

<p style="text-align: center;">Course Outcomes Guide (COG)</p>

Course Title: MAT 100 Intermediate Algebra

Date: August 2015

Course Team: Rebecca Kendrick, Lead Instructor for MAT 100,
and other DEALS Math Faculty

Expected Learning Outcomes

Upon successful completion of this course, students will be able to:

1. Perform basic operations (add, subtract, multiply, divide, or simplify) on rational, radical, and complex expressions as well as functions.
2. Classify equations as linear, rational, radical, or exponential and identify techniques to solve each type of equation.
3. Solve quadratic, rational, radical, and exponential equations.
4. Graph quadratic, radical, and exponential functions.
5. Determine whether a relation is a function and find the domain of polynomial, rational, and radical functions.
6. Translate and model application problems involving quadratic, rational, radical, and exponential equations.
7. Use formulas.
8. Communicate and understand mathematical statements, ideas, and results, with the correct use of mathematical definitions, terminology, and symbolism.

Assessment: All MAT-100 Intermediate Algebra students complete the same homework, quizzes, and tests. We use MyMathLab to run the course and all instructors are using the same assignments. Additionally, all students take a common final exam.

The final exam is the outcomes assessment tool, with every question on the exam delegated to a specific course outcome.

1. Outcome #1 – questions 1-14 on final exam, worth 26 points
2. Outcome #2 – questions 15-16 on final exam, worth 5 points in 15/SP and 4 points in 14/FA (adjusted to simplify grading of multiple parts)
3. Outcome #3 – questions 17-24 on final exam, worth 16 points
4. Outcome #4 – questions 25-27 on final exam, worth 6 points
5. Outcome #5 – questions 28-32 on final exam, worth 11 points
6. Outcome #6 – questions 33-36 on final exam, worth 8 points
7. Outcome #7 – questions 37-38 on final exam, worth 6 points
8. Outcome #8 – questions 39-40 on final exam, worth 6 points

Validation: Every instructor receives a rubric for grading the final exam and all other tests in the course to ensure consistency in grading from section to section and instructor to instructor. We then compare results from semester to semester and year to year. For FY15, we did not have any external validation for our assessment.

Results: Analysis of student learning outcomes results reveal the following:

1. (Note) Success is defined as an assessment score of at least 69.5%, or 57.7 / 83 points in 14/FA and 58.4 / 84 points in 15/SP.
2. (Note) The 14/SU semester is not included in this COG because it operated under a different curriculum.
3. The data shows that, for the academic year, 76.2% (n=404) of students who completed the SLOA assessment fall into two categories – Pass/Pass (passing both the assessment and the course) or Fail/Fail (failing both the assessment and the course). These two categories are considered good as they show that students who meet (do not meet) the course outcomes pass (fail) the course.
4. The other 23.8% (n=126) of students who completed the SLOA assessment fall into a pass-fail case where they passed either the assessment or the course but failed the other. In a perfect world, all students would fall into pass-pass or fail-fail cases. We need to investigate two items:
 - a. Why do some students who show mastery of course outcomes end up failing the course?
 - b. Why do some students pass the course when they do not show mastery of course outcomes?

5. Outcome #'s 1 and 2 have the highest individual success rates at 70.2% and 73.3% respectively. Instruction on these two outcomes should remain consistent with more effort put into improving results on lower scored outcomes.
6. Outcome #'s 3, 6, and 8 have the lowest individual success rates at 44.5%, 42.1% and 23.6% respectively. Instructors should seek to improve students' results on at least one of these three outcomes by modifying their instructional methods (more in follow-up).

Follow-up:

1. In 14/FA, a new textbook for the developmental mathematics sequence was implemented. This change occurred for several reasons The new book:
 - a. offers a wider variety of problems,
 - b. has a wider range of problems at varying levels of difficulty,
 - c. is authored by our MAT-101 textbook author (Trigsted), and
 - d. offers a Guided Notebook (deemed essential for web-class success).

