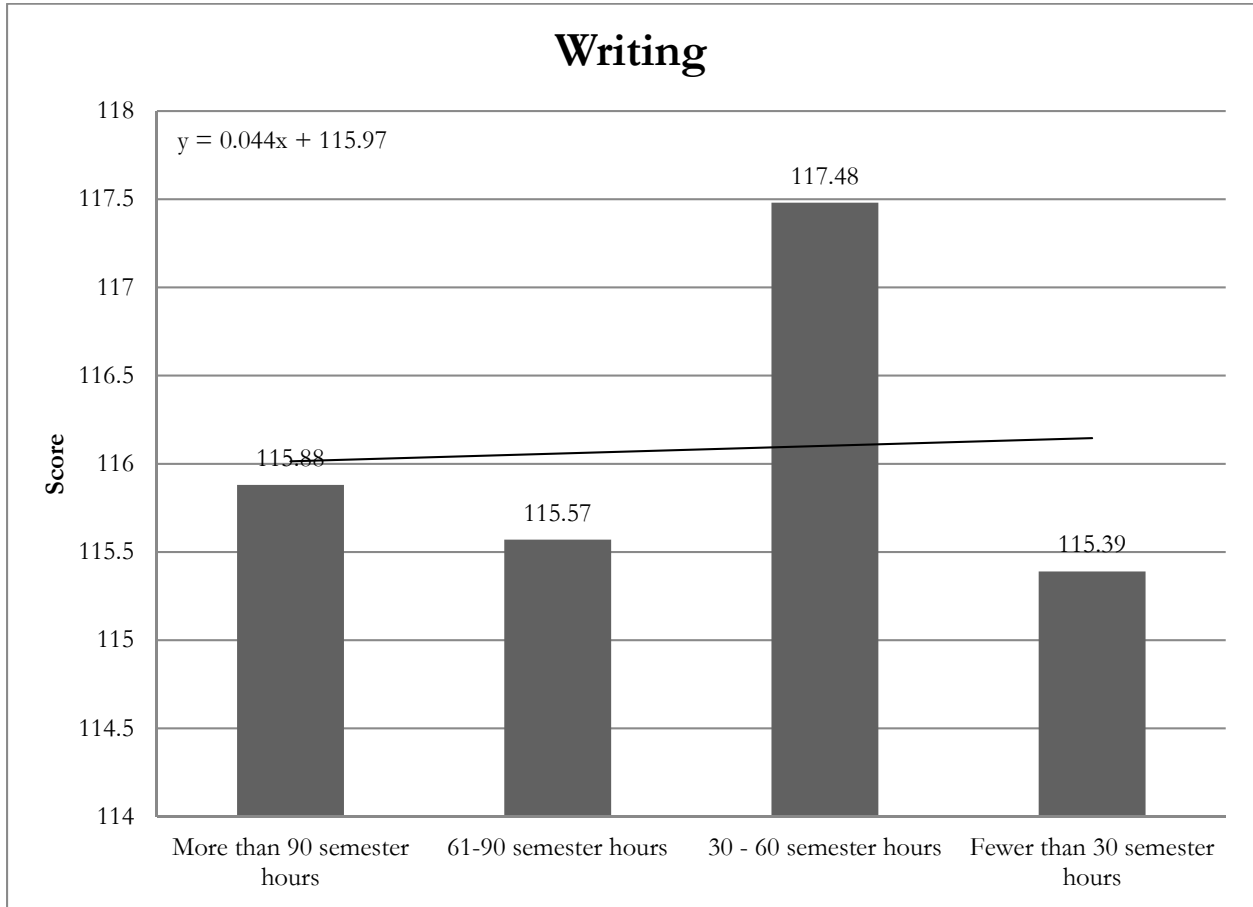


Figure 4

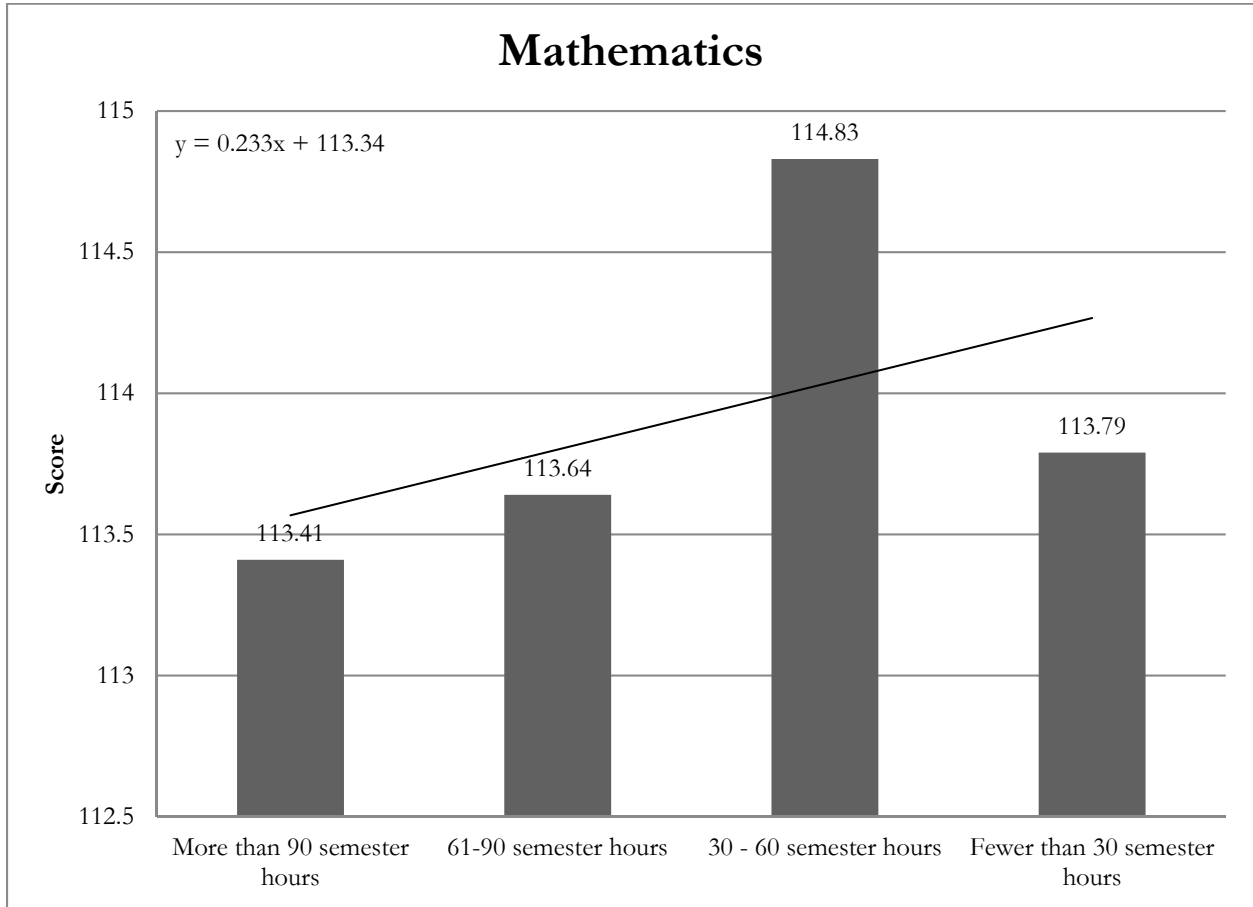


Figure 5

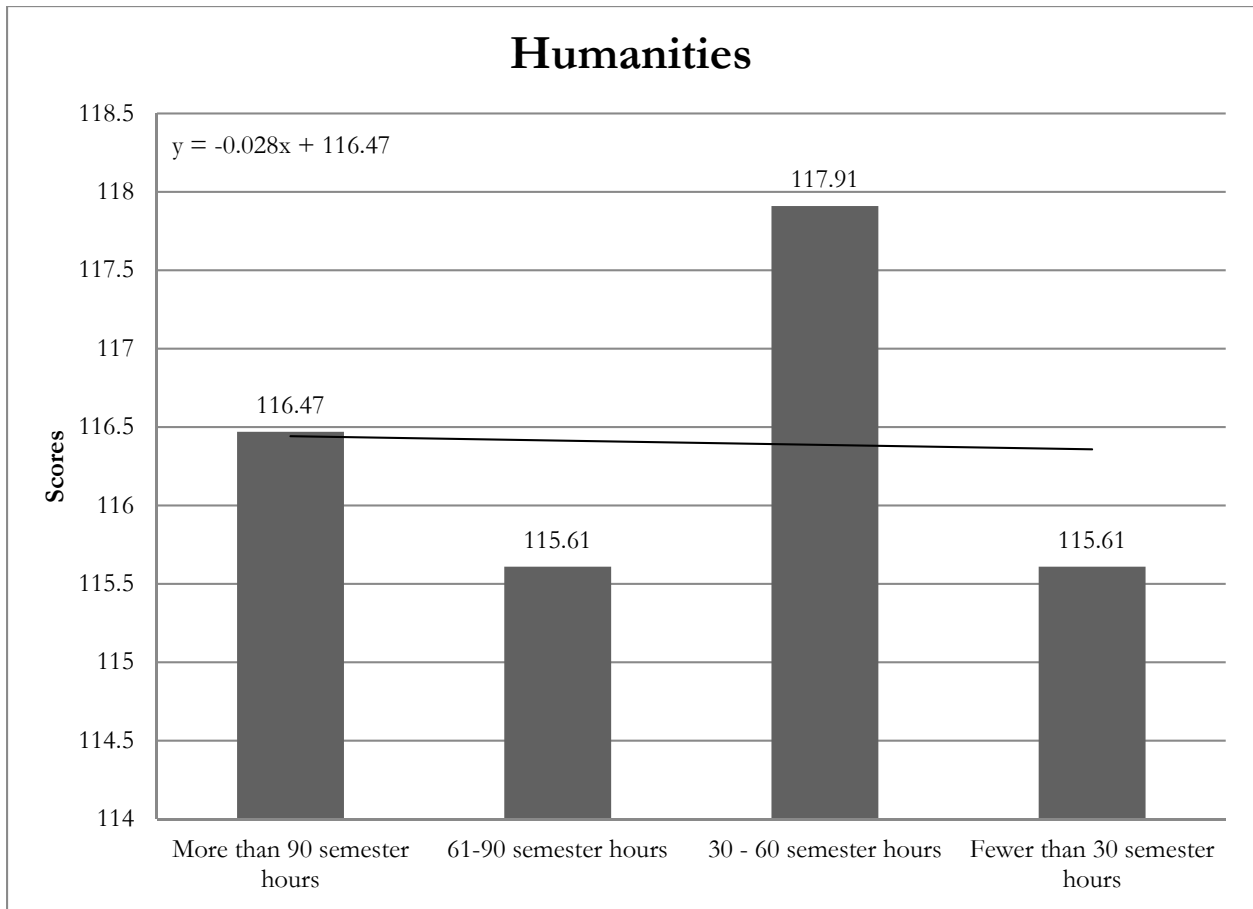


Figure 6

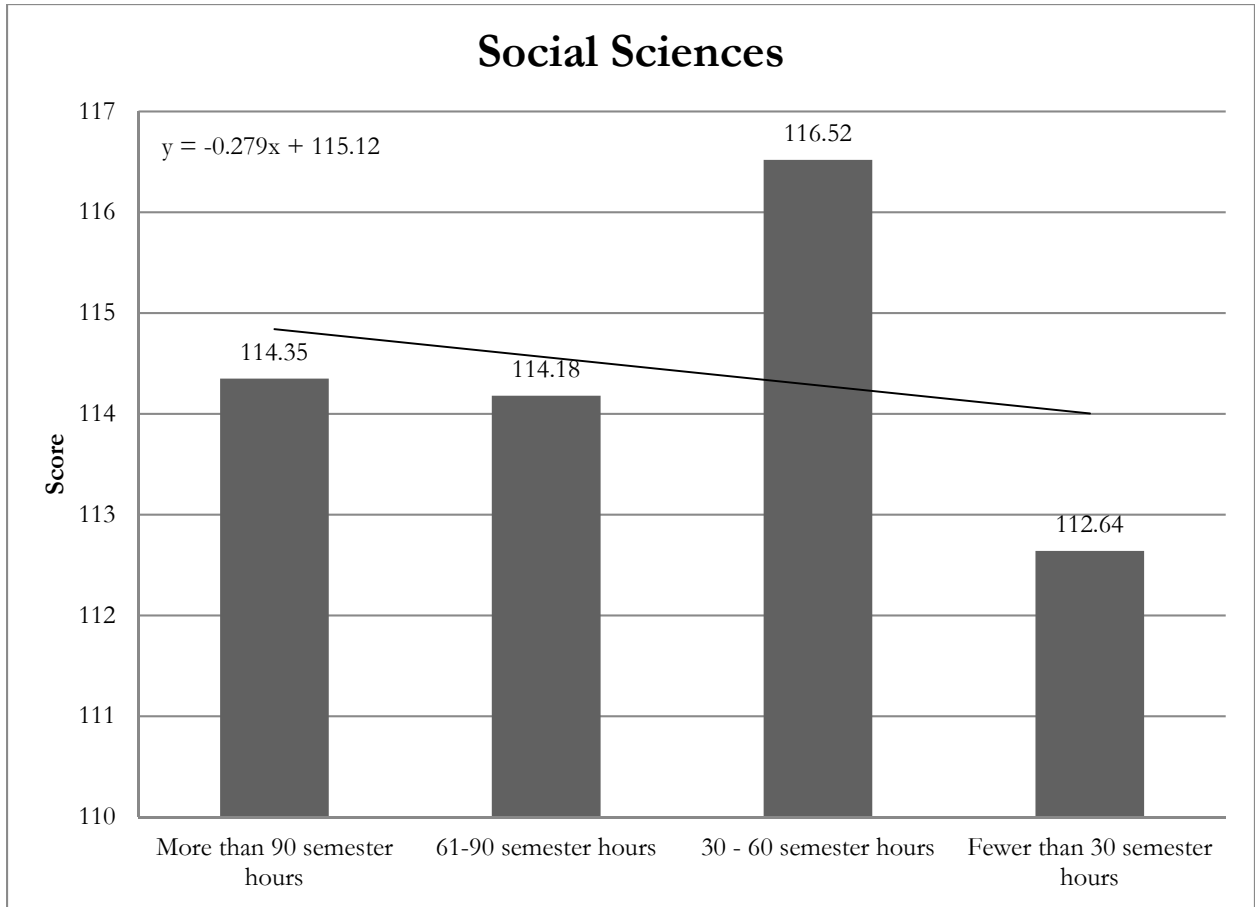


Figure 7

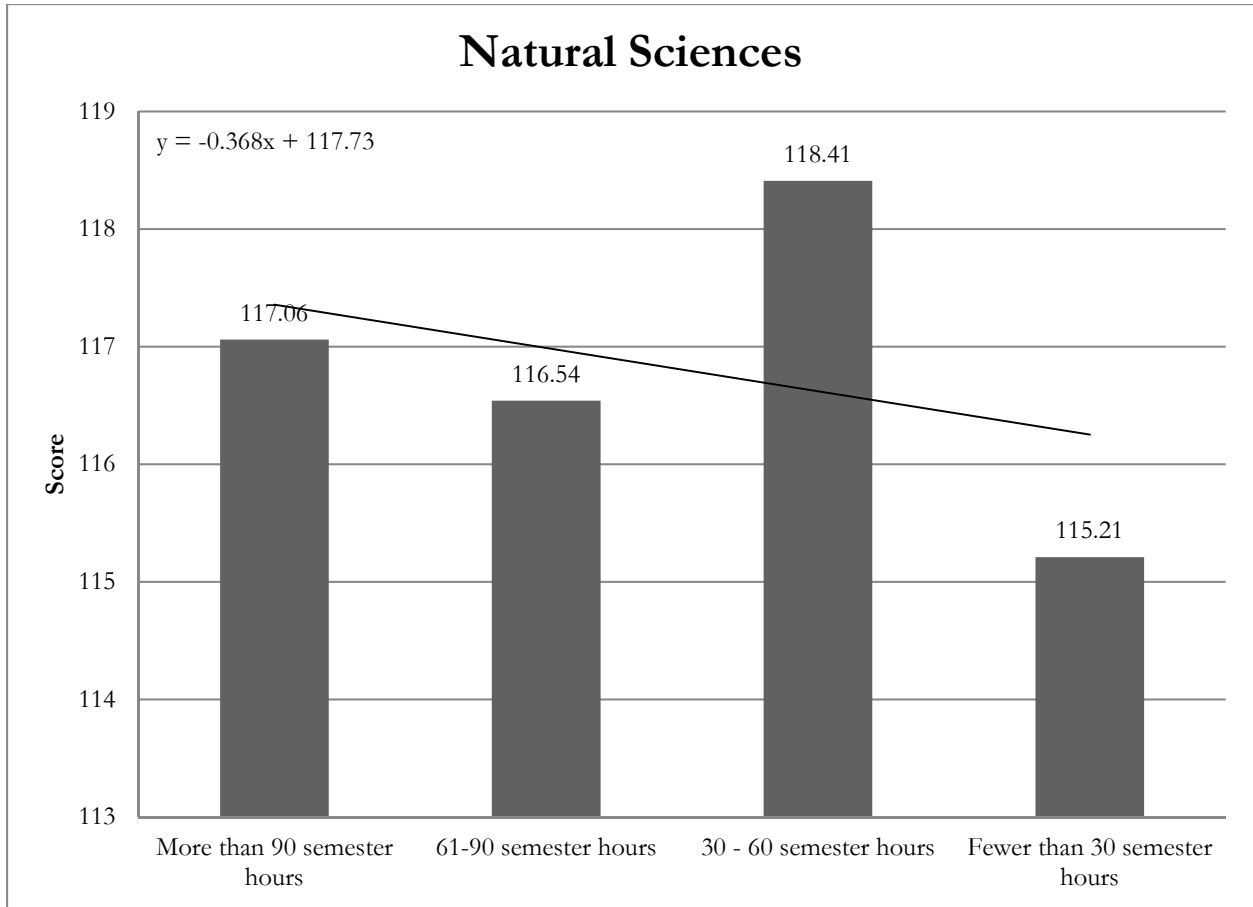


Figure 8

## Significant Findings

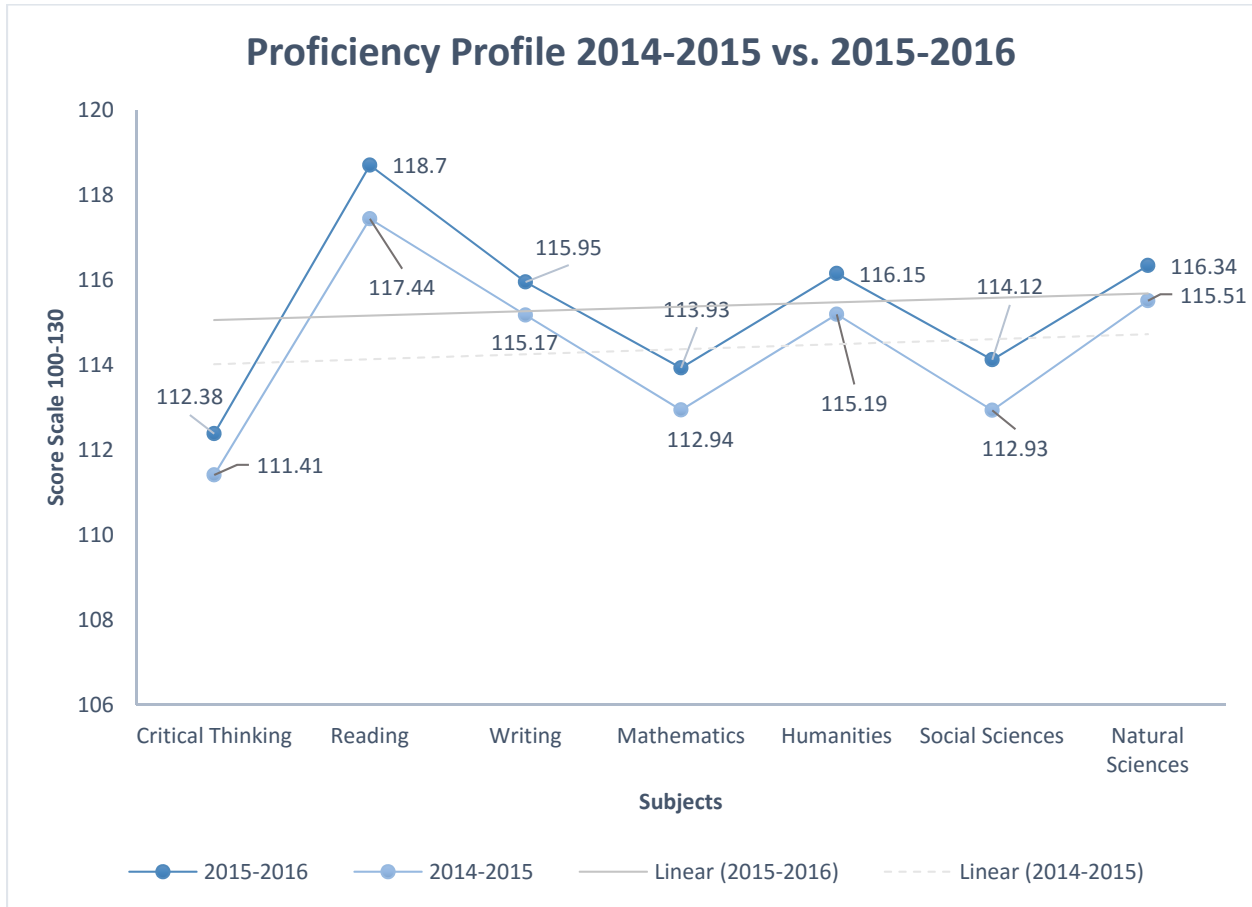


Figure 9

In figure 9, we have a line chart for comparison of the proficiency profile 2015 – 2016 academic year versus the previous academic year. The graph clearly shows an improvement over the previous academic year results.



## Demographic Analysis

### Program Enrolled

Number of students tested: 448

Number of students included in these statistics: 443

	Number	Total Score	Critical Thinking	Reading	Writing	Mathematics	Humanities	Social Sciences	Natural Sciences
<b>Total Group</b>	443	447.63 (20.03)	112.38 (6.80)	118.70 (6.93)	115.95 (4.74)	113.93 (6.07)	116.15 (6.54)	114.12 (6.52)	116.34 (6.49)
