

Developmental Studies Student Learning Report (rev. 7/14)

Fall 2015– Spring 2016

School of Mathematics, Science & Health Sciences

Developmental Math and Science

Effectively assessing a degree program should address a number of factors:

- 1) Valid student learning outcomes should be clearly articulated;
- 2) Valid assessment measures should be used, consistent with the standards of professional practice;
- 3) There should be evidence that assessment data are being used by faculty to make necessary instructional or assessment changes; and there should be evidence that instructional or assessment changes are being implemented to improve student learning.

PART 1 (A & B)

Relationship of Degree Program Learning Outcomes to Departmental and University Missions

A. Clearly state the school, department and degree program missions.

University Mission	School Mission	Department Mission	Degree Program Mission
Our mission is to ensure students develop the skills and knowledge required to achieve professional and personal goals in dynamic local and global communities.	Central to the mission of the School of Mathematics, Science & Health Science is the preparation of students to achieve professional and personal goals in their respective disciplines and to enable their success in dynamic local and global communities. Three departments comprise this School, the Departments of Biology, Health Science, and Math and Physical Science. These departments pledge to	The mission of the Department of Mathematics and Physical Sciences at Rogers State University is to support students in their pursuit of knowledge in mathematics and physical science.	Our mission in Developmental Education is to ensure that skill deficient students develop the math and science skills necessary to be successful in their college-level classes to promote their future personal and professional success in their local and global communities.

University Mission	School Mission	Department Mission	Degree Program Mission
	<p>deliver existing and newly developed programs that meet student demands, and to be responsive to the evolving culture of academia in general and the sciences in particular.</p> <p>Our Strategy is to foster an academic setting of diverse curricula that inherently incorporates an environment of service and collegiality.</p>		

B. Clearly state school purposes, department purposes and degree program student learning outcomes. Align student learning outcomes with their appropriate school and department purposes, and these outcomes and purposes with their appropriate university commitments.

University Commitments	School Purposes	Department Purposes	Student Learning Outcomes
To provide quality associate, baccalaureate, and graduate degree opportunities and educational experiences which foster student excellence in oral and written communications, scientific reasoning and critical and creative thinking.	The School will offer developmental courses that will prepare students for college careers that will enhance their quality of life. This will be accomplished by honing and developing analytical and communication skills.	The Math and Physical Science Department will provide courses that will hone mathematical and scientific analytical skills, creative problem solving, critical thinking and data gathering as well as process thinking. These learned skills will prepare the students to be successful in college level math and science courses.	1) Students will demonstrate mastery of mathematics skills necessary for entry-level collegiate study.
To promote an atmosphere of academic and intellectual freedom and respect for diverse expression in an environment of physical safety that is supportive of teaching and learning.			
To provide a general liberal arts education that supports specialized academic programs and prepares students for lifelong learning and service in a diverse society.			
To provide students with a diverse,			

University Commitments	School Purposes	Department Purposes	Student Learning Outcomes
innovative faculty dedicated to excellence in teaching, scholarly pursuits and continuous improvement of programs.			
To provide university-wide student services, activities and resources that complement academic programs.			
To support and strengthen student, faculty and administrative structures that promote shared governance of the institution.			
To promote and encourage student, faculty, staff and community interaction in a positive academic climate that creates opportunities for cultural, intellectual and personal enrichment for the University and the communities it serves.			

PART 2

Discussion of Instructional Changes Resulting from 2014-2015 Developmental Studies Student Learning Report

List and discuss all instructional or assessment changes proposed in Part 5 of last year's Degree Program Student Learning Report, whether implemented or not. Any other changes or assessment activities from last year, but not mentioned in last year's report, should be discussed here as well. Emphasis should be placed on student learning and considerations such as course improvements, the assessment process, and the budget. If no changes were planned or implemented, simply state "No changes were planned or implemented."

Instructional or Assessment Changes	Changes Implemented (Y/N)	Impact of Changes on Degree Curriculum or Budget
The second Student Learning Outcome "Students will demonstrate mastery of scientific principles necessary for entry-level collegiate study" assessed in 14/15 report has been omitted in this report as it is assessed separately by the Department of Biology using BIOL 0123v and BIOL 1144 in a separate report.	Y	No impact from the changes except reported separately in another report by the Department of Biology.

