

# **Radiation Therapy**

Doisy College of Health Sciences



**SAINT LOUIS UNIVERSITY**

—  
**DOISY COLLEGE OF HEALTH SCIENCES**

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## Accreditation

Initial accreditation of the certificate program was granted in 1968, by The Joint Review Committee on Education in Radiologic Technology, in cooperation with the American College of Radiology and the American Society of Radiologic Technologists. This accreditation has been continuous to date.

The Radiation Therapy program accepts 12 students per class. This small class size ensures personal instruction, advising and a cordial learning environment.

For further information on the Joint Review Committee on Education in Radiologic Technology, go to [jrcert.org](http://jrcert.org).

### **Joint Review Committee on Education in Radiologic Technology**

20 N. Wacker Drive, Suite 2850

Chicago, IL 60606

312-704-5300

[mail@jrcert.org](mailto:mail@jrcert.org)

## Program Goals

The Radiation Therapy Program is the only radiation therapy program in the St. Louis Area. Due to its location at Saint Louis University, it gives students the opportunity to interact with students majoring in many health care fields including medicine, nuclear medicine, nursing, physical therapy, physician assistant education, occupational therapy, health information management, nutrition and dietetics, and clinical lab science. The Radiation Therapy Program strives to produce graduates that will excel in their professional field. We provide the development and knowledge that will allow the student to pursue a variety of paths when they enter the workforce, whether it is working as a staff therapist, pursuing an advanced degree, or pursuing managerial and corporate positions. Our graduates are sought after and are well regarded at the clinical sites where they train. Students receive premier clinical experiences at the finest hospitals in the Saint Louis Metropolitan Area. Students receive instruction from expert full-time and adjunct faculty in a diverse group of related disciplines including radiation therapists, certified medical dosimetrists, nuclear medicine technologists, physicians, nurses, physical therapists, pharmacists, physicists, managers and other professionals.

**Programmatic Mission:** The Radiation Therapy Program at Saint Louis University, Doisy College of Health Sciences is dedicated to preparing liberally educated, competent, caring and socially responsible radiation therapists, committed to clinical and scholarly excellence.

### **Radiation Therapy Program Goals:**

- Goal A: Students will be clinically competent
  1. Students will position patients as directed in treatment record
  2. Students will set treatment machine as indicated in patient treatment record.
  3. Students will appropriately use record and verify to document treatment data
  4. Students will practice proper radiation protection and safety.
- Goal B: Students will demonstrate problem solving and critical thinking skills
  1. Students will simulate and demonstrate a complex treatment procedure, explaining steps in detail
  2. Students will present a complex treatment procedure
- Goal C: Students will demonstrate effective communication skills
  1. The student will appropriately communicate with patients
  2. The student will demonstrate appropriate written communication
  3. The student will demonstrate proper presentation skills
- Goal D: Students will demonstrate professional growth and development
  1. The student will demonstrate professional behavior
  2. The student will have knowledge of ethical behaviors
  3. The student will have knowledge of professional organizations
  4. Student will plan on participating in a professional organization

The program annually tracks student learning outcomes as they relate to the above student goals. This learning outcomes report for the past academic year can be found on Appendix A.

## Program Outcomes 2012-16

The data presented here are the mandatory qualitative program outcomes that are required by the Joint Review Committee on Education in Radiology Technology in the Standards for an Accredited Program in Radiologic Sciences - Radiation Therapy Program. These standards can be found at <http://www.jrcert.org/programs-faculty/jrcert-standards/>

Current Program Effectiveness Data reported to the Joint Review Committee on Education in Radiologic Technology can be found at [jrcert.org](http://www.jrcert.org).

### **Enrollments, Graduates and Program Completion Rate**

<b>Year of Graduation</b>	<b># of Students Initially Enrolled</b>	<b># Students Graduated</b>	<b>Program Completion Rate</b>
2016	12	11	92%
2015	12	11	92%
2014	12	11	92%
2013	12	12	100%
2012	12	11	92%
<b>Five Year Average</b>			<b>94%</b>

**Enrollments** are defined as the number of new students who began the program during the reporting period indicated.

**Graduates** are defined as the total number of students that the Radiation Therapy Program graduated during the reporting period indicated.