<b>AA/AS</b>	31	438.45 (18.66)	109.13 (5.54)	115.94 (8.00)	114.32 (4.04)	111.48 (6.21)	113.00 (6.03)	112.23 (5.50)	113.45 (6.74)
<b>BA/BS</b>	327	450.91 (20.01)	113.39 (6.92)	119.82 (6.59)	116.62 (4.63)	114.66 (6.13)	116.91 (6.61)	115.24 (6.46)	117.32 (6.38)
<b>Transfer Program</b>	1	417.00 (0.00)	106.00 (0.00)	107.00 (0.00)	108.00 (0.00)	106.00 (0.00)	114.00 (0.00)	101.00 (0.00)	109.00 (0.00)
<b>Career/Vocational</b>	17	444.47 (15.05)	111.18 (5.79)	117.88 (5.11)	115.18 (4.23)	113.59 (4.84)	116.35 (4.36)	112.76 (4.80)	114.76 (6.21)
<b>Certificate</b>	9	443.78 (19.14)	111.11 (5.53)	117.78 (7.64)	114.56 (6.04)	113.22 (5.14)	117.00 (6.38)	111.56 (5.46)	115.89 (5.67)
<b>Life-Long Learning</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Work Force Training</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Other</b>	58	436.10 (15.38)	109.12 (5.36)	114.40 (6.18)	113.57 (4.46)	111.45 (4.98)	113.36 (5.72)	109.86 (5.47)	113.02 (5.44)

