

**Northwestern State University
Student Learning Outcomes**

College: Nursing and School of Allied Health
Degree Program: Master of Science in Radiologic Sciences
Academic Year: 2016-2017

Northwestern State University Mission Statement: Northwestern State University is a responsive, student-oriented institution that is committed to the creation, dissemination, and acquisition of knowledge through teaching, research, and service. The University maintains as its highest priority excellence in teaching in graduate and undergraduate programs. Northwestern State University prepares its students to become productive members of society and promotes economic development and improvements in the quality of life of the citizens in its region.

College of Nursing and School of Allied Health Mission Statement: Northwestern State University College of Nursing and School of Allied Health serves the people of Louisiana and in so doing improves the health of its citizens while advancing the mission of Northwestern State University through excellence in accessible undergraduate, graduate, and continuing education programs that are designed to assist individuals in achieving their professional goals as responsible and contributing members of their profession and society.

School of Allied Health Mission Statement: The School of Allied Health at Northwestern State University of Louisiana is dedicated to providing high quality undergraduate and graduate programs that prepare individuals for a variety of professional healthcare roles and to be conscientious, contributing members of their profession and society.

MSRS Program Mission

To provide a learning environment for the development of knowledge, intellectual skills, and dispositions necessary for radiologic sciences professionals to function as leaders in the areas of administration and education and to furnish a foundation for doctoral study.

Student Learning Outcome	Tool	Benchmark	Results					Met/ Unmet	Analysis/Action	
				2017	2016	2015	2014			2013
I. Utilize critical thinking skills to resolve issues in radiologic or healthcare related problems.	A. Core Section of the Comprehensive Exam.	90% of students will score an 80 or better on first attempt.						Unmet	The comp exam was revised to multiple choice with justification questions for 2016. Test content is better emphasized in assignments. Students are reminded of course objectives and advised to develop a portfolio to study for the comp exam.	
			N		8	6	4			9
			Mean		82.5	87.8	86.2			80
			Range		72=9 3	84-91	80-90			5-98
			%		63	100	100			77
			# not met		3	0	0			2
	B. Critical Analysis Paper (RADS 5020)	100% of students will achieve an average of 85% or higher						This is a new tool that will be used in the 2017-2018 academic year. This added tool will better measure the students' ability to critically resolve issues that arise in the healthcare arena.		
			N							
			Mean							
			Range							
			%							
			# not met		Tool not used	Tool not used	Tool not used		Tool not used	

