Goal 1— Students will be clinically competent and develop the ability to function as a radiologic technologist						
Student Learning Outcomes	Measurement Tools -	Timeframe –	Benchmark -	Actual Data Results	Past 3 – 5 years of Data Results –	
1. Students will demonstrate competency and safe practice of radiologic procedures	Procedure final competency check-offs (Terminals)	Measured in the 2 <sup>nd</sup> year - Spring Semester	100% of students will score 85 or higher	Goal Met n= 13 mean: 96.9 range: 94-98 13 students scored above an 85	2022: 96.9 n=13 2021: 96.0 n=15 2020: Unable to obtain due to Covid19 n=21 2019: 97.6 n=16 2018: 96.6 n=16	
	Clinical Exit Competency Evaluation	Measured in the 2 <sup>nd</sup> year – Spring Semester	100% of students will score 85% or higher	Goal Met N=13 Mean: 3.9 (98%) Range: 3.0-4.0  100% of students scored 3.4 or higher on the clinical exit competency survey	2022: (3.90/4.0) 98% 2021: (3.96/4.0) 99% n=15 2020: (3.4/4.0) 85% n=21 2019: unable to compare/different tool n=16 2018: unable to compare/different tool n=16	

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2 Students will	Trajecsys Competency	Measured in 1 <sup>st</sup> year –	Average class score of 6.5	Goal Met	2022: 9.97 & 9.87 n=13
demonstrate proper	Assessment #8	Spring Semester	or higher (10-point scale)	n=13	2021: 9.94 & 9.95 n=15
use of equipment			1st year	mean: 9.97	2020: 9.76 & 9.88 n=21
			•	100% scored >6.5	2019: Unable to
					compare/different tool
		Measured in 2 <sup>nd</sup> year –	Average class score of	n=13	2018: Unable to
		Fall Semester	8.5 or higher (10-point	mean: 9.87	compare/different tool
			scale) 2 <sup>nd</sup> year	100% scored >8.5	
	Trajecsys Evaluation	Measured in 1st year-	Average class score of 2.5	Goal Met	2022: 3.90 & 3.99 n=13
	Positioning #2	Spring Semester	or higher (4 point scale) for	n=13	2021: 3.73 & 3.91 n=15
			1 <sup>st</sup> year	mean: 3.90	2020: 3.60 & 3.91 n=21
				100%  scored > 2.5	2019: 3.64 & 3.83 n=16
		Measured in 2 <sup>nd</sup> year	Average class score of 3.5		2018: 3.44 & 3.80 n=16
		Fall Semester	or higher (4 point scale) for	n=13	
			2 <sup>nd</sup> year	mean:3.99	
				100%  scored > 3.5	

## Student Learning Outcome 1 Student will demonstrate competency and safe practice of radiologic procedures

Analysis: (Include key findings, 3-5 year trending comparisons, steps to take to enhance student learning:

Goal 1, SLO 1, Measurement Tool 1: (Procedure Final Competency Check-offs): The benchmark for the class of 2022 was met with all 13 students scoring above an 85 on the terminal competency check offs during their final semester. Data analysis continues to show high scores for the past 2 years. This student learning outcome was unable to be measured in 2020 due to Covid19, but prior year's data is consistent with the current data. There are no current plans to amend Goal 1, SLO 1 at this time.

Goal 1, SLO 1, Measurement Tool 2: (Clinical Exit Competency Evaluations): The benchmark for the class of 2022 clinical exit competency evaluation was met. 100% of all students had an average score of 3.5 or higher, with a combined total average of 3.9(98%) total. The clinical exit competency evaluation has been utilized for the past 3 years. In 2018 and 2019, data collected from employer's surveys was used as a measurement tool for SLO 1. There was a noticeable increase in the scores from 2020 to 2021. Scores from 2021 and 2021 have remained high.

Action Plan based on Analysis: No current action plan based on results of data analysis for SLO 1 Measurement Tool 1. Some members of the committee are concerned that the technologists may be too lenient on the students pertaining to high scores. In regards to SLO Measurement Tool 2, A suggestion was made for

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the technologists to begin documenting justification for students, whom they gave perfect scores (4.0) Faculty informed other member of the committee that students do not have access to the results of the clinical exit survey. Will continue to monitor data for this measurement tool.