## Transfer Status

Number of students tested: 448

Number of students included in these statistics: 443

	Number	Total Score	Critical Thinking	Reading	Writing	Mathematics	Humanities	Social Sciences	Natural Sciences
<b>Total Group</b>	443	447.63 (20.03)	112.38 (6.80)	118.70 (6.93)	115.95 (4.74)	113.93 (6.07)	116.15 (6.54)	114.12 (6.52)	116.34 (6.49)
<b>Not a transfer</b>	414	447.44 (20.13)	112.29 (6.82)	118.57 (6.96)	115.96 (4.79)	113.91 (6.09)	116.03 (6.61)	114.05 (6.54)	116.22 (6.49)
<b>0 - 15 hours transferred</b>	15	450.00 (17.42)	113.87 (6.44)	120.33 (6.13)	115.27 (3.45)	114.27 (5.46)	118.33 (5.26)	115.27 (5.41)	117.20 (6.27)
<b>16 - 30 hours transferred</b>	7	452.43 (7.56)	115.00 (2.62)	122.14 (3.76)	117.00 (4.07)	113.29 (4.33)	119.00 (2.20)	116.43 (3.81)	119.14 (4.64)
<b>Over 30 hours transferred</b>	7	449.14 (26.22)	111.86 (8.22)	119.43 (7.72)	115.43 (4.75)	114.86 (7.36)	115.71 (6.45)	113.57 (8.67)	118.57 (7.63)

## Major

Number of students tested: 448

Number of students included in these statistics: 443

	Number	Total Score	Critical Thinking	Reading	Writing	Mathematics	Humanities	Social Sciences	Natural Sciences
<b>Total Group</b>	443	447.63 (20.03)	112.38 (6.80)	118.70 (6.93)	115.95 (4.74)	113.93 (6.07)	116.15 (6.54)	114.12 (6.52)	116.34 (6.49)
<b>Accounting</b>	24	447.21 (17.94)	111.46 (6.63)	118.21 (7.42)	115.29 (4.64)	115.63 (5.61)	115.63 (6.29)	113.79 (5.85)	115.25 (7.22)
<b>Chemistry</b>	6	459.83 (20.80)	116.33 (8.14)	123.50 (4.72)	118.33 (4.27)	116.33 (6.77)	119.50 (7.11)	118.17 (4.74)	120.17 (5.70)
<b>Communications</b>	17	449.88 (24.12)	113.35 (7.85)	119.18 (8.35)	117.00 (6.32)	113.18 (6.31)	117.18 (8.18)	114.94 (7.54)	116.53 (7.41)
<b>Computer &amp; Information Sciences</b>	14	459.64 (19.94)	115.79 (6.11)	122.21 (5.67)	117.71 (4.79)	118.29 (7.02)	118.07 (5.71)	118.00 (5.06)	119.93 (5.87)
<b>Criminal Justice</b>	10	436.60 (15.77)	111.40 (7.13)	116.30 (6.03)	114.70 (4.78)	107.50 (2.62)	114.30 (6.93)	111.90 (5.54)	115.60 (5.02)
<b>Earth, Atmosphere &amp; Marine Sciences</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Economics</b>	3	427.67 (7.59)	107.67 (2.36)	111.00 (1.63)	111.67 (3.09)	108.33 (1.89)	109.33 (1.70)	108.33 (2.87)	112.00 (4.08)
<b>Education</b>	36	447.69 (19.27)	111.92 (6.18)	118.50 (6.84)	115.78 (4.72)	115.06 (5.77)	115.89 (6.62)	114.11 (5.57)	115.58 (6.19)
<b>Engineering &amp; Engineering Technologies</b>	2	443.00 (15.00)	110.00 (7.00)	118.50 (5.50)	117.00 (5.00)	109.50 (0.50)	111.50 (4.50)	114.50 (4.50)	116.50 (6.50)

<b>English</b>	12	454.17 (21.94)	116.00 (6.62)	120.75 (6.72)	118.25 (7.05)	113.50 (5.50)	118.92 (6.41)	117.08 (7.06)	118.50 (5.66)
<b>Environmental Sciences</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Agriculture</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Foreign Languages &amp; Literature</b>	2	451.00 (5.00)	115.00 (3.00)	122.00 (1.00)	118.00 (2.00)	111.50 (1.50)	115.50 (1.50)	118.50 (2.50)	120.00 (2.00)
<b>Geological Sciences</b>	2	456.50 (15.50)	113.00 (6.00)	118.00 (7.00)	118.00 (1.00)	120.00 (4.00)	114.50 (5.50)	114.50 (9.50)	117.50 (3.50)
<b>Health &amp; Medical Sciences</b>	76	447.05 (19.37)	112.55 (6.59)	118.66 (6.45)	115.28 (4.39)	113.62 (5.52)	116.58 (6.42)	113.26 (6.37)	116.84 (6.00)
<b>History</b>	4	447.00 (25.70)	114.50 (9.55)	118.25 (8.58)	113.75 (4.15)	112.50 (5.72)	115.50 (5.72)	113.50 (11.41)	120.75 (9.42)
<b>Liberal Studies</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Marketing</b>	7	454.57 (16.13)	115.57 (4.78)	119.71 (6.56)	116.57 (3.42)	116.86 (5.36)	117.57 (4.95)	116.57 (5.29)	118.57 (5.12)
<b>Mathematical Sciences</b>	5	471.80 (19.29)	117.40 (7.12)	125.00 (4.24)	121.80 (5.08)	123.60 (3.93)	122.20 (5.42)	120.80 (5.64)	120.20 (6.24)
<b>Music</b>	5	460.00 (15.13)	113.20 (5.00)	124.40 (4.63)	120.00 (2.19)	115.80 (5.04)	118.40 (7.55)	120.40 (4.03)	118.40 (2.42)
<b>Philosophy</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Physics &amp; Astronomy</b>	2	487.50 (11.50)	123.00 (4.00)	128.00 (2.00)	121.00 (1.00)	126.50 (0.50)	125.50 (4.50)	125.50 (4.50)	124.50 (1.50)
<b>Allied Health</b>	6	435.00 (14.82)	109.33 (4.46)	112.67 (7.91)	114.67 (4.07)	110.33 (4.57)	111.33 (3.73)	112.00 (6.83)	111.67 (5.59)
<b>Political Science</b>	8	447.50 (13.12)	111.00 (4.87)	118.88 (6.45)	116.75 (2.95)	114.13 (3.89)	115.38 (6.30)	114.50 (5.00)	115.63 (4.33)
<b>Psychology</b>	21	437.00 (17.87)	109.86 (5.61)	116.62 (6.91)	113.24 (3.91)	110.05 (5.51)	113.76 (5.38)	112.19 (6.26)	114.48 (5.92)

<b>Religion &amp; Theology</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Social Work</b>	12	448.25 (18.29)	112.42 (7.08)	118.50 (7.73)	116.08 (4.99)	115.00 (4.47)	116.50 (6.79)	113.75 (5.34)	116.17 (8.35)
<b>Sociology</b>	2	424.00 (13.00)	108.00 (5.00)	111.50 (7.50)	114.00 (2.00)	103.50 (0.50)	108.00 (7.00)	110.50 (3.50)	112.00 (5.00)
<b>Undecided</b>	33	444.79 (15.88)	110.79 (5.91)	118.12 (5.54)	116.15 (3.58)	113.48 (5.93)	116.39 (5.00)	112.79 (5.77)	114.39 (5.82)
<b>Other A</b>	48	446.00 (17.66)	111.90 (6.31)	118.40 (6.78)	115.75 (3.49)	113.29 (6.11)	115.98 (5.79)	113.29 (5.88)	116.17 (6.94)
<b>Other B</b>	3	454.00 (18.71)	112.00 (8.04)	122.00 (4.55)	120.00 (3.56)	113.67 (4.64)	118.67 (6.02)	114.00 (5.89)	117.33 (6.24)
<b>Other C</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Anthropology &amp; Archeology</b>	3	452.00 (15.30)	117.33 (5.44)	117.67 (4.19)	117.00 (3.56)	114.00 (4.32)	119.00 (3.56)	117.33 (5.44)	115.33 (3.86)
<b>Architecture &amp; Environmental Design</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Art &amp; Art History</b>	8	448.50 (21.04)	113.50 (8.41)	119.13 (7.66)	115.13 (4.78)	113.13 (3.14)	116.88 (7.90)	114.25 (8.80)	117.50 (6.02)
<b>Banking &amp; Finance</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Biological Sciences</b>	38	455.24 (20.39)	114.34 (7.09)	120.79 (6.35)	117.39 (4.65)	116.29 (5.66)	117.84 (6.74)	116.16 (6.78)	118.18 (6.48)
<b>Business Administration</b>	34	439.50 (18.70)	109.59 (6.22)	115.97 (6.65)	114.38 (5.25)	112.18 (5.47)	112.85 (6.12)	112.09 (6.07)	114.00 (5.82)

## Gender

**Number of students tested: 448**

**Number of students included in these statistics: 443**

	Number	Total Score	Critical Thinking	Reading	Writing	Mathematics	Humanities	Social Sciences	Natural Sciences
<b>Total Group</b>	443	447.63 (20.03)	112.38 (6.80)	118.70 (6.93)	115.95 (4.74)	113.93 (6.07)	116.15 (6.54)	114.12 (6.52)	116.34 (6.49)
<b>Male</b>	96	453.84 (21.66)	114.13 (7.32)	120.21 (6.74)	116.74 (5.11)	116.76 (6.82)	117.14 (6.83)	115.96 (6.64)	117.85 (6.39)
<b>Female</b>	329	446.33 (19.00)	112.01 (6.54)	118.40 (6.85)	115.86 (4.60)	113.22 (5.54)	115.96 (6.41)	113.67 (6.37)	116.06 (6.38)

\*Note: Not all students provided gender information.

## GPA

Number of students tested: 448

Number of students included in these statistics: 443

	Number	Total Score	Critical Thinking	Reading	Writing	Mathematics	Humanities	Social Sciences	Natural Sciences
<b>Total Group</b>	443	447.63 (20.03)	112.38 (6.80)	118.70 (6.93)	115.95 (4.74)	113.93 (6.07)	116.15 (6.54)	114.12 (6.52)	116.34 (6.49)
<b>None yet, entering freshman</b>	217	448.88 (19.12)	112.69 (6.58)	119.04 (6.98)	116.14 (4.52)	114.37 (5.60)	116.47 (6.37)	114.28 (6.43)	116.69 (6.38)
<b>3.50 - 4.00</b>	125	452.38 (20.66)	113.70 (7.17)	120.02 (6.69)	117.11 (4.67)	115.10 (6.33)	117.35 (6.75)	115.47 (6.82)	117.49 (6.44)
<b>3.00 - 3.49</b>	75	441.73 (19.41)	110.71 (6.42)	116.71 (6.74)	114.68 (4.94)	112.69 (6.30)	114.45 (6.38)	112.71 (6.14)	114.51 (6.58)
<b>2.50 - 2.99</b>	19	429.84 (11.42)	107.79 (4.96)	115.11 (5.42)	111.47 (3.23)	107.74 (3.21)	113.05 (4.75)	109.95 (4.25)	112.47 (5.14)
<b>2.00 - 2.49</b>	7	435.57 (14.60)	109.71 (5.36)	115.57 (6.21)	114.71 (3.06)	109.14 (4.64)	111.14 (5.49)	111.71 (4.10)	115.14 (4.88)
<b>1.00 - 1.99</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Less than 1.00</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

## Hours Working

Number of students tested: 448

Number of students included in these statistics: 443

	Number	Total Score	Critical Thinking	Reading	Writing	Mathematics	Humanities	Social Sciences	Natural Sciences
<b>Total Group</b>	443	447.63 (20.03)	112.38 (6.80)	118.70 (6.93)	115.95 (4.74)	113.93 (6.07)	116.15 (6.54)	114.12 (6.52)	115.51 (6.11)
<b>0</b>	207	449.77 (20.31)	113.23 (6.86)	119.31 (6.83)	116.20 (4.85)	114.52 (6.01)	116.92 (6.64)	114.65 (6.60)	115.71 (6.09)
<b>1 - 15</b>	136	447.13 (18.40)	111.77 (6.53)	118.57 (6.68)	116.13 (4.35)	113.90 (5.56)	115.81 (6.06)	113.81 (6.36)	114.94 (5.75)
<b>16 - 30</b>	61	445.02 (17.69)	111.90 (6.09)	117.79 (6.84)	115.44 (4.00)	113.33 (5.96)	115.49 (6.36)	113.87 (5.61)	116.56 (6.95)
<b>more than 30</b>	39	442.10 (25.12)	110.74 (7.74)	117.28 (7.92)	114.74 (6.08)	111.79 (7.55)	114.26 (7.25)	112.79 (7.60)	114.57 (5.56)