Student Learning Outcome	Tool	Benchmark	Results							Met/ Unmet	Analysis/ Action																																																															
II. Apply research evidence and skills in the practice setting as an educator or administrator in the radiologic sciences to improve practice.	A. Core & Research Sections of the Comprehensive Exam.	90% of students will score an 80 or better on both sections for first attempt.	<table border="1"> <thead> <tr> <th></th> <th>2017</th> <th>2016</th> <th colspan="2">2015</th> <th colspan="2">2014</th> <th colspan="2">2013</th> </tr> </thead> <tbody> <tr> <td>N</td> <td></td> <td>8</td> <td colspan="2">6</td> <td colspan="2">4</td> <td colspan="2">9</td> </tr> <tr> <td></td> <td></td> <td>R/C</td> <td>R</td> <td>C</td> <td>R</td> <td>C</td> <td>R</td> <td>C</td> </tr> <tr> <td>Mean</td> <td></td> <td>82.5</td> <td>87.8</td> <td>87.8</td> <td>93.2</td> <td>86.2</td> <td>83.8</td> <td>80</td> </tr> <tr> <td>Range</td> <td></td> <td>72-93</td> <td>80-98</td> <td>84-91</td> <td>90-100</td> <td>80-90</td> <td>58-98</td> <td>5-98</td> </tr> <tr> <td>%</td> <td></td> <td>62</td> <td>100</td> <td>100</td> <td>100</td> <td>100</td> <td>77</td> <td>77</td> </tr> <tr> <td># not met</td> <td></td> <td>3</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>2</td> <td>2</td> </tr> </tbody> </table>								2017	2016	2015		2014		2013		N		8	6		4		9				R/C	R	C	R	C	R	C	Mean		82.5	87.8	87.8	93.2	86.2	83.8	80	Range		72-93	80-98	84-91	90-100	80-90	58-98	5-98	%		62	100	100	100	100	77	77	# not met		3	0	0	0	0	2	2	Unmet	Research will now be considered core content for 2017. The exam was revised to multiple choice with justification questions for 2016. Test content is better emphasized in assignments. Students are reminded of course objectives and advised to develop a portfolio to study for the comp exam.
				2017	2016	2015		2014		2013																																																																
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	%		62	100	100	100	100	77	77																																																																	
	# not met		3	0	0	0	0	2	2																																																																	
	B. Practicum for education and administration RADS 5510/5520/5530	100% of students will score an 80 or higher on practicum portfolio	<table border="1"> <thead> <tr> <th></th> <th>2017</th> <th>2016</th> <th>2015</th> <th>2014</th> <th>2013</th> </tr> </thead> <tbody> <tr> <td>N</td> <td></td> <td>12</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Mean</td> <td></td> <td>93.1</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Range</td> <td></td> <td>80-100</td> <td></td> <td></td> <td></td> </tr> <tr> <td>%</td> <td></td> <td>100</td> <td></td> <td></td> <td></td> </tr> <tr> <td># not met</td> <td></td> <td>0</td> <td>Tool not used</td> <td>Tool not used</td> <td>Tool not used</td> </tr> </tbody> </table>						2017	2016	2015	2014	2013	N		12				Mean		93.1				Range		80-100				%		100				# not met		0	Tool not used	Tool not used	Tool not used	Met																														
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Student Learning Outcome	Tool	Benchmark	Results					Met/ Unmet	Analysis/ Action	
			2017	2016		2015				2014
III. Demonstrate effective communication skills in professional settings to maintain collegial and collaborative relationships.	A. Research paper and presentation (RADS 5110).	100% of students will achieve an average of 85% or higher on the two assignments	N		8		6		4	9
					Pres	Paper	Pres	Paper	P&P	Pres only
			Mean		93	85.3	97	78	91	91.5
			Range		70-100	69-96	90-100	57-91	91-93	80-100
			%		89	75	100	67	100	89
			# not met		1	2	0	2	0	1
								Unmet	Faculty will work to impress upon students the importance of all assignments and the need to adequately prepare in order to meet the objectives of each assignment. 2015: Two students scored extremely low on research paper. Both students have written much better in the past. Their poor scores appear to be a reflection of a lack of time and attention to writing. All students will have the opportunity to improve their writing skills for their final paper. Faculty are inviting students	

	<p>B. Presentation (RADS 5030)</p>	<p>100% of students will achieve an average of 85% or higher</p>	<table border="1" data-bbox="751 558 1402 859"> <thead> <tr> <th></th> <th>2017</th> <th>2016</th> <th>2015</th> <th>2014</th> <th>2013</th> </tr> </thead> <tbody> <tr> <td>N</td> <td></td> <td>9</td> <td>6</td> <td>4</td> <td>9</td> </tr> <tr> <td>Mean</td> <td></td> <td>98</td> <td>98</td> <td>98</td> <td>99</td> </tr> <tr> <td>Range</td> <td></td> <td>94-100</td> <td>95-100</td> <td>96-100</td> <td>96-100</td> </tr> <tr> <td>%</td> <td></td> <td>100</td> <td>100</td> <td>99</td> <td>100</td> </tr> <tr> <td># not met</td> <td></td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> </tbody> </table>		2017	2016	2015	2014	2013	N		9	6	4	9	Mean		98	98	98	99	Range		94-100	95-100	96-100	96-100	%		100	100	99	100	# not met		0	0	0	0	<p>Met</p>	<p>to come to campus for writing sessions so faculty can encourage and help guide them during their writing.</p> <p>This tool has been effective in measuring the students' ability to effectively communicate. We will continue to monitor the results.</p>
	2017	2016	2015	2014	2013																																				
N		9	6	4	9																																				
Mean		98	98	98	99																																				
Range		94-100	95-100	96-100	96-100																																				
%		100	100	99	100																																				
# not met		0	0	0	0																																				