The results of this textbook change have been a bit disappointing. While it was expected that success rates would drop initially (due to increased rigor), the drastic drop in success is unsettling. To compare year over year:

13/FA	72.3%	14/SP	58.3%
14/FA	59.3%	15/SP	46.3%

It is unclear if the change in textbook, increased rigor, changing student population, or some other reason caused these decreased success rates. Most likely it was a combination of many things. Minor tweaks will be made to the MAT 100 curriculum for the upcoming academic year and o see if things improve.

2. Minor adjustments to curriculum for the 2015-2016 academic year include:
 - a. Removing section 19.1 (Square Root Property and Quadratic Formula) from Test 2. Instead, we will teach it after Test 2 and then test it on the final exam.
 - b. Removing section 19.4 (Circles) from the course entirely. Previously, this section was not included on the final exam and as such, students often neglected to complete the homework assignment. It is not necessary that students have exposure to this material prior to MAT-101.
3. **During the annual faculty dinner and conference in August 2015, developmental math faculty will receive a summary of their SLO results for each section taught during 14/FA and 15/SP and a summary of the SLO results for the course levels in aggregate. In small groups, faculty will generate ideas to improve success in the lowest scored outcomes (for most faculty, these are #'s 3, 6, and 8). Then, each group will share their ideas with all attendees. By the end of the conference, each faculty will create a plan for improving their own lowest outcome.**

4. As stated in 1.d above, one reason we implemented a new textbook starting in 14/FA was for our web students to have access to a Guided Notebook. This Notebook guides students through the e-text, directing them to definitions and processes to write down as well as to video examples to watch. Because web success rates have historically been much lower than lecture and hybrid success rates, we thought this would provide more structure for these students. Looking at the results from the past two semesters, the success rates in web-based sections remained unchanged (38% and 32%).
 - a. As the lead instructor for MAT 100, I teach a web section every fall and spring semester. Seeing the lack of improvement in these courses, I changed the way the students use the Guided Notebook for the 15/SU semester. Instead of relying on the videos provided by the publisher (imbedded in the e-text), I created my own lecture videos for each section. The course is still in progress and the evaluation of results will occur on next year's COG.
 - b. Success rates in web sections will remain under observation with new techniques implemented as needed in an effort to improve success and retention rates.

Budget Justification: No additional funding/resources is necessary at this time.

Attachments:

1. SLO Assessment
2. SLO Rubric
3. Grade Distribution Summary
4. SLOA at a Glance
5. AY 2014-2015 Assessment Results by Outcome

SLO Assessment for MAT 100 Intermediate Algebra

The SLO assessment is the Final Exam and is currently in use. For test security purposes, the exam is not attached to this Course Outcome Guide. A copy of the assessment is stored at the division level and is available to any faculty, staff, administrator, or accrediting body as requested.

Grading Rubric for Developmental Mathematics

Use this general scale for grading all tests and the Final Exam in MAT 098/099/100.

Percentage of Point Value	Description	
	<i>Computational Questions</i>	<i>Essay Questions</i>
100%	The student has the problem worked out completely, showing all the proper steps, and has the correct answer.	Answer must meet the criterion listed to the left AND must also be in complete sentences and use correct mathematical terminology and symbolism
90%	The student has worked out the problem using the correct mathematical procedure, but has made one minor mathematical (arithmetical) mistake giving the incorrect answer (unless the problem is testing one of these concepts, as oft is the case in MAT 098).	The criterion to the left is to be used.
75%	The student has used the correct mathematical procedure, but has several minor arithmetical errors or has one more major mathematical error in the problem.	The theme of the answer is correct, but has a minor error in mathematical terminology or symbolism OR the answer is not grammatically correct.
50%	The student has started the problem using the correct mathematical procedure, but has several mathematical errors and weak justification for the work.	The theme of the answer is correct but there is major mistake in mathematical terminology or symbolism.
25%	The student response demonstrates understanding of at least one major concept; however, it is mostly incorrect. Justifications may be missing or may lack clear mathematical reasoning. Only the correct answer is given without any supporting work.	The criterion to the left is to be used.
0	The student response is incorrect and lacks reasonable justification. The student did not respond to this problem.	The criterion to the left is to be used.