**Program Completion Rate** is calculated by dividing the number of students who complete the program within the cohort by the number who enrolled in the cohort initially and subsequently. Any student who leaves the program for any reason (medical leave, personal reasons, or course failure) is counted as not completing the program. The Radiation Therapy Program identifies a program completion rate benchmark of 80%, and is in compliance with this benchmark for the past 5 years reported, 2012-2016.

### Credentialing Examination Pass Rate

ARRT Exam	Graduation Year				
	2016	2015	2014	2013	2012
# First Time Examinees	11/11	11/11	11/11	10/11*	9/10 *
# of Repeat Examinees	0/11	0/11	0/11	1/11	1/10
% Pass Rates	100%	100%	100%	91%	90%
<b>Five Year Average</b>	<b>96%</b>				

**Credentialing Examination Pass Rate** is defined as the number of graduates who pass the American Registry of Radiologic Technologists (ARRT) credentialing exam compared with the number of graduates who take the exam. Consistent with JRCERT Standards, programs must document a five year credentialing examination pass rate average of not less than 75%, at first attempt, within six months of graduation.

\* One of eleven graduates in 2012 and in 2013 did not take the exam within six months of graduation therefore is not reported here as an examinee.

### Job Placement Rate

Graduation Year	# Graduates Actively Seeking Employment	# Graduates Employed Within 12 Months of Graduation	% of Graduates Employed Within 12 Months of Graduation
2016	9 (out of 11)	9	100%
2015	9 (out of 11)	9	100%
2014	10 (out of 11)	10	100%
2013	9 (out of 12)	6	66%
2012	10 (out of 11)	9	90%
<b>Five Year Average</b>	<b>91%</b>		

**Job placement rate** is defined as the number of graduates employed in the radiologic sciences compared to the number of graduates actively seeking employment in the radiologic sciences. Consistent with JRCERT Standards, programs must document a five year average job placement rate of not less than 75% within twelve months of graduation. Radiation Therapy students graduate in August; therefore these results are reported in September.

### **Annual Learning Outcomes Report**

The program annually tracks the following learning outcome goals as part of its ongoing assessment plan, as required by the JRCERT. These program goals are:

- A. Students will be clinically competent
- B. Students will demonstrate problem solving and critical thinking skills
- C. Students will demonstrate effective communication skills
- D. Students will demonstrate professional growth and development

## Clinical Sites

Clinical education requirements will place the student in the patient care setting in various clinical areas throughout the St. Louis Metro area; therefore a student must have reliable transportation to get to the clinical sites. Students will travel to several of the following sites for their clinical rotations:

### **St. Anthony's Medical Center**

Department of Radiation Oncology  
10010 Kennerly Road  
St. Louis, MO 63128

### **Missouri Baptist Medical Center**

3015 N. Ballas Rd.  
St. Louis, MO 63131

### **SSM Health Saint Louis University Hospital**

Radiation Medicine and Cyberknife  
3635 Vista Ave.  
PO Box 15250  
St. Louis, MO 63110-0250

### **SSM Health St. Clare Hospital- Fenton**

1011 Bowles Ave. Suite G50  
Fenton, MO 63026

### **Cancer Treatment Center**

Memorial and St. Elizabeth's Healthcare  
Services, LLP  
4000 North Illinois  
Swansea, IL 62226

### **Siteman Cancer Center -St. Peters.**

Barnes-Jewish Hospital - St. Peters  
Siteman Cancer Center - Department of  
Radiation Oncology  
150 Entrance Way  
St. Peters, MO 63376

### **Mercy Medical Center**

David C. Pratt Cancer Center  
607 S. New Ballas Road  
St. Louis, MO 63141

### **Siteman Cancer Center - Barnes-Jewish Hospital**

Barnes Jewish Hospital - Siteman Cancer Center  
Department of Radiation Oncology  
One Barnes-Jewish Hospital Plaza  
St. Louis, MO 63110