PART 3

Discussion of the University Assessment Committee's 2014-2015 Peer Review Report

The University Assessment Committee in its Developmental Studies Peer Review Report provided feedback and recommendations for improvement in assessment. List or accurately summarize all feedback and recommendations from the committee, and state whether they were implemented or will be implemented at a future date. If they were not or will not be implemented, please explain why. If no changes were recommended last year, simply state "No changes were recommended."

Feedback and Recommended Changes from the University Assessment Committee	Suggestions Implemented (Y/N)	Changes that Were or Will Be Implemented, or Rationale for Changes that Were Not Implemented
No changes were recommended		

PART 4

Analysis of Evidence of Developmental Studies Student Learning Outcomes

For all student learning outcomes (as listed in Part 1 B above), describe the assessment measures and performance standards used, as well as the sampling methods and sample sizes. For each measure, document the results of the activity measured and draw relevant conclusions related to strengths and weaknesses of their performance.

A. Student Learning Outcomes	B. Assessment Measures	C. Performance Standards	D. Sampling Methods	E. Sample Size (N)	F. Results	G. Conclusions	H. Performance Standards Met (Y/N)																																	
1) Students will demonstrate mastery of mathematics skills necessary for entry-level collegiate study.	1a. Posttest in Elementary Algebra Plus with four objective areas of Order of Operations, Algebraic Expressions, Algebraic Equations, and Applications.	1a. 65% of the students taking both the pretest and the posttest will score at least 65% on the posttest.	1a. Students who took the posttest in day, evening, and online sections taught by both fulltime and adjunct faculty on all three campuses in fall and spring semesters.	1a.104 Students (Online-8 On campus-96)	1a. Posttest results: <table border="1" data-bbox="1052 394 1276 670"> <thead> <tr> <th>% score</th> <th>#</th> <th>%</th> </tr> </thead> <tbody> <tr><td>< 20</td><td>0</td><td>0</td></tr> <tr><td>21-30</td><td>0</td><td>0</td></tr> <tr><td>31-40</td><td>2</td><td>2</td></tr> <tr><td>41-50</td><td>13</td><td>13</td></tr> <tr><td>51-64</td><td>11</td><td>11</td></tr> <tr><td>65-70</td><td>15</td><td>14</td></tr> <tr><td>70-80</td><td>38</td><td>37</td></tr> <tr><td>81-90</td><td>17</td><td>16</td></tr> <tr><td>91-100</td><td>8</td><td>8</td></tr> </tbody> </table>	% score	#	%	< 20	0	0	21-30	0	0	31-40	2	2	41-50	13	13	51-64	11	11	65-70	15	14	70-80	38	37	81-90	17	16	91-100	8	8	1a. Overall 75% of the students taking the posttest made 65% or above. Out of the online sections, only 63% of the students taking posttest made 65% or above. Out of the on campus sections, 76% of the students made 65% or above. Online sections alone did not meet the standards.	1a. Y			
% score	#	%																																						
< 20	0	0																																						
21-30	0	0																																						
31-40	2	2																																						
41-50	13	13																																						
51-64	11	11																																						
65-70	15	14																																						
70-80	38	37																																						
81-90	17	16																																						
91-100	8	8																																						
	1b. Posttest in Intermediate Algebra with four course objective areas of Slope & Line, Functions, Systems & Equations, and Quadratic Equations.	1b. 65% of the students taking both the pretest and the posttest will score at least 65% on the posttest.	1b. Students who took the posttest in day, evening, and online sections taught by fulltime and adjunct faculty on all three campuses in fall and spring semesters.	1b. 80 students. (Online 13 On campus-67)	1b. Posttest results: <table border="1" data-bbox="1052 846 1276 1149"> <thead> <tr> <th>% score</th> <th>#</th> <th>%</th> </tr> </thead> <tbody> <tr><td>0-10</td><td>0</td><td>0</td></tr> <tr><td>11-20</td><td>1</td><td>1</td></tr> <tr><td>21-30</td><td>1</td><td>1</td></tr> <tr><td>31-40</td><td>2</td><td>3</td></tr> <tr><td>41-50</td><td>3</td><td>4</td></tr> <tr><td>51-64</td><td>14</td><td>18</td></tr> <tr><td>65-70</td><td>7</td><td>9</td></tr> <tr><td>71-80</td><td>25</td><td>31</td></tr> <tr><td>81-90</td><td>18</td><td>23</td></tr> <tr><td>91-100</td><td>9</td><td>11</td></tr> </tbody> </table>	% score	#	%	0-10	0	0	11-20	1	1	21-30	1	1	31-40	2	3	41-50	3	4	51-64	14	18	65-70	7	9	71-80	25	31	81-90	18	23	91-100	9	11	1b. Overall 74% of the students taking the posttest made 65% or above. Out of the online sections, 84% of the students taking posttest made 65% or above. Out of the on campus sections, 72% of the students made 65% or above. Both online and on campus sections met the standards.	1b. Y
% score	#	%																																						
0-10	0	0																																						
11-20	1	1																																						
21-30	1	1																																						
31-40	2	3																																						
41-50	3	4																																						
51-64	14	18																																						
65-70	7	9																																						
71-80	25	31																																						
81-90	18	23																																						
91-100	9	11																																						