MAT-100 AY 2014-2015

	Total	A	B	C	D	F	WF	W/I/AU	Success	Completer Success
2014-2015 Summary	844	14.9% (n=126)	18.6% (n=157)	22.6% (n=191)	3.1% (n=26)	32.6% (n=275)	18.1% (n=153)	8.2% (n=69)	56.2% (n=474)	76.2%

Full-Time Faculty vs Adjunct Faculty

	Total	A	B	C	D	F	WF	W/I/AU	Success	Completer Success
Full-time	397	12.6% (n=50)	18.6% (n=74)	21.2% (n=84)	4.8% (n=19)	32.7% (n=130)	17.4% (n=69)	10.1% (n=40)	52.4% (n=208)	72.2%
Adjunct	447	17.0% (n=76)	18.6% (n=83)	23.9% (n=107)	1.6% (n=7)	32.4% (n=145)	18.8% (n=84)	6.5% (n=29)	59.5% (n=266)	79.6%

Academic year summary includes 14/SU, which was under a slightly different curriculum and textbook.

*Completer success is defined as the success rate of students who completed the course. It is calculated by the formula $(A + B + C) \div (\text{Total} - \text{WF} - \text{W} - \text{I} - \text{AU})$.

		MAT-100		14/SU								
	Total	A	B	C	D	F	WF	W/I/AU	Success	Completer Success		
Hybrid Summer 10	12	33.3% (n=4)	16.7% (n=2)	33.3% (n=4)	0.0% (n=0)	16.7% (n=2)	16.7% (n=2)	0.0% (n=0)	83.3% (n=10)	100.0%		
<i>Hybrid Subtotal</i>	12	33.3% (n=4)	16.7% (n=2)	33.3% (n=4)	0.0% (n=0)	16.7% (n=2)	16.7% (n=2)	0.0% (n=0)	83.3% (n=10)	100.0%		
Lecture Summer 10	21	28.6% (n=6)	19.0% (n=4)	33.3% (n=7)	0.0% (n=0)	14.3% (n=3)	4.8% (n=1)	4.8% (n=1)	81.0% (n=17)	89.5%		
Lecture Summer 8	16	31.3% (n=5)	12.5% (n=2)	6.3% (n=1)	0.0% (n=0)	37.5% (n=6)	18.8% (n=3)	12.5% (n=2)	50.0% (n=8)	72.7%		
<i>Lecture Subtotal</i>	37	29.7% (n=11)	16.2% (n=6)	21.6% (n=8)	0.0% (n=0)	24.3% (n=9)	10.8% (n=4)	8.1% (n=3)	67.6% (n=25)	83.3%		
Package Lecture	25	8.0% (n=2)	24.0% (n=6)	40.0% (n=10)	0.0% (n=0)	24.0% (n=6)	16.0% (n=4)	4.0% (n=1)	72.0% (n=18)	90.0%		
Package Web	17	29.4% (n=5)	41.2% (n=7)	11.8% (n=2)	0.0% (n=0)	11.8% (n=2)	5.9% (n=1)	5.9% (n=1)	82.4% (n=14)	93.3%		
<i>Package Subtotal</i>	42	16.7% (n=7)	31.0% (n=13)	28.6% (n=12)	0.0% (n=0)	19.0% (n=8)	11.9% (n=5)	4.8% (n=2)	76.2% (n=32)	91.4%		
Web 12	22	31.8% (n=7)	13.6% (n=3)	18.2% (n=4)	0.0% (n=0)	27.3% (n=6)	18.2% (n=4)	9.1% (n=2)	63.6% (n=14)	87.5%		
<i>Web Subtotal</i>	22	31.8% (n=7)	13.6% (n=3)	18.2% (n=4)	0.0% (n=0)	27.3% (n=6)	18.2% (n=4)	9.1% (n=2)	63.6% (n=14)	87.5%		
14/SU Subtotal	113	25.7% (n=29)	21.2% (n=24)	24.8% (n=28)	0.0% (n=0)	22.1% (n=25)	13.3% (n=15)	6.2% (n=7)	71.7% (n=81)	89.0%		