Results/Improvement(s) noted based on the action plans that were implemented: Benchmarks continue to be met, Discussion will be made at the next assessment committee meeting on the possibility of increasing the benchmark for SLO 1 Measurement Tool 1. The suggestion regarding justification for high scores regarding SLO 1 Measurement Tool 2 will be brought before the next Advisory.

Re-evaluation Date: Fall 2022

Student Learning Outcome 2 Student will demonstrate proper use of equipment

Analysis: (Include key findings, 3-5 year trending comparisons, steps to take to enhance student learning:

Goal 1, SLO 2, Measurement Tool 1: (Trajecsys Competency Assessment #8 "sets the control panel correctly and operates the equipment satisfactorily"): The benchmark for the class of 2022 was met with all 13 students scoring above a 6.5 or higher (10 point scale) on Trajecsys Competency #8 for Timeframe 1 and a score of 8.5 or higher (10 point scale) for timeframe 2. The time frame for measurement was conducted at two points in the student's curriculum, the first measured in the Spring Semester of the student's first year and the second measurement in the Fall Semester of the student's second year. All 13 students met the benchmark for both measurements with a class average score of 9.97 and 9.87.

Goal 1, SLO 2 Measurement Tool 2: (Trajecsys Evaluation Positioning #2 "applies proper radiographic positioning appropriate to level of instruction"): The benchmark for the class of 2022 was met with all 13 students scoring above a 2.5 or higher (4 point scale) on Trajecsys Clinical Evaluation Positioning #2 for Timeframe 1 and a score of 3.5 or higher (4 point scale) for timeframe 2. The time frame for measurement was conducted at two points in the student's curriculum, the first measured in the Spring Semester of the student's first year and the second measurement in the Fall Semester of the student's second year. All 13 students met the benchmark for both measurements with a class average score of 3.90 and 3.99

Action Plan based on Analysis: Analysis of data obtained from the past 5 years shows improvement with increasing scores. No current action plan recommended based on results of data analysis for SLO 1.1. Some members of the committee are concerned that the technologists may be too lenient on the students pertaining to high scores. In regards to SLO 1.2 A suggestion was made for the technologists to begin documenting justification for students, whom they gave perfect scores (4.0) Faculty informed other member of the committee that students do not have access to the results of the clinical exit survey. No action plan needed at this time for SLO 2: 1 and 2

Results/Improvement(s) noted based on the action plans that were implemented: Benchmarks continue to be met, Discussion will be made at the next assessment committee meeting on the possibility changing the current measurement tools for Student Learning Outcome 2 or increasing the score. The suggestion regarding potential changes will be brought before the next Advisory.

Goal 2- Students will use critical thinking and problem-solving skills							
Student Learning Outcomes	Measurement Tools -	Timeframe –	Benchmark -	Actual Data Results	Past 3 – 5 years of Data Results –		
Students will adapt technique for body size and pathology	Trajecsys Competency Assessment #2	Measured in the 1 <sup>st</sup> year - Spring Semester  Measured in the 2 <sup>nd</sup> year - Fall Semester	Average class score of 6.5 or higher (10-point scale) 1st year  Average class score of 8.5 or higher (10-point scale) 2nd year	Goal Met n=13 mean: 9.99 100% scored >6.5 n=13 mean: 9.98 100% scored >8.5	2022: 9.99 & 9.98 n=13 2021: 9.98 & 9.97 n=15 2020: 9.91 & 9.96 n=21 2019: unable to compare/different tool n=16 2018: unable to compare/different tool n=16		
	Trajecsys Evaluation Positioning #3: All Students	Measured in 1 <sup>st</sup> year- Spring Semester  Measured in 2 <sup>nd</sup> year Fall Semester	Average class score of 2.5 or higher (4 point scale) for 1 <sup>st</sup> year  Average class score of 3.5 or higher (4 point scale) for 2 <sup>nd</sup> year	Goal Met n=13 mean: 3.93 100% scored > 2.5 n=13 mean: 3.98 100% scored > 3.5	2022: 3.93 & 3.98 n=13 2021: 3.77 & 3.83 n=15 2020: 3.57 & 3.90 n=21 2019: 3.70 & 3.83 n=16 2018: 3.55 & 3.80 n=16		