Student Learning Outcome	Tool	Benchmark	Results					Met/ Unmet	Analysis/ Action																																					
IV. Conduct research studies to contribute to and improve the practice of the radiologic sciences.	A. Applied research project (RADS 5910).	100% of students will receive a score of 85% or higher.	<table border="1"> <thead> <tr> <th></th> <th>2017</th> <th>2016</th> <th>2015</th> <th>2014</th> <th>2013</th> </tr> </thead> <tbody> <tr> <td>N</td> <td></td> <td>4</td> <td>6</td> <td>4</td> <td>9</td> </tr> <tr> <td>Mean</td> <td></td> <td>97</td> <td>98</td> <td>97</td> <td>85</td> </tr> <tr> <td>Range</td> <td></td> <td>89-100</td> <td>93-100</td> <td>89-100</td> <td>79-100</td> </tr> <tr> <td>%</td> <td></td> <td>100</td> <td>100</td> <td>100</td> <td>89</td> </tr> <tr> <td># not met</td> <td></td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> </tr> </tbody> </table>		2017	2016	2015	2014	2013	N		4	6	4	9	Mean		97	98	97	85	Range		89-100	93-100	89-100	79-100	%		100	100	100	89	# not met		0	0	0	1						Met	<p>2013, one student required more edits than others and submitted drafts late.</p> <p>2016, 4 students were assigned an IP and will be counted in 2017.</p>
		2017	2016	2015	2014	2013																																								
N		4	6	4	9																																									
Mean		97	98	97	85																																									
Range		89-100	93-100	89-100	79-100																																									
%		100	100	100	89																																									
# not met		0	0	0	1																																									
B. Survey development project (RADS 5123)	100% of students will receive a score of 85% or higher.	<table border="1"> <thead> <tr> <th></th> <th>2017</th> <th>2016</th> <th>2015</th> <th>2014</th> <th>2013</th> </tr> </thead> <tbody> <tr> <td>N</td> <td></td> <td>9</td> <td>6</td> <td>4</td> <td></td> </tr> <tr> <td>Mean</td> <td></td> <td>92.4</td> <td>93.1</td> <td>93.2</td> <td></td> </tr> <tr> <td>Range</td> <td></td> <td>76-98</td> <td>90-96</td> <td>91-94</td> <td></td> </tr> <tr> <td>%</td> <td></td> <td>89</td> <td>100</td> <td>100</td> <td></td> </tr> <tr> <td># not met</td> <td></td> <td>1</td> <td></td> <td></td> <td>Tool not used</td> </tr> </tbody> </table>		2017	2016	2015	2014	2013	N		9	6	4		Mean		92.4	93.1	93.2		Range		76-98	90-96	91-94		%		89	100	100		# not met		1			Tool not used						Unmet	<p>One student did not meet for 2016. This student was having personal problems that may have affected her academically as other assignments were also low scores.</p>	
	2017	2016	2015	2014	2013																																									
N		9	6	4																																										
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Range		76-98	90-96	91-94																																										
%		89	100	100																																										
# not met		1			Tool not used																																									

	C. Research Paper (RADS 5110)	100% of students will achieve an average of 80% or higher		2017	2016	2015	2014	2013	Unmet	While two students scored low on their papers, they were given the opportunity to rewrite their literature review in RADS 5910 while faculty guided students to continue to edit their paper until it reached an acceptable quality.	
			N		8	6					
			Mean		85.3	78					
			Range		69-96	57-91					
			%		75	67					
# not met		2	2	Tool not used	Tool not used						