Full-Time Faculty vs Adjunct Faculty

	Total	A	B	C	D	F	WF	W/I/AU	Success	Completer Success
Adjunct	113	25.7% (n=29)	21.2% (n=24)	24.8% (n=28)	0.0% (n=0)	22.1% (n=25)	13.3% (n=15)	6.2% (n=7)	71.7% (n=81)	89.0%

*Completer success is defined as the success rate of students who completed the course. It is calculated by the formula (A + B + C) divided by (Total - WF - W - I - AU).

		MAT-100		14/FA							Completer Success	
	Total	A	B	C	D	F	WF	W/I/AU	Success	Completer Success		
Hybrid First 7.5	24	29.2% (n=7)	33.3% (n=8)	8.3% (n=2)	8.3% (n=2)	12.5% (n=3)	8.3% (n=2)	8.3% (n=2)	70.8% (n=17)	85.0%		
Hybrid Subtotal	24	29.2% (n=7)	33.3% (n=8)	8.3% (n=2)	8.3% (n=2)	12.5% (n=3)	8.3% (n=2)	8.3% (n=2)	70.8% (n=17)	85.0%		
Lecture 15 week	183	15.3% (n=28)	19.1% (n=35)	19.1% (n=35)	3.8% (n=7)	33.3% (n=61)	19.1% (n=35)	9.3% (n=17)	53.6% (n=98)	74.8%		
Lecture Subtotal	183	15.3% (n=28)	19.1% (n=35)	19.1% (n=35)	3.8% (n=7)	33.3% (n=61)	19.1% (n=35)	9.3% (n=17)	53.6% (n=98)	74.8%		
Package Hybrid	51	13.7% (n=7)	21.6% (n=11)	25.5% (n=13)	3.9% (n=2)	29.4% (n=15)	7.8% (n=4)	5.9% (n=3)	60.8% (n=31)	70.5%		
Package Lecture	123	13.0% (n=16)	20.3% (n=25)	34.1% (n=42)	4.9% (n=6)	26.0% (n=32)	9.8% (n=12)	1.6% (n=2)	67.5% (n=83)	76.1%		
Package Web	11	18.2% (n=2)	36.4% (n=4)	27.3% (n=3)	0.0% (n=0)	18.2% (n=2)	9.1% (n=1)	0.0% (n=0)	81.8% (n=9)	90.0%		
Package Subtotal	185	13.5% (n=25)	21.6% (n=40)	31.4% (n=58)	4.3% (n=8)	26.5% (n=49)	9.2% (n=17)	2.7% (n=5)	66.5% (n=123)	75.5%		
Web 15 week	26	11.5% (n=3)	7.7% (n=2)	19.2% (n=5)	0.0% (n=0)	38.5% (n=10)	34.6% (n=9)	23.1% (n=6)	38.5% (n=10)	90.9%		
Web Subtotal	26	11.5% (n=3)	7.7% (n=2)	19.2% (n=5)	0.0% (n=0)	38.5% (n=10)	34.6% (n=9)	23.1% (n=6)	38.5% (n=10)	90.9%		
14/FA Subtotal	418	15.1% (n=63)	20.3% (n=85)	23.9% (n=100)	4.1% (n=17)	29.4% (n=123)	15.1% (n=63)	7.2% (n=30)	59.3% (n=248)	76.3%		

Full-Time Faculty vs Adjunct Faculty

	Total	A	B	C	D	F	WF	W/I/AU	Success	Completer Success
Full-time	195	16.9% (n=33)	20.5% (n=40)	20.5% (n=40)	5.1% (n=10)	27.2% (n=53)	12.3% (n=24)	9.7% (n=19)	57.9% (n=113)	74.3%
Adjunct	223	13.5% (n=30)	20.2% (n=45)	26.9% (n=60)	3.1% (n=7)	31.4% (n=70)	17.5% (n=39)	4.9% (n=11)	60.5% (n=135)	78.0%

*Completer success is defined as the success rate of students who completed the course. It is calculated by the formula (A + B + C) divided by (Total - WF - W - I - AU).