### **St. Joseph's Medical Park**

1475 Kisker Rd, Suite 180  
St. Charles, MO, 63304-8781

### **SSM Health St. Mary's Hospital- St. Louis**

6420 Clayton Rd.  
Richmond Heights, MO 63117

### **SSM Health St. Joseph Hospital West**

**St. Louis**  
400 Medical Plz Ste. 100  
Lake St. Louis, MO 63367

### **VA St. Louis Health Care - John Cochran**

915 North Grand  
St. Louis, MO 63106



# Technical Standards

**Purpose:** This is a non-discriminatory policy that describes the intellectual, social, and physical capabilities required to perform the tasks of a radiation therapist. The mission of the Program is to educate a therapist in Radiation Therapy. Therefore, students must meet these standards to pursue the program coursework and work within the field.

All applicants and students of the Radiation Therapy Program must be able to perform each of the standards stated in this policy.

In some cases, the use of adaptive devices may be permitted in order for the student to meet selected technical standards.

## **Radiation Therapists are required to:**

- Intellectually understand the conceptual, integrative and quantitative ability to analyze information and data. Comprehend three-dimensional relationships and the spatial relationships of structure. Understand and apply clinical instructions given by departmental personnel.
- Think critically: Identify cause and effect relationships, predict outcomes, interpret situation contexts and have the ability to make sufficient judgments.
- Tolerate physical and emotional stress and continue to function effectively. Demonstrate emotional stability and psychological health in day-to-day interaction with patients staff, family members, and others. They must be adaptable, flexible and able to function in the face of uncertainty. A student must be able to develop mature, sensitive and effective relationships with patients and colleagues. They must have a high level of compassion for others, motivation to serve, integrity and a consciousness of social values. A student must possess sufficient interpersonal skills to interact with people from all levels of society, all ethnic backgrounds and all belief systems.
- Clearly communicate, verbally and in writing, with the patient, families, personnel and others to disseminate information about patient care and work duties. Candidates must be able to speak and hear at a level that allows them to elicit and convey information, accurately perceive nonverbal communication and describe changes in patient mood, activity posture and recognize and respond to an emergency or urgent situation. Must demonstrate normal or corrected hearing to discern audible signals on accelerators, imaging equipment, phones, and timing devices.
- See with normal or device corrected vision. They must possess the ability to discriminate among various color combinations in dimly lit conditions including blacks, grays and whites. Must possess the ability to read graphs, scales, computers and oscilloscopes. Recognize emergency signals. Adjust, move and manipulate variety of machines in dimly lit locations and have the ability to see both display devices and recorded images. Observe patient responses. A student must be able to observe patients accurately and completely, both from a distance and at close range.

- Read, extract and apply appropriate information and instructions contained in patient requisitions, notes and medical charts. Have the ability to read and comprehend technical and medical information.
- Have the manual dexterity to perform various radiation therapy procedures. Motor skills must include the ability to extend hands and arms in any direction. You must be able to hold, grasp and turn with the hands, and possess the ability to coordinate eyes, hands, and feet rapidly and accurately.
- Lift, transfer and move patients from wheelchairs/stretchers/beds to treatment tables. Lift, move, reach or push equipment weighing approximately 30-35 lbs. Endure an eight-hour clinical day with a minimum of four to six hours of standing or walking.
- Submit to and receive a satisfactory report on criminal background checks and drug testing for substance abuse.

## Additional Program Requirements and Fees

Criminal Background Check	Drug Screen	Respiratory Fit Test	Two Step Tb/PPD Screening	Annual Flu Shot	Poster Fee
\$105	\$30	\$30	\$28	\$20	\$25-35

### Criminal Background Check

#### Fees: \$105.00

A majority of the Doisy College of Health Science's learning experience facilities mandate that criminal background checks be performed on all persons having any opportunity for patient/client interaction. This includes employees and volunteers, as well as students. A CBC revealing a charge and/or conviction for certain crimes could result in a ban from participation in learning experiences and thus prevent graduation. Therefore, every student in the Doisy College of Health Sciences whose academic program requires her/him to participate in learning experiences in an affiliate facility will be required to undergo the level of CBC required by their major department and/or the affiliate facility.