## Enrollment Status

**Number of students tested: 448**

**Number of students included in these statistics: 443**

	Number	Total Score	Critical Thinking	Reading	Writing	Mathematics	Humanities	Social Sciences	Natural Sciences
<b>Total Group</b>	443	447.63 (20.03)	112.38 (6.80)	118.70 (6.93)	115.95 (4.74)	113.93 (6.07)	116.15 (6.54)	114.12 (6.52)	116.34 (6.49)
<b>Full Time</b>	434	447.92 (19.98)	112.47 (6.81)	118.75 (6.94)	116.01 (4.71)	114.03 (6.04)	116.21 (6.54)	114.20 (6.54)	116.41 (6.49)
<b>Part Time</b>	9	433.56 (17.31)	107.89 (4.51)	115.89 (5.80)	112.78 (4.98)	109.11 (5.82)	113.22 (5.88)	110.44 (4.27)	113.00 (5.37)

## Ethnicity

**Number of students tested: 448**

**Number of students included in these statistics: 443**

	Number	Total Score	Critical Thinking	Reading	Writing	Mathematics	Humanities	Social Sciences	Natural Sciences
<b>Total Group</b>	443	447.63 (20.03)	112.38 (6.80)	118.70 (6.93)	115.95 (4.74)	113.93 (6.07)	116.15 (6.54)	114.12 (6.52)	116.34 (6.49)
<b>African American</b>	58	431.91 (14.94)	108.10 (5.33)	114.95 (5.83)	112.43 (4.43)	108.60 (3.98)	112.60 (5.62)	110.12 (5.48)	112.81 (4.73)
<b>Black Hispanic</b>	1	421.00 (0.00)	108.00 (0.00)	115.00 (0.00)	108.00 (0.00)	103.00 (0.00)	110.00 (0.00)	112.00 (0.00)	113.00 (0.00)
<b>Hispanic</b>	4	458.50 (20.48)	116.75 (6.30)	122.75 (6.02)	116.75 (4.49)	117.25 (7.40)	118.50 (5.89)	118.25 (5.31)	121.25 (6.46)
<b>Latino</b>	1	446.00 (0.00)	112.00 (0.00)	121.00 (0.00)	116.00 (0.00)	113.00 (0.00)	114.00 (0.00)	116.00 (0.00)	118.00 (0.00)
<b>American Indian or Alaskan Native</b>	6	443.17 (13.81)	110.83 (5.93)	119.00 (3.27)	115.83 (3.13)	111.33 (4.75)	113.17 (3.39)	117.17 (3.13)	114.67 (5.79)
<b>Other/Decline</b>	4	430.25 (10.18)	107.75 (3.77)	111.50 (7.09)	111.75 (2.86)	110.50 (3.77)	109.50 (2.18)	109.75 (5.76)	111.50 (5.22)
<b>Asian, Asian American or Pacific Islander</b>	8	448.38 (20.40)	111.50 (6.89)	119.50 (6.87)	114.63 (5.15)	115.75 (5.70)	115.38 (7.57)	113.00 (6.20)	117.88 (4.96)
<b>White</b>	361	450.36 (19.60)	113.13 (6.77)	119.31 (6.91)	116.60 (4.53)	114.82 (5.90)	116.86 (6.49)	114.74 (6.49)	116.90 (6.58)

## Credit Hours

Number of students tested: 448

Number of students included in these statistics: 443

	Number	Total Score	Critical Thinking	Reading	Writing	Mathematics	Humanities	Social Sciences	Natural Sciences
<b>Total Group</b>	443	447.63 (20.03)	112.38 (6.80)	118.70 (6.93)	115.95 (4.74)	113.93 (6.07)	116.15 (6.54)	114.12 (6.52)	116.34 (6.49)
<b>None, entering freshman</b>	244	445.94 (18.92)	111.65 (6.54)	118.26 (6.82)	115.55 (4.56)	113.68 (5.62)	115.65 (6.23)	113.56 (6.33)	115.76 (6.48)
<b>Fewer than 30 semester hours or fewer than 45 quarter hours</b>	61	444.77 (20.18)	111.43 (6.70)	117.33 (7.39)	115.39 (5.03)	113.79 (6.04)	115.61 (7.15)	112.64 (6.65)	115.21 (6.02)
<b>30 - 60 semester hours or 45 - 90 quarter hours</b>	93	454.02 (18.71)	114.94 (6.39)	120.68 (6.11)	117.48 (4.35)	114.83 (6.16)	117.91 (6.47)	116.52 (5.83)	118.41 (5.84)
<b>61 - 90 semester hours or 91 - 145 quarter hours</b>	28	447.07 (26.27)	112.96 (7.97)	117.79 (8.20)	115.57 (5.73)	113.64 (8.33)	115.61 (6.85)	114.18 (8.00)	116.54 (7.83)
<b>More than 90 semester hours or more than 145 quarter hours</b>	17	448.06 (22.61)	111.41 (7.31)	120.53 (5.97)	115.88 (4.81)	113.41 (7.10)	116.47 (6.82)	114.35 (6.22)	117.06 (6.70)

## Curriculum Completed

**Number of students tested: 448**

**Number of students included in these statistics: 443**

	Number	Total Score	Critical Thinking	Reading	Writing	Mathematics	Humanities	Social Sciences	Natural Sciences
<b>Total Group</b>	443	447.63 (20.03)	112.38 (6.80)	118.70 (6.93)	115.95 (4.74)	113.93 (6.07)	116.15 (6.54)	114.12 (6.52)	116.34 (6.49)
<b>None</b>	242	446.38 (18.66)	111.69 (6.53)	118.29 (6.74)	115.69 (4.39)	113.97 (5.70)	115.61 (6.27)	113.52 (6.32)	115.93 (6.37)
<b>About 25%</b>	54	443.70 (19.65)	111.11 (6.08)	117.46 (7.26)	115.39 (5.09)	112.78 (5.42)	115.20 (6.64)	112.63 (6.13)	115.48 (6.14)
<b>About 50%</b>	34	450.15 (23.22)	113.79 (7.43)	118.85 (7.67)	115.94 (6.01)	114.76 (6.43)	117.21 (7.53)	115.26 (7.11)	116.47 (6.41)
<b>About 75%</b>	71	452.23 (21.46)	114.37 (7.11)	120.08 (7.23)	117.18 (4.96)	114.25 (6.74)	117.31 (6.80)	116.44 (6.45)	117.51 (7.01)
<b>100%</b>	42	450.05 (20.96)	113.48 (7.05)	120.12 (5.68)	116.07 (4.28)	113.93 (7.19)	117.67 (5.99)	114.67 (6.60)	117.69 (6.29)

## Age

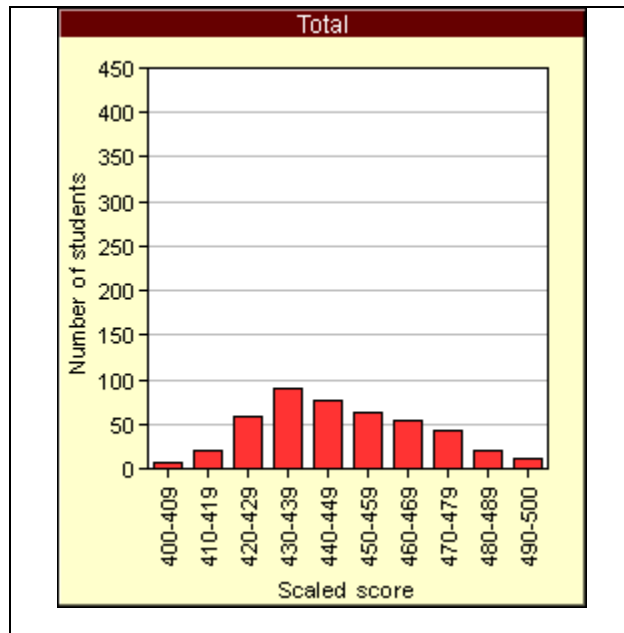
Number of students tested: 448

Number of students included in these statistics: 443

	Number	Total Score	Critical Thinking	Reading	Writing	Mathematics	Humanities	Social Sciences	Natural Sciences
<b>Total Group</b>	443	447.63 (20.03)	112.38 (6.80)	118.70 (6.93)	115.95 (4.74)	113.93 (6.07)	116.15 (6.54)	114.12 (6.52)	116.34 (6.49)
<b>&lt;20</b>	358	448.13 (19.62)	112.40 (6.80)	118.81 (6.89)	116.06 (4.68)	114.23 (5.84)	116.30 (6.55)	114.12 (6.50)	116.37 (6.51)
<b>20 - 29</b>	62	451.31 (19.88)	114.13 (6.25)	119.76 (6.73)	116.61 (4.56)	114.39 (6.48)	117.03 (5.91)	115.89 (6.39)	117.52 (6.22)
<b>30 - 39</b>	13	429.08 (15.49)	106.23 (4.71)	114.15 (5.05)	112.46 (4.55)	107.92 (6.03)	111.23 (4.99)	108.69 (3.81)	112.00 (4.21)
<b>40 - 49</b>	7	431.71 (22.11)	109.57 (6.84)	113.71 (7.42)	111.86 (4.64)	108.57 (5.21)	111.57 (7.94)	111.14 (5.51)	113.43 (7.40)
<b>50 - 59</b>	3	429.33 (15.69)	107.33 (4.03)	114.67 (7.04)	112.67 (4.92)	107.00 (2.16)	112.00 (5.66)	108.33 (4.03)	113.67 (5.31)
<b>60 - 69</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>&gt;=70</b>	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