		MAT-100		15/SP							Completer Success	
	Total	A	B	C	D	F	WF	W/I/AU	Success	Completer Success		
Hybrid First 7.5	19	5.3% (n=1)	26.3% (n=5)	26.3% (n=5)	10.5% (n=2)	21.1% (n=4)	21.1% (n=4)	10.5% (n=2)	57.9% (n=11)	84.6%		
Hybrid Subtotal	19	5.3% (n=1)	26.3% (n=5)	26.3% (n=5)	10.5% (n=2)	21.1% (n=4)	21.1% (n=4)	10.5% (n=2)	57.9% (n=11)	84.6%		
Lecture 12	18	16.7% (n=3)	11.1% (n=2)	38.9% (n=7)	0.0% (n=0)	27.8% (n=5)	11.1% (n=2)	5.6% (n=1)	66.7% (n=12)	80.0%		
Lecture 15 week	156	6.4% (n=10)	16.0% (n=25)	20.5% (n=32)	3.2% (n=5)	41.7% (n=65)	22.4% (n=35)	12.2% (n=19)	42.9% (n=67)	65.7%		
Lecture Subtotal	174	7.5% (n=13)	15.5% (n=27)	22.4% (n=39)	2.9% (n=5)	40.2% (n=70)	21.3% (n=37)	11.5% (n=20)	45.4% (n=79)	67.5%		
Package Hybrid	7	14.3% (n=1)	0.0% (n=0)	14.3% (n=1)	0.0% (n=0)	57.1% (n=4)	42.9% (n=3)	14.3% (n=1)	28.6% (n=2)	66.7%		
Package Lecture	66	16.7% (n=11)	16.7% (n=11)	18.2% (n=12)	3.0% (n=2)	37.9% (n=25)	19.7% (n=13)	7.6% (n=5)	51.5% (n=34)	70.8%		
Package Web	19	21.1% (n=4)	15.8% (n=3)	15.8% (n=3)	0.0% (n=0)	42.1% (n=8)	42.1% (n=8)	5.3% (n=1)	52.6% (n=10)	100.0%		
Package Subtotal	92	17.4% (n=16)	15.2% (n=14)	17.4% (n=16)	2.2% (n=2)	40.2% (n=37)	26.1% (n=24)	7.6% (n=7)	50.0% (n=46)	75.4%		
Web 15 week	28	14.3% (n=4)	7.1% (n=2)	10.7% (n=3)	0.0% (n=0)	57.1% (n=16)	35.7% (n=10)	10.7% (n=3)	32.1% (n=9)	60.0%		
Web Subtotal	28	14.3% (n=4)	7.1% (n=2)	10.7% (n=3)	0.0% (n=0)	57.1% (n=16)	35.7% (n=10)	10.7% (n=3)	32.1% (n=9)	60.0%		
15/SP Subtotal	313	10.9% (n=34)	15.3% (n=48)	20.1% (n=63)	2.9% (n=9)	40.6% (n=127)	24.0% (n=75)	10.2% (n=32)	46.3% (n=145)	70.4%		

Full-Time Faculty vs Adjunct Faculty

	Total	A	B	C	D	F	WF	W/I/AU	Success	Completer Success
Full-time	202	8.4% (n=17)	16.8% (n=34)	21.8% (n=44)	4.5% (n=9)	38.1% (n=77)	22.3% (n=45)	10.4% (n=21)	47.0% (n=95)	69.9%
Adjunct	111	15.3% (n=17)	12.6% (n=14)	17.1% (n=19)	0.0% (n=0)	45.0% (n=50)	27.0% (n=30)	9.9% (n=11)	45.0% (n=50)	71.4%

*Completer success is defined as the success rate of students who completed the course. It is calculated by the formula (A + B + C) divided by (Total - WF - W - I - AU).