The Office of Clinical Education Compliance has a detailed policy that outlines the procedure for obtaining a CBC through the University. Please refer to the [Office of Clinical Education Compliance](#) or your department for a copy of this policy.

The timing of a CBC will be in concert with the student's program/department or affiliate facility policies. A single negative check does NOT preclude the requirement of additional checks at a future time. Students should be aware that any affirmative results from a CBC could restrict ability to participate in a learning experience and therefore restrict ability to complete degree requirements. In addition, the lack of an acceptable report on a CBC could bar the student from sitting for licensure examinations and thus from practice in certain professions.

In the event that a student's CBC is reported "affirmatively" the student will have the opportunity to contest the report by requesting an additional CBC. In the event that an Affirmative CBC is confirmed, the compliance officer will notify the designated program/department official and the student.

### Drug Screen

#### Fees: \$30.00

A pre-placement drug screen is required for accreditation standards in the affiliated hospitals in which University faculty and staff work. To comply with these standards and federal regulations, Saint Louis University will require that a pre-placement drug screen occur for students in clinical placement where there will be occupational activities in a University affiliated hospital, clinical site, direct patient contact, or employment.

The student will be advised of the pre-placement drug screen requirement prior to beginning the program. The candidate will be provided with instructions for scheduling the drug screen in Student Health.

If the candidate satisfactorily completes the drug screen, and it is negative, Student Health will notify the Program Director.

Candidates who have a positive drug screen are interviewed by an independent Medical Review Officer who determines if there is a legitimate reason for the presence of a controlled substance. The results of this interview are provided to Student Health and made available to the program.

In the event of a positive result, the Program Director and student will be notified of the positive drug screen. The student will be counseled, and further action regarding the student's enrollment in the program will be considered. The student will be advised that a positive test may result in immediate dismissal from the program.

Other **required immunizations/screenings required** for clinical placement:

**Respirator Fit Test**

Provided at SLU Student Health

Fees: \$30.00

**Two Step Tb/PPD Screening**

Provided at SLU Student Health

Fees: \$28.00

**Annual Flu Shot**

Provided at SLU Student Health

Fees: \$20.00

**Poster Printing**

Provided at SLU Instructional Media Center fees: \$25.00-\$35.00

Students are required to prepare and present a research poster as part of their coursework. Students must pay for the cost of printing this poster which is provided at the SLU Instructional Media Center.

**SAINT LOUIS UNIVERSITY - DOISY COLLEGE OF HEALTH SCIENCES**  
**ASSESSMENT PLAN**  
**GENERAL GOAL: CONTINUOUSLY MONITOR STUDENT LEARNING OUTCOMES**  
Revision date August 2015

Division: Medical Imaging and Radiation Therapeutics  
Program: Radiation Therapy - Professional Year  
Academic Year: **2014-2015**

Mission: *The Radiation Therapy Program at Saint Louis University, Doisy College of Health Sciences is dedicated to preparing liberally educated, competent, caring and socially responsible Radiation Therapists, committed to clinical and scholarly excellence.*