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2 Students will be able to perform well under pressure	Graduate Survey #11	Graduates	Average class score of 3 or higher (5 point scale)	Goal Met 100% average scores of 3 or higher	2022: 5.0 n=13 2021: 4.93 n=15 2020: 4.90 n=21 2019: unable to compare results/different tool n=16 2018: unable to compare results/different tool n=16
	Image Analysis Critique Final Competency Check-off, Average of all students	Measured in 2 <sup>nd</sup> year Spring Semester	100% of Students will score 78.0 or higher	Goal Met n= 13 mean: 89.86 range: 85.4-95.67 13 students scored above an 78	2022: 89.86 n=13 2021: 88.35 n=15 2020: Unable to obtain due to Covid19 n=21 2019: 91.2 n=16 2018: 91.24 n=16

#### Student Learning Outcome 1 Students will adapt technique for body size and pathology

Analysis: (Include key findings, 3-5 year trending comparisons, steps to take to enhance student learning:

Goal 2, SLO 1, Measurement Tool 1: (Trajecsys competency assessment #2 "properly assesses patient (evaluates and determines the status of the patient) and prepares the room accordingly)): The benchmark for the class of 2022 was met with all 13 students scoring above a 6.5 or higher (10 point scale) on Trajecsys Competency #8 for Timeframe 1 and a score of 8.5 or higher (10 point scale) for timeframe 2. The time frame for measurement was conducted at two points in the student's curriculum, the first measured in the Spring Semester of the student's first year and the second measurement in the Fall Semester of the student's second year. All 13 students met the benchmark for both measurements with a class average score of 9.99 and 9.98. The measurement tool was changed in 2019 therefore we have data trends for the past 3 years regarding this measurement tool. Students have scored high on this assessment for the past three years.

Goal 2, SLO 1, Measurement Tool 2: (Trajecsys Evaluation Positioning #3 "applies proper radiographic positioning appropriate to the level of instruction): The benchmark for Evaluation positioning #3 was met with an average class score of 3.93 for the first measurement during the Spring Semester of the first year and 3.98 during the Fall Semester of the second year. This Measurement tool has been used for 5 years and there is a slight upward increase in data score trending. There is no plan at this time to modify this measurement tool.

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Action Plan based on Analysis: No current action plan based on results of data analysis for SLO 1 Measurement Tool 1. Some members of the committee are concerned that the technologists may be too lenient on the students pertaining to high scores. In regards to SLO Measurement Tool 2, A suggestion was made for the technologists to begin documenting justification for students, whom they gave perfect scores (4.0) Faculty informed other member of the committee that students do not have access to the results of the clinical exit survey. Data analysis of SLO 1 Measurement Tool 2 will continue to be monitored and analyzed to determine if any changes need to be made.

Results/Improvement(s) noted based on the action plans that were implemented: Benchmarks continue to be met with an increase in student scores according to the data trend. Will continue to monitor.

Re-evaluation Date: Fall 2022

# Student Learning Outcome 2 Students will be able to perform well under pressure

Analysis: (Include key findings, 3-5 year trending comparisons, steps to take to enhance student learning:

Goal 2, SLO 2, Measurement Tool 1: (Graduate Survey Question #11 "The program helped me to adapt/cope effectively in an emergency healthcare environment"): The benchmark for Goal 2, SLO 2, Measurement tool one was met. All students responded that they were able to adapt and perform effectively in emergent or stressful situations. The benchmark was set for the average class score to be 3.0 or higher. All students for the class of 2022 responded with 5.0. There is an increase in the 2022 scores compared to previous years.

Goal 2, SLO 2 Measurement Tool 2: (Image Analysis Critique Final Competency check-off): The benchmark for the class of 2022 was met with all 13 students scoring above a 78 on the terminal film critique check offs during their final semester. The Average score was 89.86. Data analysis continues to show high scores for the past 2 years. This benchmark was not met for 2021 due to 1 student scoring below a 78 however, the average score for the entire class was 88.35. This student learning outcome was unable to be measured in 2020 due to Covid19. Data analysis shows an improvement in student performance. Will continue to analyze this benchmark.