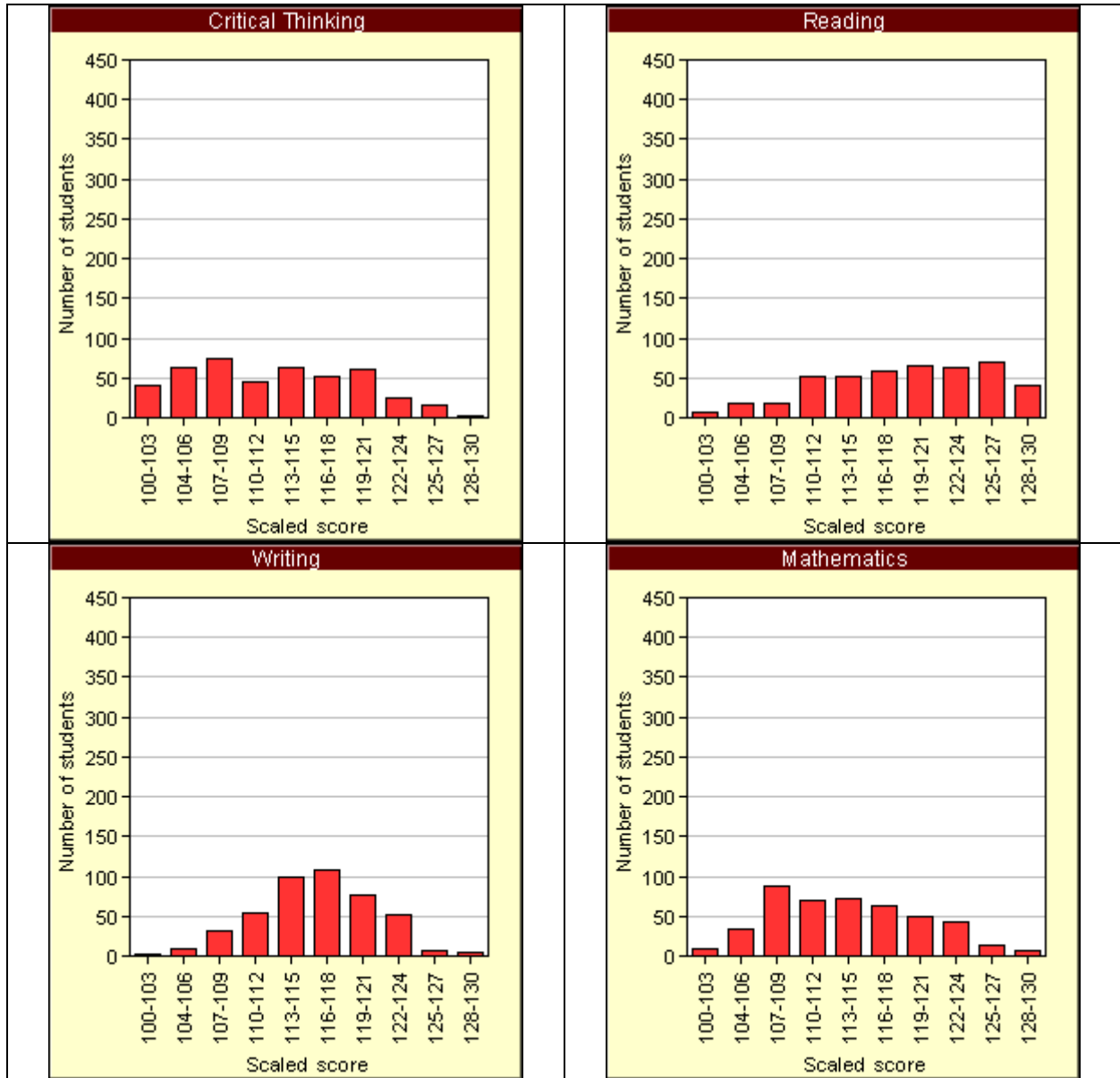
## Scaled Score Distributions

### Total



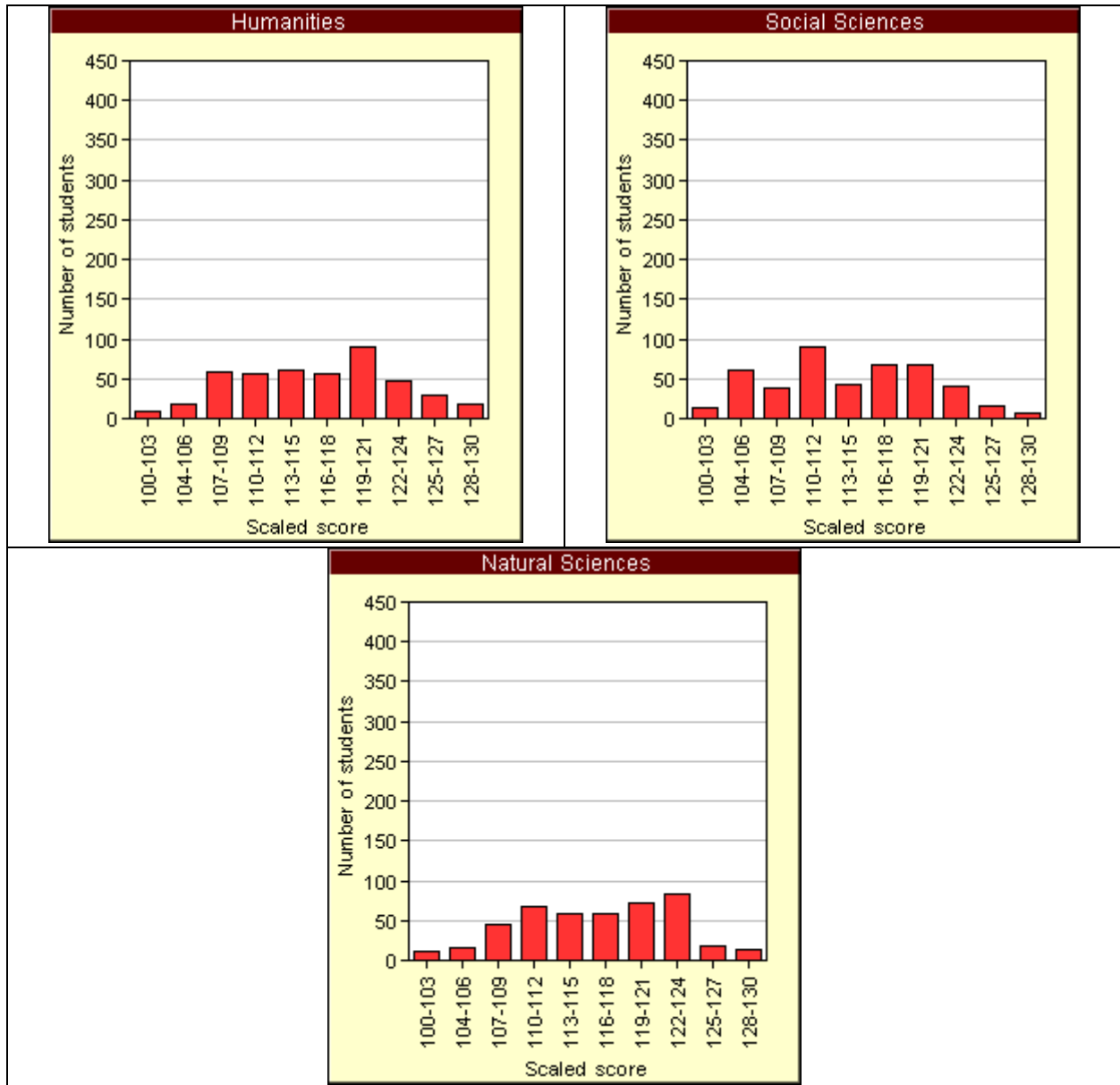
## Scaled Score Distributions

### Skills Subscores



## Scaled Score Distributions

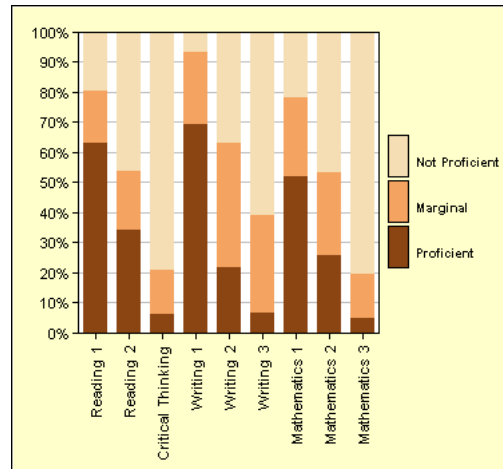
### Academic Area Subscores





## Summary of Proficiency Classifications

Skill Dimension	Proficiency Classification		
	Proficient	Marginal	Not Proficient
<b>Reading, Level 1</b>	63%	18%	19%
<b>Reading, Level 2</b>	34%	20%	46%
<b>Critical Thinking</b>	6%	15%	79%
<b>Writing, Level 1</b>	69%	24%	7%
<b>Writing, Level 2</b>	22%	41%	37%
<b>Writing, Level 3</b>	7%	32%	61%
<b>Mathematics, Level 1</b>	52%	26%	22%
<b>Mathematics, Level 2</b>	26%	28%	46%
<b>Mathematics, Level 3</b>	5%	14%	80%



## Comparative Data Analysis

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The following considerations should be kept in mind when interpreting comparative data:

- This data should be considered comparative rather than normative because the institutions included in the data do not represent proportionally the various types of higher education institutions. The data are drawn entirely from institutions that choose to use ETS Proficiency Profile. Such a self-selected sample may not be representative of all institutions.
- The number of students tested and sampling procedures vary from one institution to another. Therefore, it is impossible to verify that the students tested at each institution are representative of all that institution's students.
- The tables report data for institutions that have tested 30 or more students at the selected class level or number of credit hours attained. Institutions with fewer than 30 test takers at that class level are excluded from these calculations.

### Institution List

School Name	Number of Students
Alabama A&M University, AL	1,839
Alabama State University, AL	6,468
Athens State University, AL	3,584
Blue Mountain College, MS	397
Faulkner University, AL	523
Florida Gulf Coast University, FL	150
Florida Polytechnic University, FL	58
Florida Southern College - Lakeland, FL	68
Jacksonville State University, AL	2,276
Mississippi College, MS	1,111
Talladega College, AL	258
University of Mobile, AL	499
University of North Florida, FL	2,830
University of South Alabama, AL	212
University of West Alabama, AL	1,172
<b>Total</b>	<b>21,445</b>

## Comparative Subscores

\*Please note that all calculations refer to the eleven university's being compared unless labeled differently.

Critical Thinking	Troy University	Reading	Troy University	Writing	Troy University	Math	Troy University	Total Scores	Troy University
110.30	111.41	116.60	117.44	113.50	115.17	112.20	112.94	439.40	443.94

Humanities	Troy University	Social Sciences	Troy University	Natural Sciences	Troy University
113.70	115.19	112.40	112.93	114.20	115.51

## Support locations (Onsite), and Troy Online (Distance Learning)

Support locations (Onsite), and Troy Online (Distance Learning)

### Descriptive Statistics

n=4

	Possible Range	Mean Score	95% Confidence Limits* for Mean	Standard Deviation	25th Percentile	50th Percentile	75th Percentile
<b>Total Score</b>							
	400 to 500	434.75	428 to 441	5.67	431	435	439
<b>Skills Subscores:</b>							
<b>Critical Thinking</b>	100 to 130	107.50	104 to 111	3.50	105	109	111
<b>Reading</b>	100 to 130	113.75	110 to 117	4.66	110	114	118
<b>Writing</b>	100 to 130	113.75	111 to 117	1.48	113	114	115
<b>Mathematics</b>	100 to 130	112.00	109 to 115	3.08	110	111	115
<b>Context-Based Subscores:</b>							
<b>Humanities</b>	100 to 130	109.50	105 to 114	0.87	109	109	110
<b>Social Sciences</b>	100 to 130	110.25	106 to 114	3.90	108	110	113
<b>Natural Sciences</b>	100 to 130	112.00	108 to 116	4.06	109	113	116

\*The confidence limits are based on the assumption that the questions contributing to each scaled score are a sample from a much larger set of possible questions that could have been used to measure those same skills. If the group of students taking the test is a sample from some larger population of students eligible to be tested, the confidence limits include both sampling of students and sampling of questions as factors that could cause the mean score to vary. The confidence limits indicate the precision of the mean score of the students actually tested, as an estimate of the "true population mean" - the mean score that would result if all the students in the population could somehow be tested with all possible questions. These confidence limits were computed by a procedure that has a 95 percent probability of producing upper and lower limits that will surround the true population mean. The population size used in the calculation of the confidence limits for the mean scores in this report is 4.

Reports based on a sample of fewer than 50 test takers are representative of the performance of **that sample only**. Reports based on **fewer than 50 test takers** should not be considered representative of the larger group of like students, and inferences or generalizations about the larger population or subgroup **should not** be made based on such small samples.