Outcome	Measurement Tool/ Reporting Strategies	Threshold (Benchmark)	Time Line/ Responsible Person	Data/Status/ Action Plan
<p><b>Goal A: Students will be clinically competent</b></p> <p>1. Students will position patients as directed in treatment record</p> <p>2. Students will set treatment machine as indicated in patient treatment record</p> <p>3. Students will appropriately use record and verify to document treatment data</p> <p>4. Students practice proper radiation protection and safety</p>	<p><b>1:</b> a. Linear Accelerator Clinical Rotation Performance Evaluation, Patient Treatment Section, Ave. total for all b. Clinical Competency Form</p> <p><b>2:</b> a. Linear Accelerator Clinical Rotation Performance Evaluation, Patient Treatment Section Questions 8, &amp; 13 b. Clinical Competency Form</p> <p><b>3:</b> a. Linear Accelerator Clinical Rotation Performance Evaluation, Patient Treatment Section Questions 12, 17 &amp; 18.</p> <p><b>4:</b> Linear Accelerator Clinical Rotation Performance Evaluation, Patient Treatment Section, Question 5</p>	<p><b>1:</b> a. Ave Score for all linac evals is <math>\geq 5</math> on a 6 point scale, 6= Excellent b. <math>\geq 80\%</math> of students earned score of Satisfactory on 1<sup>st</sup> attempt</p> <p><b>2:</b> a. Average score of all linac evals is <math>\geq 5</math> on a 6 point scale. b. <math>\geq 80\%</math> of students earned score of Satisfactory on 1<sup>st</sup> attempt</p> <p><b>3:</b> a. Average Score of all linac evals is <math>\geq 5</math> on a 6 point scale. 6= Excellent</p> <p><b>4:</b> Ave score for all linac evals is <math>\geq 5</math> on a 6 point scale, 6= Excellent</p>	<p><b>1: a &amp; b</b> Spring Evaluation Review and Summer Final Evaluation Review by Clinical Coordinator/Instructor</p> <p><b>2: a &amp; b</b> Spring Evaluation Review and Summer Final Evaluation Review by Clinical Coordinator/Instructor</p> <p><b>3: a.</b> Spring Evaluation Review and Summer Final Evaluation Review by Clinical Coordinator/Instructor</p> <p><b>4:</b> Spring Evaluation Review and Summer Final Evaluation Review by Clinical Coordinator/Instructor</p>	<p><b>1 a. Met Threshold</b></p> <p><b>1 b. Met Threshold</b></p> <p><b>2 a. Met Threshold</b></p> <p><b>2 b. Met Threshold</b></p> <p><b>3 a. Met Threshold</b></p> <p><b>4 Met Threshold</b></p>

Outcome	Measurement Tool/ Reporting Strategies	Threshold (Benchmark)	Time Line/ Responsible Person	Data/Status/ Action Plan
<p><b>Goal B: The students will demonstrate problem solving and critical thinking skills</b></p> <p>1. Students will simulate and demonstrate a complex treatment procedure, explaining steps in detail. 2. Students will present a complex treatment procedure</p>	<p>1. a. XRT 4330:Treatment Techniques Course Grade b. Employer Survey, Question 2: "Solve Problems Effectively" 2. Poster Project Rubric, Items: Abstract &amp; Knowledge Gained</p>	<p>1. a. Average Grade of <math>\geq 80\%</math> b. <math>\geq 80\%</math> responded excellent, above average or average 2. Average Score of <math>\geq 5</math> on a 6 point scale.</p>	<p>1. a. End of Fall Semester by Course Instructor b. 6 months after graduation by Program Director 2. During Spring Semester by Clinical Coordinator and Program Director</p>	<p>1. a. <b>Met Threshold</b> 1.b. <b>Met Threshold</b> 2. <b>Met Threshold</b></p>
<p><b>Goal C: Students will demonstrate effective communication skills</b></p> <p>1. The student will appropriately communicate with patients 2. The student will demonstrate appropriate written communication 3. The student will demonstrate proper presentations skills</p>	<p>1: a. Linear Accelerator Clinical Rotation Performance Evaluation, Patient Treatment Section, Questions 3 &amp; 4 b. Clinical Competency Form c. Employer Survey Question 8: 'Speak so that clients or colleagues can understand the meaning of the message' 2: a. Clinical Reflection Paper b. Poster Project rubric item: Required Elements 3: XRT 4980 Capstone Case Study Project rubric item: Technical Competence</p>	<p>1. a. Average Score of all linac evals is <math>\geq 5</math> on a 6 point scale. b. <math>\geq 80\%</math> of students earned score of Satisfactory on 1<sup>st</sup> attempt c. <math>\geq 80\%</math> responded excellent, above average or average 2: a Average Grade of <math>\geq 80\%</math> b. Average Score of <math>\geq 4</math> on a 5 point scale. 3: Average Score of <math>\geq 5</math> on a 6 point scale.</p>	<p>1. a. End of Spring Semester by Clinical Coordinator b. Spring Evaluation Review and Summer Final Evaluation Review by Clinical coordinator/Clinical Instructor c. 6 months after graduation by Program Director 2 a. End of Fall Semester by Didactic Instructor b. Spring Semester by Didactic Instructor 3: Summer Semester by Didactic instructor</p>	<p>1 a. <b>Met Threshold</b> 1 b. <b>Met Threshold</b> 1 c. <b>Met Threshold</b> 2 a. <b>Met Threshold</b> 2 b. <b>Met Threshold</b> 3. <b>Met Threshold</b></p>