A. Student Learning Outcomes	B. Assessment Measures	C. Performance Standards	D. Sampling Methods	E. Sample Size (N)	F. Results	G. Conclusions	H. Performance Standards Met (Y/N)																																	
	1c. Pre/Post Test Elementary Algebra Plus with four course objective areas of Oder of Operations, Algebraic Expressions, Algebraic Equations, and Applications.	1c. 70% of the students taking both the pretest and the posttest in Elementary Algebra Plus will improve at least 30%.	1c. Students who took the posttest in day, evening, and online sections taught by both fulltime and adjunct faculty on all three campuses in fall and spring semesters.	1c. 104 Students (Online-8 On campus-96)	1c. Pretest results: <table border="1" data-bbox="1056 370 1381 651"> <thead> <tr> <th>% score</th> <th>#</th> <th>%</th> </tr> </thead> <tbody> <tr><td>0-10</td><td>8</td><td>8</td></tr> <tr><td>11-20</td><td>14</td><td>13</td></tr> <tr><td>21-30</td><td>29</td><td>28</td></tr> <tr><td>31-40</td><td>33</td><td>32</td></tr> <tr><td>41-50</td><td>17</td><td>16</td></tr> <tr><td>51-64</td><td>3</td><td>3</td></tr> <tr><td>65-70</td><td>0</td><td>0</td></tr> <tr><td>71-80</td><td>0</td><td>0</td></tr> <tr><td>> 80</td><td>0</td><td>0</td></tr> </tbody> </table>	% score	#	%	0-10	8	8	11-20	14	13	21-30	29	28	31-40	33	32	41-50	17	16	51-64	3	3	65-70	0	0	71-80	0	0	> 80	0	0	1c. Overall 71% of the students taking both the pretest and the posttest improved more than 30%. Out of the online sections, only 63% of the students improved at least 30%. Out of the on campus sections, 72% of the students improved at least 30%. Online sections alone did not meet the standards.	1c. Y			
% score	#	%																																						
0-10	8	8																																						
11-20	14	13																																						
21-30	29	28																																						
31-40	33	32																																						
41-50	17	16																																						
51-64	3	3																																						
65-70	0	0																																						
71-80	0	0																																						
> 80	0	0																																						
	1d. Pre/Post Test Intermediate Algebra with four course objective areas of Slope & Line, Functions, Systems & Equations, and Quadratic Equations.	1d. 70% of the students taking both the pretest and the posttest in Intermediate Algebra will improve at least 30%.	1d. Students who took the posttest in day, evening, and online sections taught by fulltime and adjunct faculty on all three campuses in fall and spring semesters.	1d. 80 students. (Online 13 On campus-67)	1d. Pretest results: <table border="1" data-bbox="1056 776 1381 1084"> <thead> <tr> <th>% score</th> <th>#</th> <th>%</th> </tr> </thead> <tbody> <tr><td>0-10</td><td>8</td><td>10</td></tr> <tr><td>11-20</td><td>12</td><td>15</td></tr> <tr><td>21-30</td><td>18</td><td>23</td></tr> <tr><td>31-40</td><td>22</td><td>28</td></tr> <tr><td>41-50</td><td>11</td><td>14</td></tr> <tr><td>51-64</td><td>6</td><td>8</td></tr> <tr><td>65-70</td><td>2</td><td>3</td></tr> <tr><td>71-80</td><td>0</td><td>0</td></tr> <tr><td>81-90</td><td>0</td><td>0</td></tr> <tr><td>91-100</td><td>0</td><td>0</td></tr> </tbody> </table>	% score	#	%	0-10	8	10	11-20	12	15	21-30	18	23	31-40	22	28	41-50	11	14	51-64	6	8	65-70	2	3	71-80	0	0	81-90	0	0	91-100	0	0	1d. Overall 76% of the students taking both the pretest and the posttest improved more than 30%. Out of the online sections, 77% of the students improved at least 30%. Out of the on campus sections, 76% of the students improved at least 30%. Both online and on campus sections met the standards.	1d. Y
% score	#	%																																						
0-10	8	10																																						
11-20	12	15																																						
21-30	18	23																																						
31-40	22	28																																						
41-50	11	14																																						
51-64	6	8																																						
65-70	2	3																																						
71-80	0	0																																						
81-90	0	0																																						
91-100	0	0																																						
	1e. Based on results in the Entry-Level Assessment Through Fall 2013. Report compiled by Office of Accountability and	1e. Students completing Elementary Algebra and enrolling in Intermediate Algebra will make a grade of C or higher at the same	1e. Student success (A, B, C) tracked from Elementary Algebra through Intermediate Algebra for Fall 2013 students.	1e.	1e.	1e.	1e.																																	