Action Plan based on Analysis: Analysis of data obtained from the past 5 years shows improvement with increasing scores. No current action plan recommended based on results of data analysis for SLO 2 Measurement Tool 1 or Measurement Tool 2. Data analysis continues to show an improvement in student performance. Results/Improvement(s) noted based on the action plans that were implemented: Benchmarks continue to be met, Discussion will be made at the next assessment committee meeting regarding the improvement of scores.

Student Learning Outcomes	Measurement Tools -	Timeframe –	Benchmark -	Actual Data Results	Past 3 – 5 years of Data Results –
1. Students will be able to explain procedure and/or instructions to patient prior to and during an exam	Trajecsys Evaluation Patient Care #9	Measured in the 1st year - Spring Semester	Average class score of 2.5 or higher (4-point scale)  1st year	Goal Met n=13 mean: 3.91 100% scored >2.5	2022: 3.91 & 4.00 n=13 2021: 3.90 & 3.99 n=15 2020: 3.73 & 3.92 n=21 2019: 3.71 & 3.84 n=16 2018: 3.53 & 3.85 n=16
		Measured in the 2 <sup>nd</sup> year - Fall Semester	Average class score of 3.5 or higher (4-point scale) 2 <sup>nd</sup> year	n=13 mean: 4.00 100% scored >3.5	
	Trajecsys Competency Assessment #3	Measured in 1 <sup>st</sup> year- Spring Semester  Measured in 2 <sup>nd</sup> year Fall Semester	Average class score of 6.5 or higher (10 point scale) for 1st year  Average class score of 8.5 or higher (10 point scale) for 2nd year	Goal Met n=13 mean: 9.99 100% scored > 6.5 n=13 mean: 9.92 100% scored > 8.5	2022: 9.99 & 9.92 n=13 2021: 9.94 & 9.98 n=15 2020: 9.87 & 9.95 n=21 2019: unable to compare/different tool n=16 2018: unable to compare/different tool n=16

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2 Students will be able to demonstrate effective written and oral communication skills	Radiographic Pathology Presentation	Measured in 2 <sup>nd</sup> year Fall Semester	100% of Students will score a level 2 or higher on course rubric	Goal Met with 100% of student scores of 2 or higher	2022: 100% n=13 2021: 93% n=15 2020: 100% n=21 2019: 95% n=16 2018: unable to compare results/different tool n=16
	Radiographic Pathology Paper	Measured in 2 <sup>nd</sup> year Fall Semester	100% of Students will score a level 2 or higher on course rubric	Goal Not Met n= 13 11 of 13 students scored 2 or higher (85%) 2 of 13 students scored below 2 (15%)	2022: 85% n=13 2021: 40% n=15 2020: 93% n=21 2019: 68% n=16 2018: 86% n=16

Student Learning Outcome 1 Students will be able to explain procedure and/or instructions to patient prior to and during exam

Analysis: (Include key findings, 3-5 year trending comparisons, steps to take to enhance student learning:

Goal 3, SLO 1, Measurement Tool 1: (Trajecsys Evaluation Patient Care #9 "Explains procedure prior to the exam and/or gives proper instructions to the patient during the exam): The benchmark for the class of 2022 was met with all 13 students scoring above a 2.5 or higher (4 point scale) on Trajecsys Evaluation #9 for Timeframe 1 and a score of 3.5 or higher (4 point scale) for timeframe 2. The time frame for measurement was conducted at two points in the student's curriculum, the first measured in the Spring Semester of the student's first year and the second measurement in the Fall Semester of the student's second year. All 13 students met the benchmark for both measurements with a class average score of 3.91 and 4.00. The measurement tool has shown data consistently trending upwards for the past five years.