## Cohort Questions Specific to Troy University

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### Troy Campus Fall 2015

#	Question												
	Were you dually enrolled while in high school? (Taking college classes and high school classes at same time) (268 of 268 examinees responded, 100%)												
1	<table border="0" style="margin-left: 40px;"> <thead> <tr> <th style="text-align: left;">Option</th> <th style="text-align: left;">Responses</th> <th style="text-align: left;">%</th> </tr> </thead> <tbody> <tr> <td>a. Yes</td> <td>113</td> <td>42</td> </tr> <tr> <td>b. No</td> <td>155</td> <td>58</td> </tr> <tr> <td>-- no response</td> <td>0</td> <td>0</td> </tr> </tbody> </table>	Option	Responses	%	a. Yes	113	42	b. No	155	58	-- no response	0	0
Option	Responses	%											
a. Yes	113	42											
b. No	155	58											
-- no response	0	0											
	Are you a first generation college student? (268 of 268 examinees responded, 100%)												
2	<table border="0" style="margin-left: 40px;"> <thead> <tr> <th style="text-align: left;">Option</th> <th style="text-align: left;">Responses</th> <th style="text-align: left;">%</th> </tr> </thead> <tbody> <tr> <td>a. Yes</td> <td>68</td> <td>25</td> </tr> <tr> <td>b. No</td> <td>200</td> <td>75</td> </tr> <tr> <td>-- no response</td> <td>0</td> <td>0</td> </tr> </tbody> </table>	Option	Responses	%	a. Yes	68	25	b. No	200	75	-- no response	0	0
Option	Responses	%											
a. Yes	68	25											
b. No	200	75											
-- no response	0	0											
	Did you complete college level Biology? (268 of 268 examinees responded, 100%)												
3	<table border="0" style="margin-left: 40px;"> <thead> <tr> <th style="text-align: left;">Option</th> <th style="text-align: left;">Responses</th> <th style="text-align: left;">%</th> </tr> </thead> <tbody> <tr> <td>a. Yes</td> <td>27</td> <td>10</td> </tr> <tr> <td>b. No</td> <td>241</td> <td>90</td> </tr> <tr> <td>-- no response</td> <td>0</td> <td>0</td> </tr> </tbody> </table>	Option	Responses	%	a. Yes	27	10	b. No	241	90	-- no response	0	0
Option	Responses	%											
a. Yes	27	10											
b. No	241	90											
-- no response	0	0											
	Did you complete college level Math? (268 of 268 examinees responded, 100%)												
4	<table border="0" style="margin-left: 40px;"> <thead> <tr> <th style="text-align: left;">Option</th> <th style="text-align: left;">Responses</th> <th style="text-align: left;">%</th> </tr> </thead> <tbody> <tr> <td>a. Yes</td> <td>83</td> <td>31</td> </tr> <tr> <td>b. No</td> <td>185</td> <td>69</td> </tr> <tr> <td>-- no response</td> <td>0</td> <td>0</td> </tr> </tbody> </table>	Option	Responses	%	a. Yes	83	31	b. No	185	69	-- no response	0	0
Option	Responses	%											
a. Yes	83	31											
b. No	185	69											
-- no response	0	0											
	Did you receive the Leadership, Chancellor, or Millennium scholarship? (268 of 268 examinees responded, 100%)												
5	<table border="0" style="margin-left: 40px;"> <thead> <tr> <th style="text-align: left;">Option</th> <th style="text-align: left;">Responses</th> <th style="text-align: left;">%</th> </tr> </thead> <tbody> <tr> <td>a. Yes</td> <td>238</td> <td>89</td> </tr> <tr> <td>b. No</td> <td>30</td> <td>11</td> </tr> <tr> <td>-- no response</td> <td>0</td> <td>0</td> </tr> </tbody> </table>	Option	Responses	%	a. Yes	238	89	b. No	30	11	-- no response	0	0
Option	Responses	%											
a. Yes	238	89											
b. No	30	11											
-- no response	0	0											
	Did you complete college level English? (268 of 268 examinees responded, 100%)												
6	<table border="0" style="margin-left: 40px;"> <thead> <tr> <th style="text-align: left;">Option</th> <th style="text-align: left;">Responses</th> <th style="text-align: left;">%</th> </tr> </thead> <tbody> <tr> <td>a. Yes</td> <td>136</td> <td>51</td> </tr> <tr> <td>b. No</td> <td>132</td> <td>49</td> </tr> <tr> <td>-- no response</td> <td>0</td> <td>0</td> </tr> </tbody> </table>	Option	Responses	%	a. Yes	136	51	b. No	132	49	-- no response	0	0
Option	Responses	%											
a. Yes	136	51											
b. No	132	49											
-- no response	0	0											

# Question

Are you conditionally admitted to TROY? (268 of 268 examinees responded, 100%)

7	Option		Responses %	
	a.	Yes	53	20
b.	No	215	80	
	-- no response	0	0	

Was Troy your first choice? (268 of 268 examinees responded, 100%)

8	Option		Responses %	
	a.	Yes	200	75
b.	No	68	25	
	-- no response	0	0	

## Item Level Data

### Item Information

n = 224 for all item level data

**Number of Test Takers = 151**

Section	Item Number <sup>(a)</sup>	Percent Correct Institution	Percent Correct National <sup>(b)</sup>	Percent Omit	Percent Not Reached	Skill Area	Proficiency Level	Type of Content
1	1	30.5	32.2	0.7	0	Reading	II	Recognize explicit information
1	2	30.5	35.6	0	0	Reading	I	Meaning in context
1	3	27.8	25.4	0	0	Critical Thinking	III	Discern purpose of a reference
1	4	35.1	33.5	0	0	Critical Thinking	III	Recognize a valid inference
1	5	73.5	67.4	0	0	Reading	II	Discern purpose of a reference
1	6	57.6	55.3	0	0	Reading	I	Discern facts from a passage
1	7	90.1	84.9	0	0	Writing	I	Recognize agreement
1	8	90.1	74.7	0	0	Writing	II	Recast an existing sentence
1	9	94.0	81.0	0	0	Writing	II	Recast an existing sentence
1	10	80.8	66.1	0	0	Writing	II	Recast an existing sentence
1	11	78.8	62.5	0	0	Mathematics	I	Algebraic expression
1	12	53.0	42.5	0	0	Mathematics	II	Translation to algebraic expression
1	13	19.2	15.4	0	0	Mathematics	III	Percent change - ratio and proportion
1	14	83.4	72.0	0	0	Mathematics	I	Interpret a trend represented in a graph
1	15	58.3	55.1	0	0	Critical Thinking	III	Evaluate hypotheses
1	16	69.5	64.1	0	0	Critical Thinking	III	Evaluate hypotheses
1	17	57.6	46.7	0	0	Reading	I	Discern facts from a passage



Section	Item Number <sup>(a)</sup>	Percent Correct Institution	Percent Correct National <sup>(b)</sup>	Percent Omit	Percent Not Reached	Skill Area	Proficiency Level	Type of Content
1	18	70.9	63.0	0	0	Critical Thinking	III	Recognize an assumption
1	19	29.8	31.5	0	0	Critical Thinking	III	Determine relevance of information
1	20	47.0	40.6	0	0	Reading	II	Recognize a valid inference
1	21	51.0	44.3	0	0	Critical Thinking	III	Determine relevance of information
1	22	55.0	48.1	0	0	Reading	I	Recognize explicit information
1	23	13.9	12.4	0	0	Mathematics	III	Word problem - logarithmic function
1	24	84.1	78.5	0	0	Mathematics	I	Number line
1	25	82.8	68.8	0	0	Mathematics	II	Problems involving sets - properties of numbers
1	26	87.4	75.2	0	0	Mathematics	III	Exponential functions
1	27	54.3	42.9	0	0	Mathematics	II	Arithmetic word problem - units of measurement
1	28	84.8	65.6	0	0	Writing	III	Recognize correct construction
1	29	46.4	25.7	0	0	Writing	III	Recognize correct construction
1	30	95.4	88.1	0	0	Writing	I	Appropriate connector
1	31	43.7	41.5	0	0	Writing	I	Recognize incorrect adjective comparison
1	32	62.9	54.2	0	0	Writing	III	Recognize correct usage
1	33	60.9	50.4	0	0	Critical Thinking	III	Discern purpose of a reference
1	34	52.3	42.6	0	0	Reading	II	Discern primary purpose
1	35	50.3	46.8	0	0	Reading	I	Recognize explicit information
1	36	52.3	46.4	0	0	Critical Thinking	III	Determine relevance of information
1	37	65.6	58.7	0	0	Reading	I	Recognize explicit information
1	38	45.0	36.2	0	0	Reading	II	Recognize a valid inference
1	39	45.0	32.7	0	0	Critical Thinking	III	Determine relevance of information
1	40	71.5	52.0	0	0	Reading	II	Synthesize material

Section	Item Number <sup>(a)</sup>	Percent Correct Institution	Percent Correct National <sup>(b)</sup>	Percent Omit	Percent Not Reached	Skill Area	Proficiency Level	Type of Content
1	41	52.7	52.8	0	0.7	Critical Thinking	III	Recognize an assumption
1	42	54.7	42.8	0	0.7	Reading	II	Recognize a valid inference
1	43	52.0	40.6	0	0.7	Writing	I	Order sentences in a paragraph
1	44	42.7	38.2	0	0.7	Writing	III	Recognize inappropriate parallelism
1	45	47.3	42.0	0	0.7	Writing	III	Recognize inappropriate idiom
1	46	93.3	76.2	0	0.7	Writing	I	Recognize agreement
1	47	72.7	69.6	0	0.7	Writing	I	Recognize grammatical correction
1	48	70.0	58.6	0	0.7	Writing	III	Recognize correct construction
1	49	95.3	89.5	0	0.7	Mathematics	I	Arithmetic word problem - work units
1	50	8.7	8.6	0	0.7	Mathematics	III	Word problem - algebraic expression
1	51	81.3	67.7	0	0.7	Mathematics	II	Translation to algebraic expression
1	52	80.7	65.8	0	0.7	Mathematics	II	Arithmetic word problem - ratio and proportion
1	53	32.7	17.8	0	0.7	Mathematics	II	Number line - algebraic manipulation
1	54	74.7	67.0	0	0.7	Mathematics	III	Solve problems involving inequalities
2	1	46.0	35.3	0	0.7	Critical Thinking	III	Recognize a valid inference
2	2	59.3	45.4	0	0.7	Reading	I	Recognize explicit information
2	3	53.3	46.6	0	0.7	Reading	II	Discern primary purpose
2	4	63.3	52.6	0	0.7	Critical Thinking	III	Discern purpose of a reference
2	5	54.0	42.2	0	0.7	Reading	II	Discern primary purpose
2	6	74.0	62.3	0	0.7	Reading	I	Recognize explicit information
2	7	74.7	68.8	0	0.7	Writing	II	Recast an existing sentence
2	8	93.3	90.7	0	0.7	Writing	II	Recast an existing sentence

Section	Item Number <sup>(a)</sup>	Percent Correct Institution	Percent Correct National <sup>(b)</sup>	Percent Omit	Percent Not Reached	Skill Area	Proficiency Level	Type of Content
2	9	81.3	70.0	0	0.7	Writing	II	Recast an existing sentence
2	10	48.0	36.2	0	0.7	Critical Thinking	III	Determine relevance of information
2	11	72.7	57.1	0	0.7	Reading	I	Discern facts from a passage
2	12	37.3	30.6	0	0.7	Critical Thinking	III	Determine relevance of information
2	13	65.3	55.1	0	0.7	Critical Thinking	III	Recognize an assumption
2	14	7.3	7.2	0	0.7	Mathematics	III	Data interpretation - percent change
2	15	80.0	68.7	0	0.7	Mathematics	I	Data interpretation - find information
2	16	85.3	65.6	0	0.7	Mathematics	I	Negative and positive integers - average
2	17	76.0	67.0	0	0.7	Critical Thinking	III	Evaluate an argument
2	18	70.7	60.1	0.7	0.7	Critical Thinking	III	Determine relevance of information
2	19	24.7	18.8	0.7	0.7	Reading	I	Recognize explicit information
2	20	54.7	36.4	0.7	0.7	Critical Thinking	III	Determine relevance of information
2	21	53.3	48.4	1.3	0.7	Critical Thinking	III	Recognize an assumption
2	22	61.3	52.4	1.3	0.7	Reading	II	Synthesize material
2	23	28.0	19.1	1.3	0.7	Critical Thinking	III	Evaluate data for consistency
2	24	60.7	49.0	0	0.7	Critical Thinking	III	Extrapolate from known facts
2	25	80.0	64.8	0	0.7	Writing	I	Recognize appropriate transitions
2	26	50.7	49.9	0	0.7	Writing	III	Recognize most effective revision
2	27	76.0	66.8	0	0.7	Mathematics	III	Data interpretation - rate of change