Outcome	Measurement Tool/ Reporting Strategies	Threshold (Benchmark)	Time Line/ Responsible Person	Data/Status/ Action Plan
<p><b>Goal D: Students will demonstrate professional growth and development</b></p> <p><b>1. The student will demonstrate professional behaviors</b></p> <p><b>2. The student will have knowledge of ethical behaviors</b></p> <p><b>3. The student will have knowledge of professional organizations</b></p> <p><b>4. Student will plan on participating in a Professional Organization</b></p>	<p><b>1: a.</b> Linear Accelerator Clinical Rotation Performance Evaluation Attitude Assessment Section, Question 6 <b>b.</b> Employer Survey, Question 14: 'Participate in formal activities to improve the quality of clinical practice'</p> <p><b>2: a.</b> Linear Accelerator Clinical Rotation Performance Evaluation Attitude Assessment Section, Question 10 <b>b.</b> Employer Survey, Question 13: 'Take responsibility for the outcomes of clinical decisions' <b>c.</b> XRT4320 Ethics Quiz Grade</p> <p><b>3 a.</b> XRT 4320 Radiation Therapy Practice I, Exam I Grade <b>b.</b> XRT 4960 Capstone Course: 5 Year Professional Growth Plan Grade</p> <p><b>4.</b> XRT 4960 Capstone Course: 5 Year Professional Growth Plan Grade</p>	<p><b>1: a.</b> Ave Score of all linac evals is <math>\geq 5</math> on a 6 point scale. <b>b.</b> <math>\geq 80\%</math> responded excellent, above average or average</p> <p><b>2: a.</b> Average Score of all linac evals is <math>\geq 5</math> on a 6 point scale. <b>b.</b> <math>\geq 80\%</math> responded excellent, above average or average <b>c.</b> Average Grade of <math>\geq 80\%</math></p> <p><b>3: a.</b> Average Grade of <math>\geq 80\%</math> <b>b.</b> Average Grade of <math>\geq 80\%</math></p> <p><b>4.</b> Average Grade of <math>\geq 80\%</math></p>	<p><b>1: a.</b> Summer Final Evaluation Review by Clinical coordinator/Clinical Instructor <b>b.</b> 6 months after graduation by Program Director</p> <p><b>2: a.</b> Summer Semester Final Evaluation by Clinical Coordinator <b>b.</b> 6 months after graduation by Program Director <b>c.</b> End of Fall Semester by Didactic Instructor</p> <p><b>3: a.</b> Fall Semester by Didactic Instructor <b>b.</b> End of Summer Semester by Didactic Instructor</p> <p><b>4.</b> End of Summer Semester by Didactic Instructor</p>	<p><b>1 a. Met Threshold</b></p> <p><b>1 b. Met Threshold</b></p> <p><b>2 a. Met Threshold</b></p> <p><b>2 b. Met Threshold</b></p> <p><b>2 c. Met Threshold</b></p> <p><b>3 a. Met Threshold</b></p> <p><b>3 b. Met Threshold</b></p> <p><b>4. Met Threshold</b></p>