Goal 3, SLO 1, Measurement Tool 2: (Trajecsys Competency Assessment #3 "introduces themselves and explains the exam in terms the patient fully understands): The benchmark for Competency Assessment #3 was met with an average class score of 9.99 for the first measurement during the Spring Semester of the first year and 9.92 during the Fall Semester of the second year. This Measurement tool has been used for 3 years and there is a slight upward increase in data score trending. There is no plan at this time to modify this measurement tool.

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**Action Plan based on Analysis:** No current action plan based on results of data analysis for SLO 1 Measurement Tool 1. Or SLO Measurement Tool 2. Data analysis of both SLO 1 Measurement Tool 1 and 2 will continue to be monitored and analyzed to determine if any changes need to be made.

Results/Improvement(s) noted based on the action plans that were implemented: Benchmarks continue to be met with an increase in student scores according to the data trend. Will continue to monitor.

Re-evaluation Date: Fall 2022

## Student Learning Outcome 2 Students will be able to demonstrate effective written and oral communication

Analysis: (Include key findings, 3-5 year trending comparisons, steps to take to enhance student learning:

Goal 3, SLO 2, Measurement Tool 1: (Radiographic Pathology Oral Presentation): The benchmark for Goal 2, SLO 2, Measurement tool one was met with all students scoring a 2 or above on the presentation rubric (100%) Analysis of a 4 year data points to inconsistent student performance and varies. 2022 was an improvement to 2021 scores due to the benchmark not met in 2021 with 93% meeting the benchmark.

Goal 3, SLO 2 Measurement Tool 2: (Radiographic Pathology Paper): The benchmark for the class of 2022 was not met with 11 of 13 students scoring above a 2 or higher on the prescribed rubric. 2 of 13 students scored below a 2 bringing the total to 85% of students meeting the benchmark. Although analysis of student performance regarding written communication has improved significantly in the past five years, students continually struggle with meeting this benchmark. After analyzing the low scores from 2021 (40% meeting the benchmark), the committee decided to implement an action plan to help improve student performance.

Action Plan based on Analysis: For SLO 2 Measurement tool 2 the Goal was not met in 2021 with 60% of students scoring below a level 2. As a result, the instructor implemented additional face-to-face classes to teach basic APA formatting concepts as well as a review of grammar and mechanics for 2022. In addition, two low stake assessments to monitor student progress leading up to the final draft were utilized. Implementation of this action plan may have contributed to the increased student improvement and higher scores for 2022.

**Results/Improvement(s) noted based on the action plans that were implemented:** Marked improvement shown since action plan was implemented in Fall of 2021 for the 2022 graduates.

Goal 4— Students will exhibit professionalism and quality patient care						
Student Learning Outcomes	Measurement Tools -	Timeframe –	Benchmark -	Actual Data Results	Past 3 – 5 years of Data Results –	
1. Students will develop safe, competent patient care skills	Trajecsys Student Evaluation Question #8 (Patient Care)	Measured in the 1 <sup>st</sup> year - Spring Semester	Average class score of 2.5 or higher (4 point scale) for 1st year  Average class score of 3.5 or higher (4 point scale) for	Goal Met n=13 mean: 3.96 100% scored >2.5	2022: 3.96 & 4.00 n=13 2021: 3.98 & 3.99 n=15 2020: 3.80 & 3.97 n=21 2019: unable to compare/different tool n=16	
		Measured in the 2 <sup>nd</sup> year - Fall Semester	2 <sup>nd</sup> year	n=13 mean: 4.00 100% scored >3.5	2018: unable to compare/different tool n=16	
	Trajecsys Student Evaluation Question #11 (Patient Care)	Measured in 1 <sup>st</sup> year- Spring Semester  Measured in 2 <sup>nd</sup> year Fall Semester	Average class score of 2.5 or higher (4 point scale) for 1 <sup>st</sup> year  Average class score of 3.5 or higher (4 point scale) for 2 <sup>nd</sup> year	Goal Met n=13 mean: 3.97 100% scored > 2.5 n=13 mean: 3.99 100% scored > 3.5	2022: 3.97 & 3.99 n=13 2021: 3.94 & 3.95 n=15 2020: 3.84 & 3.98 n=21 2019: unable to compare/different tool n=16 2018: unable to compare/different tool	