Section	Item Number <sup>(a)</sup>	Percent Correct Institution	Percent Correct National <sup>(b)</sup>	Percent Omit	Percent Not Reached	Skill Area	Proficiency Level	Type of Content
2	28	54.4	51.2	0	1.3	Mathematics	II	Arithmetic word problem - embedded ratios
2	29	75.8	58.0	0	1.3	Mathematics	I	Arithmetic word problem
2	30	24.8	25.8	0	1.3	Mathematics	III	Rational functions/exponents/change conditions and evaluate
2	31	58.4	45.0	0	1.3	Mathematics	I	Data interpretation - read information
2	32	82.6	69.4	0	1.3	Writing	I	Recognize correct word choice
2	33	85.2	75.7	0	1.3	Writing	I	Recognize correct word choice
2	34	87.9	75.5	0	1.3	Writing	III	Appropriate use of parallelism
2	35	77.9	61.3	0	1.3	Reading	I	Discern facts from a passage
2	36	69.8	52.2	0	1.3	Reading	II	Discern purpose of a reference
2	37	36.2	30.3	0.7	1.3	Critical Thinking	III	Evaluate hypotheses
2	38	53.7	43.9	0.7	1.3	Reading	II	Evaluate rhetorical structure
2	39	55.0	41.3	0.7	1.3	Reading	I	Recognize explicit information
2	40	66.2	51.5	0.7	2.0	Reading	II	Recognize a valid inference
2	41	37.2	32.0	0	2.0	Critical Thinking	III	Extrapolate from known facts
2	42	70.1	52.4	0	2.6	Writing	II	Incorporate new material into passage
2	43	61.9	49.2	0	2.6	Writing	III	Organize text for coherence/rhetorical effect
2	44	74.8	63.1	0	2.6	Writing	II	Recast an existing sentence
2	45	64.4	58.8	0	3.3	Writing	II	Recast an existing sentence
2	46	39.7	37.5	0	3.3	Mathematics	II	Algebraic word problem - units of measurement/rate
2	47	29.5	18.9	0.7	3.3	Mathematics	I	Data interpretation - read information
2	48	36.3	40.4	0.7	3.3	Mathematics	II	Algebraic expressions - average
2	49	35.6	23.0	0.7	3.3	Mathematics	III	Probability

Section	Item Number <sup>(a)</sup>	Percent Correct Institution	Percent Correct National <sup>(b)</sup>	Percent Omit	Percent Not Reached	Skill Area	Proficiency Level	Type of Content
2	50	49.3	38.8	0	3.3	Critical Thinking	III	Evaluate an argument
2	51	57.5	49.5	0	3.3	Critical Thinking	III	Evaluate an argument
2	52	54.1	41.8	0	3.3	Reading	I	Recognize explicit information
2	53	52.1	41.8	0	3.3	Critical Thinking	III	Extrapolate from known facts
2	54	45.2	35.9	0	3.3	Reading	II	Discern primary purpose

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## Definitions

- Mean, Arithmetic mean.
- The sum of a list of numbers, divided by the number of numbers.
- Median.
- "Middle value" of a list. The smallest number such that at least half the numbers in the list are no greater than it. If the list has an odd number of entries, the median is the middle entry in the list after sorting the list into increasing order. If the list has an even number of entries, the median is the smaller of the two middle numbers after sorting. The median can be estimated from a histogram by finding the smallest number such that the area under the histogram to the left of that number is 50%.
- Standard Deviation (SD).
- The standard deviation of a set of numbers is the rms of the set of deviations between each element of the set and the mean of the set. See also sample standard deviation.
- Sample Sum.

- The sum of a **random sample** from a population. The **expected value** of the sample sum is the **sample size** times the **population mean**. For sampling with replacement, the **SE** of the sample sum is the population **standard deviation**, times the square-root of the **sample size**. For sampling without replacement, the SE of the sample sum is the **finite-population correction**  $((N-n)/(N-1))^{1/2}$  times the SE of the sample sum for sampling with replacement, with  $N$  the size of the population and  $n$  the size of the sample.
- **Kurtosis tells you how tall and sharp the central peak is**, relative to a standard bell curve.
- Variance, population variance
- The variance of a list is the square of the **standard deviation** of the list, that is, the average of the squares of the deviations of the numbers in the list from their mean. The variance of a random variable  $X$ ,  $\text{Var}(X)$ , is the expected value of the squared difference between the variable and its expected value:  $\text{Var}(X) = E((X - E(X))^2)$ . The variance of a random variable is the square of the **standard error (SE)** of the variable.
- **Harmonic mean** (sometimes called the **subcontrary mean**) is one of several kinds of **average**. Typically, it is appropriate for situations when the average of **rates** is desired.
- The harmonic mean  $H$  of the positive **real numbers**  $x_1, x_2, \dots, x_n > 0$  is defined to be
- $$H = \frac{n}{\frac{1}{x_1} + \frac{1}{x_2} + \dots + \frac{1}{x_n}} = \frac{n}{\sum_{i=1}^n \frac{1}{x_i}} = \frac{n \prod_{j=1}^n x_j}{\sum_{i=1}^n \frac{\prod_{j=1}^n x_j}{x_i}}$$
- Geometric Distribution.
- The geometric distribution describes the number of trials up to and including the first success, in independent trials with the same probability of success. The geometric distribution depends only on the single parameter  $p$ , the probability of success in each trial. For example, the number of times one must toss a fair coin until the first time the coin lands heads has a geometric distribution with parameter  $p = 50\%$ . The geometric distribution assigns probability  $p \times (1-p)^{k-1}$  to the event that it takes  $k$  trials to the first success. The **expected value** of the geometric distribution is  $1/p$ , and its **SE** is  $(1-p)^{1/2}/p$ .
- Geometric Mean.
- The geometric mean of  $n$  numbers  $\{x_1, x_2, x_3, \dots, x_n\}$  is the  $n$ th root of their product:
- $(x_1 \times x_2 \times x_3 \times \dots \times x_n)^{1/n}$ .

# Appendix I

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## Levels

### Reading and Critical Thinking

#### *Level 1*

To be considered proficient at Level 1, students should be able to:

- recognize factual material explicitly presented in a reading passage
- understand the meaning of particular words or phrases in the context of a reading passage

#### *Level 2*

To be considered proficient at Level 2, students should be able to:

- synthesize material from different sections of a passage
- recognize valid inferences derived from material in the passage
- identify accurate summaries of a passage or of significant sections of the passage
- understand and interpret figurative language
- discern the main idea, purpose or focus of a passage or a significant portion of the passage

#### *Level 3*

To be considered proficient at Level 3, students should be able to:

- evaluate competing causal explanations
- evaluate hypotheses for consistency with known facts
- determine the relevance of information for evaluating an argument or conclusion
- determine whether an artistic interpretation is supported by evidence contained in a work
- evaluate the appropriateness of procedures for investigating a question of causation
- evaluate data for consistency with known facts, hypotheses or methods
- recognize flaws and inconsistencies in an argument

## Writing

#### *Level 1*

To be considered proficient at Level 1, students should be able to:

- recognize agreement among basic grammatical elements (e.g., nouns, verbs, pronouns and conjunctions)
- recognize appropriate transition words

- recognize incorrect word choice
- order sentences in a paragraph
- order elements in an outline

### *Level 2*

To be considered proficient at Level 2, students should be able to:

- incorporate new material into a passage
- recognize agreement among basic grammatical elements (e.g., nouns, verbs, pronouns and conjunctions) when these elements are complicated by intervening words or phrases
- combine simple clauses into single, more complex combinations
- recast existing sentences into new syntactic combinations

### *Level 3*

To be considered proficient at Level 3, students should be able to:

- discriminate between appropriate and inappropriate use of parallelism
- discriminate between appropriate and inappropriate use of idiomatic language
- recognize redundancy
- discriminate between correct and incorrect constructions
- recognize the most effective revision of a sentence

## Mathematics

### *Level 1*

To be considered proficient at Level 1, students should be able to:

- Solve word problems that would most likely be solved by arithmetic and do not involve conversion of units or proportionality. These problems can be multistep if the steps are repeated rather than embedded.
- Solve problems involving the informal properties of numbers and operations, often involving the Number Line, including positive and negative numbers, whole numbers and fractions (including conversions of common fractions to percent, such as converting  $\frac{1}{4}$  to 25 percent).
- Solve problems requiring a general understanding of square roots and the squares of numbers.
- Solve a simple equation or substitute numbers into an algebraic expression.
- Find information from a graph. This task may involve finding a specified piece of information in a graph that also contains other information.

### *Level 2*

To be considered proficient at Level 2, students should be able to:

- Solve arithmetic problems with some complications, such as complex wording, maximizing or minimizing and embedded ratios. These problems include algebra problems that can be solved by arithmetic (the answer choices are numeric).



- Simplify algebraic expressions, perform basic translations, and draw conclusions from algebraic equations and inequalities. These tasks are more complicated than solving a simple equation, though they may be approached arithmetically by substituting numbers.
- Interpret a trend represented in a graph, or choose a graph that reflects a trend.
- Solve problems involving sets; problems have numeric answer choices.

### *Level 3*

To be considered proficient at Level 3, students should be able to:

- solve word problems that would be unlikely to be solved by arithmetic; the answer choices are either algebraic expressions or numbers that do not lend themselves to back-solving
  - solve problems involving difficult arithmetic concepts, such as exponents and roots other than squares and square roots, and percent of increase or decrease
  - generalize about numbers (e.g., identify the values of  $(x)$  for which an expression increases as  $(x)$  increases)
  - Solve problems requiring an understanding of the properties of integers, rational numbers, etc.
  - interpret a graph in which the trends are to be expressed algebraically or one of the following is involved: exponents and roots other than squares and square roots, percent of increase or decrease
  - solve problems requiring insight or logical reasoning
-

## Appendix II (Technical Information)

	Total Score	Critical Thinking	Reading	Writing	Mathematics
<b>N of Cases</b>	448	448	448	448	448
<b>Minimum</b>	400.000	100.000	100.000	100.000	100.000
<b>Maximum</b>	500.000	130.000	130.000	130.000	130.000
<b>Range</b>	100.000	30.000	30.000	30.000	30.000
<b>Sum</b>	200,333.000	50,296.000	53,092.000	51,881.000	50,986.000
<b>Median</b>	445.000	112.000	119.000	116.000	113.000
<b>Arithmetic Mean</b>	447.172	112.268	118.509	115.806	113.808
<b>Standard Error of Arithmetic Mean</b>	0.965	0.324	0.336	0.232	0.291
<b>95.0% Lower Confidence Limit</b>	445.276	111.631	117.848	115.349	113.236
<b>95.0% Upper Confidence Limit</b>	449.068	112.905	119.170	116.262	114.380
<b>Trimmed Mean (10%, Two Sided)</b>	446.595	112.061	118.885	115.966	113.528
<b>No. of Observations Trimmed Out</b>	90	90	90	90	90
<b>Geometric Mean</b>	446.709	112.060	118.291	115.701	113.643
<b>Harmonic Mean</b>	446.249	111.854	118.070	115.594	113.480
<b>Standard Deviation</b>	20.420	6.858	7.119	4.917	6.164
<b>Variance</b>	416.993	47.029	50.676	24.179	37.990
<b>Coefficient of Variation</b>	0.046	0.061	0.060	0.042	0.054
<b>Skewness(G1)</b>	0.253	0.247	-0.402	-0.248	0.378
<b>Standard Error of Skewness</b>	0.115	0.115	0.115	0.115	0.115
<b>Kurtosis(G2)</b>	-0.451	-0.810	-0.571	0.437	-0.476
<b>Standard Error of Kurtosis</b>	0.230	0.230	0.230	0.230	0.230
<b>Shapiro-Wilk Statistic</b>	0.989	0.972	0.969	0.985	0.975
<b>Shapiro-Wilk p-value</b>	0.002	0.000	0.000	0.000	0.000
<b>Anderson-Darling Statistic</b>	1.484	3.816	3.460	2.294	4.121
<b>Adjusted Anderson-Darling Statistic</b>	1.487	3.823	3.466	2.298	4.128
<b>p-value</b>	<0.01	<0.01	<0.01	<0.01	<0.01