MAT-100 SLOA Report

Lead Faculty: Rebecca Kendrick

Term	Course Results					Common Assessments				
	# of Students	Success	Walk-Away F	With-drawal	Mean GPA	PreTest Avg	PostTest Avg	Avg Change	Course	GenEd
12/SP	n = 435	65.7% n = 286	11.7% n = 51	5.7% n = 25	2.10	N/A out of 10	N/A out of 10	N/A	----	N/A
12/SU	n = 119	70.6% n = 84	10.1% n = 12	8.4% n = 10	2.48	1.80 out of 10	7.94 out of 10	6.13	----	N/A
12/FA	n = 535	70.7% n = 378	15.7% n = 84	3.2% n = 17	2.11	1.28 out of 10	6.75 out of 10	5.28	----	N/A
13/SP	n = 483	63.6% n = 307	17.4% n = 84	4.6% n = 22	1.91	1.25 out of 10	6.96 out of 10	5.75	----	N/A
13/SU	n = 120	60.0% n = 72	0.0% n = 0	1.7% n = 2	1.84	1.15 out of 10	6.52 out of 10	5.42	----	N/A
13/FA	n = 566	72.3% n = 409	6.7% n = 38	4.1% n = 23	2.13	1.19 out of 10	7.25 out of 10	6.03	3.01 out of 6	N/A
14/SP	n = 343	58.3% n = 200	15.7% n = 54	6.4% n = 22	1.77	1.11 out of 10	6.90 out of 10	5.76	2.83 out of 6	N/A
14/SU	n = 113	71.7% n = 81	13.3% n = 15	6.2% n = 7	2.30	1.19 out of 10	7.47 out of 10	6.22	3.15 out of 6	N/A
14/FA	n = 418	59.3% n = 248	14.8% n = 62	7.2% n = 30	1.87	N/A	N/A	N/A	57.34 out of 83	N/A
15/SP	n = 313	46.3% n = 145	23.6% n = 74	9.3% n = 29	1.46	N/A	N/A	N/A	56.38 out of 84	N/A

Current
Academic
Year

MAT 100, Student Learning Outcomes Assessment Academic Year 2014-2015

<u>14/FA</u> 418 students registered 324 assessments completed/reported	<u>15/SP</u> 313 students registered 206 assessments completed/reported	<u>Total for Academic Year</u> 731 students registered 530 assessments completed/reported
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*Demonstrating mastery of an outcome is defined as having earned at least 69.5% of the points available for said outcome.

ASSESSMENT TOTAL	Term	% of Students Showing Mastery	Course and Assessment Alignment			
			% Pass Both or Fail Both		% Pass One and Fail One	
Total points earned on Final Exam.	14/FA	55.9% n=181	76.2%	n=247	23.8%	n=77
	15/SP	47.6% n=98	76.2%	n=157	23.8%	n=49
	Year	52.6% n=279	76.2%	n=404	23.8%	n=126

SLO #1	Term	% of Students Showing Mastery of Outcome*	Course and Assessment Alignment			
			% Pass Both or Fail Both		% Pass One and Fail One	
Perform basic operations (add, subtract, multiply, divide, or simplify) on rational, radical, and complex expressions as well as functions.	14/FA	73.1% n=237	84.9%	n=275	15.1%	n=49
	15/SP	65.5% n=135	84.5%	n=174	15.5%	n=32
	Year	70.2% n=372	84.7%	n=449	15.3%	n=81

SLO #2	Term	% of Students Showing Mastery of Outcome	Course and Assessment Alignment			
			% Pass Both or Fail Both		% Pass One and Fail One	
Classify equations as linear, rational, radical, or exponential and identify techniques to solve each type of equation.	14/FA	73.1% n=236	75.5%	n=244	24.5%	n=79
	15/SP	73.5% n=152	70.4%	n=145	29.6%	n=61
	Year	73.3% n=388	73.5%	n=389	26.5%	n=140