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2 Students will	Trajecsys Student Evaluation	Measured in 1st year-	Average class score of 2.5	Goal Met	2022: 3.95 & 3.99 n=13
demonstrate	Question #15 (General)	Spring Semester	or higher (4 point scale) for	n=13	2021: 3.94 & 3.91 n=15
professional behavior			1 <sup>st</sup> year	mean: 3.95	2020: 3.84 & 3.98 n=21
				100%  scored > 2.5	2019: unable to compare
		Measured in 2 <sup>nd</sup> year			results/different tool
		Fall Semester	Average class score of 3.5	n=13	n=16
			or higher (4 point scale) for	mean: 3.99	2018: unable to compare
			2 <sup>nd</sup> year	100%  scored > 3.5	results/different tool
			-		n=16
	Student Disciplinary Referral	Measured in 1st year-	100% of Students will	Goal not Met for	2022: 92% n=13
	Form	Spring Semester	receive no more than 2	the timeframe	2021: 100% n=15
		Through the	write ups for the indicated	n= 13,	2020: 92% n=21
		2 <sup>nd</sup> year Spring	time frame	12 students had no	2019: unable to compare
		Semester		more than 2 write	results/different tool
				ups	n=16
				1 student had 3	2018: unable to compare
				write ups	results/different tool
					n=16

## Student Learning Outcome 1 Students will exhibit professionalism and quality patient care

Analysis: (Include key findings, 3-5 year trending comparisons, steps to take to enhance student learning:

Goal 4, SLO 1, Measurement Tool 1: (Trajecsys Student Evaluation #8 "Correctly identifies patient using clinical site protocol): The benchmark for Evaluation positioning #8 was met with an average class score of 3.96 for the first measurement during the Spring Semester of the first year and 4.00 during the Fall Semester of the second year. This Measurement tool has been used for 3 years and there is a slight upward increase in data score trending. There is no plan at this time to modify this measurement tool since it was modified in 2019 and continues to adequately measure the intended outcome.

Goal 4, SLO 1, Measurement Tool 2: (Trajecsys Student Evaluation #11 "student is attentive to patient's needs"): The benchmark for Evaluation positioning #11 was met with an average class score of 3.97 for the first measurement during the Spring Semester of the first year and 3.99 during the Fall

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Semester of the second year. This Measurement tool has been used for 3 years and the scores remain consistent. This could be a benchmark to consider revising for the next cycle.

**Action Plan based on Analysis:** No current action plan based on results of data analysis for SLO 1 Measurement Tool 1 or Measurement Tool 2, Data analysis of SLO 1 Measurement Tool 1 and 2 will continue to be monitored and analyzed to determine if any changes need to be made.

Results/Improvement(s) noted based on the action plans that were implemented: Benchmarks continue to be met with an increase in student scores according to the data trend. Will continue to monitor.

Re-evaluation Date: Fall 2022

#### Student Learning Outcome 2 Students will demonstrate professional behavior

Analysis: (Include key findings, 3-5 year trending comparisons, steps to take to enhance student learning:

Goal 4, SLO 2, Measurement Tool 1: (Trajecsys Student Evaluation #15 "accepts constructive criticism with a positive attitude"): The benchmark for Goal 4, SLO 2, Measurement tool one was met. All students scored relatively high for this benchmark and the data remains constant for the past 3 years.

Goal 4, SLO 2 Measurement Tool 2: (Student Disciplinary referral): The benchmark for the class of 2022 was met not met with all 12 students receiving more than 2 write ups for the indicated time frame and 1 student receiving 3 write ups. This data continues to vary from cycle to cycle for the past 3 years.

Action Plan based on Analysis: Analysis of data obtained from the past 3 years remains relatively consistent. No current action plan recommended based on results of data analysis for SLO 2 Measurement Tool 1 or Measurement Tool 2 at this time. Although this is not a required Goal by the JRCERT, the committee agrees that measuring outcomes related to professionalism can be a useful tool for student improvement.

**Results/Improvement(s) noted based on the action plans that were implemented:** Benchmark was not met for Measurement tool 2 and will continue to be monitored. Discussion will be made at the next assessment committee meeting regarding the improvement of scores..