Outcome	Tool	Benchmark	Results								Met/ Unmet	Analysis/ Action		
				2017	2016		2015		2014				2013	
V. Evaluate ethical standards in practice as a radiologic sciences educator or administrator.	A. Core & Concentration Sections of the Comprehensive Exam.	90% of students will score 80% or better on both sections for first attempt.			Core	Conc	Core	Conc	Core	Conc	Core	Conc	Unmet	The exam was revised to multiple choice with justification questions for 2016. Test content is better emphasized in assignments. Students are reminded of course objectives and advised to develop a portfolio to study for the comp exam.
			N		8	8	6	6	4	4	9	9		
			Mean		82.5		87.8	62.8	86.2	87	80	76.2		
			Range		72-93		84-91	61-98	80-90	84-90	5-98	66-94		
			%		62.5		100	67	100	100	77	89		
			# not met		3		0	2	0	0	2	1		

B. Legal and Ethical presentation (RADS 5030)	100% of students will achieve an average of 85% or higher		2017	2016	2015	2014	2013		Met	This is a new tool used in 2016. We will continue to monitor the data in 2017.
		N		9						
		Mean		98						
		Range		94-100						
		%		100						
# not met		0	Tool not used	Tool not used	Tool not used					

Summary of Decisions

- I. Utilize critical thinking skills to resolve issues in radiologic or healthcare related problems. Measures for 2013 and 2016 were unmet. The comprehensive exam questions were revised from mostly essay to multiple choice questions with justification in support of the answer. This helps reduce subjective grading and keeps grades more consistent. Test content is better emphasized in assignments. Students are reminded of course objectives and advised to develop a portfolio to study for the comp exam. An additional measure was added for 2017.
- II. Apply research evidence and skills in the practice setting as an educator or administrator in the radiologic sciences to improve practice. Measures for 2013 and 2016 were unmet. Research will now be considered core content for 2017. The comprehensive exam questions were revised from mostly essay to multiple choice questions with justification in support of the answer. This helps reduce subjective grading and keeps grades more consistent. Test content is better emphasized in assignments. Students are reminded of course objectives and advised to develop a portfolio to study for the comp exam. An additional measure was added for 2016.
- III. Demonstrate effective communication skills in professional settings to maintain collegial and collaborative relationships. Measures for 2013, 2015, and 2016 were unmet. To better monitor measures for these benchmarks, the two assignments in RADS 5110 will be calculated separately to see which assignment the student is scoring low. So far, the research paper assignment is the benchmark unmet. Faculty are inviting local students to come to campus for writing sessions so faculty can encourage and help guide them during their writing. Faculty are offering phone and WebEx sessions to online students to help with writing. Faculty are allowing a rough draft to be submitted first. The faculty provides feedback and then the students work on improving their paper assignment.

- IV. Conduct research studies to contribute to and improve the practice of the radiologic sciences. In 2013, the measure was unmet for RADS 5910 due to one student required more edits than others and submitted drafts late. This student claimed that her low performance was due to her job demands. In 2016, the measure was unmet in RADS 5123 due to one student who was having personal problems that may have affected her grades, as other assignments were also low scores. Faculty will continue to monitor the measures. Another assignment in RADS 5110 was added as a measurement starting in 2015. This measure was unmet for both 2015 and 2016. While two students scored low on their papers, they were given the opportunity to rewrite their literature review in RADS 5910 as faculty guided students to continue to edit their paper until it reached an acceptable quality. Faculty are working to better advise students on developing their research papers. The format of assignment submissions and deadlines have been revised to help guide students at different stages in writing their papers. In addition, supplemental writing tools and tutorials are provided help guide students.
- V. Evaluate ethical standards in practice as a radiologic sciences educator or administrator. Measures for 2013, 2015, and 2016 were unmet. The comprehensive exam questions were revised from mostly essay to multiple choice questions with justification in support of the answer. This helps reduce subjective grading and keeps grades more consistent. Test content is better emphasized in assignments. Students are reminded of course objectives and advised to develop a portfolio to study for the comp exam. An additional measure was added for 2016.