SLO #3	Term	% of Students Showing Mastery of Outcome	Course and Assessment Alignment			
			% Pass Both or Fail Both		% Pass One and Fail One	
Solve quadratic, rational, radical, and exponential equations.	14/FA	47.2% n=152	69.6%	n=224	30.4%	n=98
	15/SP	40.3% n=83	68.0%	n=140	32.0%	n=66
	Year	44.5% n=235	68.9%	n=364	31.1%	n=164

MAT 100, Student Learning Outcomes Assessment

Academic Year 2014-2015

<u>14/FA</u> 418 students registered 324 assessments completed/reported	<u>15/SP</u> 313 students registered 206 assessments completed/reported	<u>Total for Academic Year</u> 731 students registered 530 assessments completed/reported
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SLO #4
Graph quadratic, radical, and exponential functions.

Term	% of Students Showing Mastery of Outcome
14/FA	62.7% n=203
15/SP	52.9% n=109
Year	58.9% n=312

Course and Assessment Alignment			
% Pass Both or Fail Both		% Pass One and Fail One	
75.0%	n=243	25.0%	n=81
70.9%	n=146	29.1%	n=60
73.4%	n=389	26.6%	n=141

SLO #5
Determine whether a relation is a function and find the domain of polynomial, rational, and radical functions.

Term	% of Students Showing Mastery of Outcome
14/FA	61.4% n=199
15/SP	50.5% n=104
Year	57.2% n=303

Course and Assessment Alignment			
% Pass Both or Fail Both		% Pass One and Fail One	
71.9%	n=233	28.1%	n=91
67.5%	n=139	32.5%	n=67
70.2%	n=372	29.8%	n=158

SLO #6
Translate and model application problems involving quadratic, rational, and exponential equations.

Term	% of Students Showing Mastery of Outcome
14/FA	39.5% n=126
15/SP	46.1% n=95
Year	42.1% n=221

Course and Assessment Alignment			
% Pass Both or Fail Both		% Pass One and Fail One	
60.8%	n=194	39.2%	n=125
72.8%	n=150	27.2%	n=56
65.5%	n=344	34.5%	n=181

SLO #7
Use formulas.

Term	% of Students Showing Mastery of Outcome
14/FA	64.4% n=208
15/SP	64.6% n=133
Year	64.5% n=341

Course and Assessment Alignment			
% Pass Both or Fail Both		% Pass One and Fail One	
79.3%	n=256	20.7%	n=67
77.7%	n=160	22.3%	n=46
78.6%	n=416	21.4%	n=113

MAT 100, Student Learning Outcomes Assessment Academic Year 2014-2015

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SLO #8	Term	% of Students Showing Mastery of Outcome	Course and Assessment Alignment			
Communicate and understand mathematical statements, ideas, and results, with correct use of mathematical definitions, terminology, and symbolism.			% Pass Both or Fail Both		% Pass One and Fail One	
	14/FA	25.9% n=83	48.4%	n=155	51.6%	n=165
	15/SP	19.9% n=41	45.6%	n=94	54.4%	n=112
	Year	23.6% n=124	47.3%	n=249	52.7%	n=277

Notes:

Pass both or fail both – We believe that students who pass the assessment have demonstrated that they have met the outcomes of the course and thus should pass the course (pass assessment = pass course). Also, students who fail the assessment have indicated that they have not met the course outcomes and thus should fail the course (fail assessment = fail course).

Pass one and fail one – An area of concern is where students fail the assessment, unable to demonstrate achievement of course outcomes, but pass the course. The flip of that is also an area of concern – where students pass the assessment, demonstrating achievement of course outcomes, but fail the course.

To demonstrate an alignment between the course assessment and the course outcomes, it is expected that the percentage of students who “pass both or fail both” would be high while the percentage of students who “pass one, fail one” would be low.