A. Student Learning Outcomes	B. Assessment Measures	C. Performance Standards	D. Sampling Methods	E. Sample Size (N)	F. Results	G. Conclusions	H. Performance Standards Met (Y/N)
	Academics.	percentage rate or higher than those students who waive/clear remediation.					
	1f. Based on results in the Entry-Level Assessment through Fall 2013. Report compiled by Office of Accountability	1f. Students completing Int. Alg. And enrolling in College algebra (Math 1513) or Math for Critical Thinking (MATH 1503) in the next semester will make a grade of C or higher at the same percentage rate or higher than those students who waive/clear remediation.	1f. Student success (A, B, C) tracked from Intermediate Algebra through both College Algebra and Math for Critical Thinking for Fall 2013 students.	1f.	1f.	1f.	1f.

PART 5

Proposed Instructional Changes Based on Conclusions Drawn from Evidence Presented Above

State any proposed instructional or assessment changes to be implemented for the next academic year. They should be based on conclusions reported in Part 4 (above) or on informal activities, such as faculty meetings and discussions, conferences, pilot projects, textbook adoption, new course proposals, curriculum modifications, etc. Explain the rationale for these changes and how they will impact student learning and other considerations, such as curriculum, degree plan, assessment process, or budget. If no changes are planned, simply state "No changes are planned."

Student Learning Outcomes	Instructional or Assessment Changes	Rationale for Changes	Impact of Planned Changes on Student Learning and Other Considerations.
No changes are planned.	Department plans to implement a corequisite model for College Algebra, Math 1513 and Math. for Critical Thinking, Math 1503 that reduces the developmental student domain.	In order to further improve student success in college gateway courses.	Change is expected to increase the student success in college gateway courses, College Algebra and Math. For Critical Thinking.

PART 6

Shared Pedagogical Insight that Improves Student Learning or Classroom Engagement

(OPTIONAL) If your department or a faculty member has developed a method or technique of teaching that seems especially effective in improving student learning or student engagement in the classroom, please provide a brief description below. More detail can be communicated during the face to face peer review session.

Description

PART 7 (A & B)

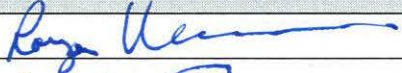

Assessment Measures and Faculty Participation

A. Assessment Measures:

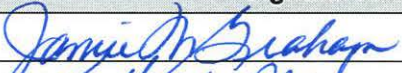

- 1) How many different assessment measures were used? Three measures per course (per SLO).
- 2) List the direct measures (see rubric): (1) Percentage of students passing the posttest at 65% or higher and (2) the percentage of students improving 30% from pretest to posttest in each of the three courses.
- 3) List the indirect measures (see rubric): Students success in subsequent college-level coursework.

B.

- 1) Provide the names and signatures of all faculty members who contributed to this report and indicate their respective roles:

Faculty Members	Roles in the Assessment Process (e.g., collect data, analyze data, prepare report, review report, etc.)	Signatures
Roya Namavar	Math Faculty - collected data	
Dr. Suhkitha Vidurupola	Math Faculty - collected and analyzed data, prepared the report	

- 2) Reviewed by:

Titles	Names	Signatures	Date
Department Head	Dr. Jamie M. Graham		10/31/16
Dean	Dr. Keith Martin		11/2/16