Statistic	Humanities	Social Sciences	Natural Sciences
<b>N of Cases</b>	448	448	448
<b>Minimum</b>	100.000	100.000	100.000
<b>Maximum</b>	130.000	130.000	130.000
<b>Range</b>	30.000	30.000	30.000
<b>Sum</b>	51,972.000	51,075.000	52,054.000
<b>Median</b>	116.000	114.000	117.000
<b>Arithmetic Mean</b>	116.009	114.007	116.192
<b>Standard Error of Arithmetic Mean</b>	0.314	0.311	0.313
<b>95.0% Lower Confidence Limit</b>	115.392	113.395	115.577
<b>95.0% Upper Confidence Limit</b>	116.626	114.618	116.806
<b>Trimmed Mean (10%, Two Sided)</b>	115.994	113.885	116.352
<b>No. of Observations Trimmed Out</b>	90	90	90
<b>Geometric Mean</b>	115.818	113.817	116.002
<b>Harmonic Mean</b>	115.626	113.628	115.810
<b>Standard Deviation</b>	6.648	6.586	6.618
<b>Variance</b>	44.192	43.376	43.802
<b>Coefficient of Variation</b>	0.057	0.058	0.057
<b>Skewness(G1)</b>	-0.043	0.130	-0.182
<b>Standard Error of Skewness</b>	0.115	0.115	0.115
<b>Kurtosis(G2)</b>	-0.728	-0.829	-0.577
<b>Standard Error of Kurtosis</b>	0.230	0.230	0.230
<b>Shapiro-Wilk Statistic</b>	0.984	0.975	0.980
<b>Shapiro-Wilk p-value</b>	0.000	0.000	0.000
<b>Anderson-Darling Statistic</b>	2.235	3.648	3.073
<b>Adjusted Anderson-Darling Statistic</b>	2.239	3.654	3.079
<b>p-value</b>	<0.01	<0.01	<0.01

## Model of Dataset

$$\text{Total scaled score} = a + b(\text{Writing}) + c(\text{Critical}) + d(\text{Mathematics}) + e(\text{Reading}) \cdot e^{f(\text{Critical})} \cdot g \cdot e^{h(\text{Critical})}$$

**Model:**  $y = a + b \cdot \text{Writing} + c \cdot \text{Critical} + d \cdot \text{Mathematics} + e \cdot \text{Reading} \cdot \exp(f \cdot \text{Critical}) - g \cdot \exp(h \cdot \text{Critical})$

**Text:**  $y = 128.935523894339 + 1.01016838765787 \cdot \text{Writing} + 0.890285710644063 \cdot \text{Critical} + 0.879252135184402 \cdot \text{Mathematics} + 0.0146165048383987 \cdot \text{Reading} \cdot \exp(0.0361377343547544 \cdot \text{Critical}) - 1.73218632785773 \cdot \exp(0.0361377343547544 \cdot \text{Critical})$

$\exp = e^x$

### Variable Sensitivity

Explanation of terms
<p><b>Sensitivity:</b> The relative impact within this model that a variable has on the target variable.</p> <p><b>% Positive:</b> The likelihood that increasing this variable will increase the target variable. If % positive = 70%, then 70% of the time increases in this variable lead to increases in the target variable (but the remaining 30% of the time it either decreases it or has no impact). If % positive = 0%, increases in this variable will not increase the target variable.</p> <p><b>Positive Magnitude:</b> When increases in this variable lead to increases in the target variable, this is generally how big the positive impact is.</p> <p><b>% Negative:</b> The likelihood that increasing this variable will decrease the target variable. If % negative = 60%, then 60% of the time increases in this variable lead to decreases in the target variable (but the remaining 40% of the time it either increases it or has no impact). If % negative = 0%, increases in this variable will not decrease the target variable.</p> <p><b>Negative Magnitude:</b> When increases in this variable lead to decreases in the target variable, this is generally how big the negative impact is.</p> <p><b>Details:</b> Given a model equation of the form <math>z = f(x,y,\dots)</math>, the influence metrics of <math>x</math> on <math>z</math> are defined as follows:</p>

**Sensitivity:**  $\left| \frac{\partial z}{\partial x} \right| \cdot \frac{\sigma(x)}{\sigma(z)}$ , evaluated at all input data points.

**% Positive:** The percent of data points where  $\frac{\partial z}{\partial x} > 0$

**% Negative:** The number of data points where  $\frac{\partial z}{\partial x} < 0$

**Positive magnitude:**  $\left| \frac{\partial z}{\partial x} \right| \cdot \frac{\sigma(x)}{\sigma(z)}$ , at all points where  $\frac{\partial z}{\partial x} > 0$

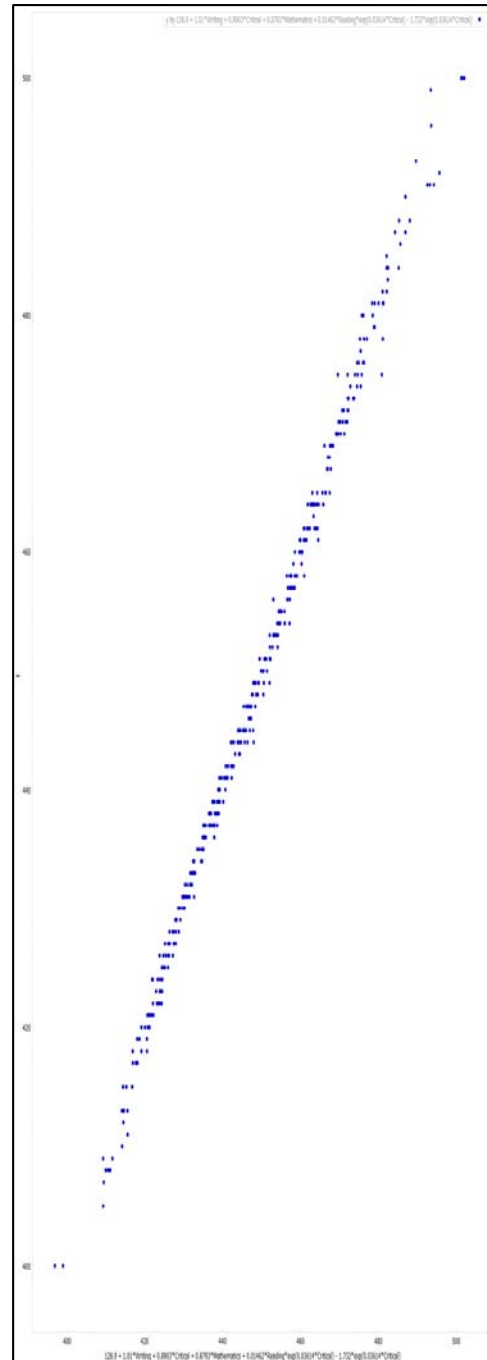
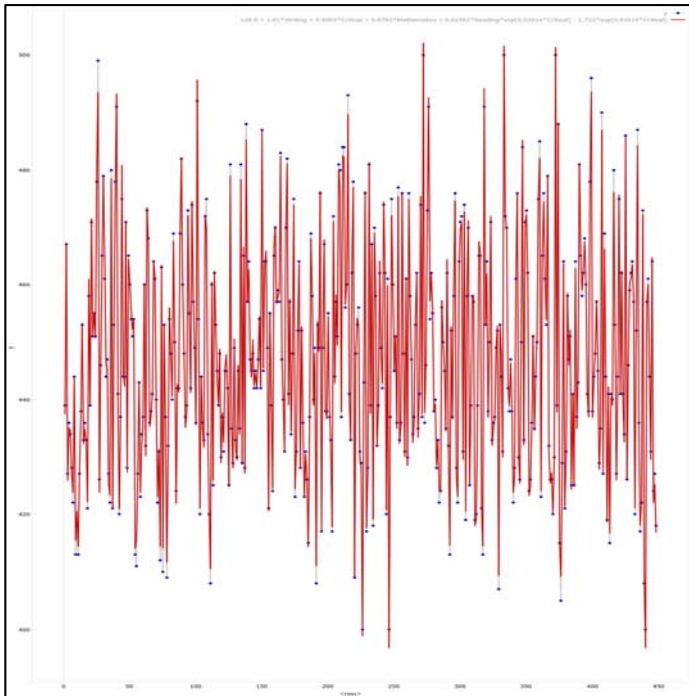
**Negative magnitude:**  $\left| \frac{\partial z}{\partial x} \right| \cdot \frac{\sigma(x)}{\sigma(z)}$ , at all points where  $\frac{\partial z}{\partial x} < 0$

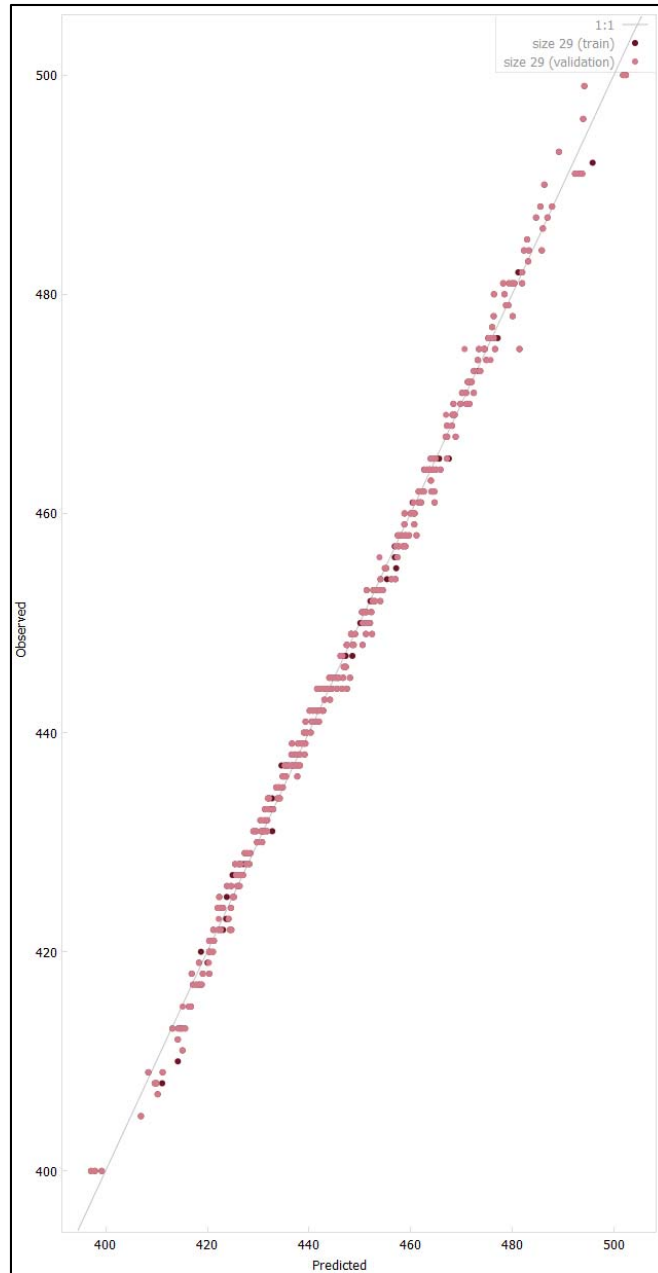
where:  
 $\frac{\partial z}{\partial x}$  is the partial derivative of z with respect to x,  
 $\sigma(x)$  is the standard deviation of x in the input data,  
 $\sigma(z)$  is the standard deviation of z,  
 $|x|$  denotes the absolute value of x and  
 $\bar{x}$  denotes the mean of x.

$$y = 128.9 + 1.01 * \text{Writing} + 0.8903 * \text{Critical} + 0.8793 * \text{Mathematics} + 0.01462 * \text{Reading} * \exp(0.03614 * \text{Critical}) - 1.732 * \exp(0.03614 * \text{Critical})$$

Variable	Sensitivity	% Positive	Positive Magnitude	% Negative	Negative Magnitude
Critical	0.31009	100%	0.31009	0%	0
Reading	0.30818	100%	0.30818	0%	0
Mathematics	0.26607	100%	0.26607	0%	0
Writing	0.22814	100%	0.22814	0%	0

Plot model values from the dataset calculated on entire dataset:





## Model Statistics

---

### Data set:

Name: Dataset 1

### Error Metrics:

Mean Absolute Error	1.03043
Mean Square Error	1.90309
R <sup>2</sup> Goodness of Fit	0.995426
Correlation Coefficient	0.997725
Rank Correlation	0.998427
Maximum Error	5.86949
Logarithmic Error	0.717982
Median Error	0.845879
Inter-quartile Absolute Error	0.849083
Signed Difference Error	0.0324043
Hybrid Correlation Error	0.0585049
Implicit Derivative Error	inf
AIC Error	362.041
AUC Error	1
Log Loss Error	nan
Hinge Loss Error	0



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