

RADIATION THERAPY, B.S.

If you choose to major in radiation therapy at Saint Louis University, you will learn to treat cancer patients with high-energy radiation using highly specialized equipment. You will focus on helping plan and administer prescribed doses of radiation to affected areas as directed by a radiation oncologist.

About Radiation Therapists

A radiation therapist is a health care professional skilled in the art and science of medical radiation treatment. Therapists are primarily concerned with the design and administration of radiation therapy treatment, in addition to issues of daily well-being for patients with cancer. A therapist is responsible for administering the prescribed treatment dose of radiation using high-energy linear accelerators. These treatments are provided to cure the patient or control the disease, improving patients' quality of life. Therapists also monitor patients' reactions for radiation side effects and keep highly accurate records of planning, treatment and equipment use.

This profession combines the great satisfaction of helping others during difficult times with sophisticated technological equipment and scientific techniques. Radiation therapists work as part of a multidisciplinary health care team with radiation oncologists, medical physicists, dosimetrists, nurses and other medical specialists to provide the best treatment and support available to their patients.

Program Highlights

The website "Best Health Degrees" recently ranked SLU's Radiation Therapy program as the #8 ranked radiation science program in the nation. Advantages of earning your B.S. in radiation therapy at SLU include:

- Opportunities to participate in professional conferences with faculty and fellow students
- A curriculum with an interprofessional focus that emphasizes a team approach to health care
- Instruction by professionally credentialed faculty
- Undergraduate opportunities to conduct research and produce projects/papers acceptable for publication and presentation at professional conferences
- Pre-med and pre-physician assistant curriculum options
- A strong science-based curriculum, which prepares students interested in postgraduate professional programs or immediate job placement
- Small class sizes and low student-faculty ratios in the professional component of the radiation therapy program provide more individualized attention to the students.

Program Effectiveness Data (<https://www.slu.edu/doisy/degrees/program-pdfs/xrt-program-effectiveness-data.pdf>)

Curriculum Overview

SLU's Bachelor of Science in Radiation Therapy prepares graduates for entry-level positions as radiation therapists. The program includes all basic sciences as well as a 12-month intensive XRT curriculum that includes 1,200 hours of clinical practicum. Students are to note that, as part of the radiation therapy professional curriculum, XRT 4340

Treatment Planning and XRT 4440 Clinical Dosimetry are delivered in a synchronous, hybrid blended-learning format.

Upon successful completion of the program, graduates are eligible for national certification to become registered radiation therapists through the American Registry of Radiologic Technologists (ARRT).

Students must maintain a cumulative GPA of 2.7 on a 4.0 scale and earn a "C" or better in math and science courses.

Clinical Opportunities

Radiation therapy students participate in a clinical practicum at multiple health care settings in the St. Louis area. This variety of clinical sites allows students to appreciate a variety of departmental structures, ranging from high-end research facilities to community hospitals.

Careers

There are many career opportunities for radiation therapists. Graduates can work as radiation therapists in hospitals and clinics and may also seek positions in areas such as health care administration, equipment sales and teaching.

Some graduates further their education to pursue careers in dosimetry and medical physics. Radiation therapy provides excellent pre-professional curricula for those interested in medicine or becoming physician assistants. Many students attend graduate school part-time with assistance from their place of employment.

Some jobs are classified as traveling jobs where the employee provides temporary help to departments that are short-staffed for a short period. These therapists travel regularly, with the length of stay and the location varying.

Major focus areas for radiation therapists are:

- Delivering treatments using linear accelerators or similar equipment using ionizing radiation
- Assessment and care of patients undergoing radiation therapy

The general salary range depends on geographic location, years of experience and education. According to the Bureau of Labor Statistics, the mean annual wage for radiation therapists in 2022 was \$98,340 per year.

Admission Requirements

First-Year Applicants

Solid academic performance in college preparatory coursework is a primary concern in reviewing a first-year applicant's file. Saint Louis University has moved to a test-optional admission process for all undergraduate programs. Applicants may submit standardized test scores, but those who choose not to will not be disadvantaged in any way in the admission process.

Admission criteria include:

- Minimum cumulative GPA of 2.70 on a 4.00 scale for all applicants.
- Professional coursework in the radiation therapy program is concentrated in the fourth year of the curriculum. Students may enter as freshmen or transfer students, depending on program availability.

Transfer Applicants

The minimum college transfer GPA is 2.70/4.00.

Tuition

Tuition	Cost Per Year
Undergraduate Tuition	\$52,260

Additional charges may apply. Other resources are listed below:

Net Price Calculator (<https://www.slu.edu/financial-aid/tuition-and-costs/calculator.php>)

Information on Tuition and Fees (<https://catalog.slu.edu/academic-policies/student-financial-services/tuition/>)

Miscellaneous Fees (<https://catalog.slu.edu/academic-policies/student-financial-services/fees/>)

Information on Summer Tuition (<https://catalog.slu.edu/academic-policies/student-financial-services/tuition-summer/>)

Accreditation

The Radiation Therapy Program at Saint Louis University is fully accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT), having been awarded an eight-year accreditation. It is the only JRCERT accredited Radiation Therapy program in the state of Missouri. The program's next scheduled reaccreditation review by the JRCERT will be July 2025.

Joint Review Committee on Education in Radiological Technology (JRCERT) (<https://www.jrcert.org/>)
20 N. Wacker Drive, Suite 2850
Chicago, Illinois 60606-3182
312-704-5300
<http://www.jrcert.org>

For more information about the Saint Louis University radiation therapy program's goals, program outcomes, credentialing exam pass rates, job placement rates, technical standards, clinical site and program-specific requirements and fees, please see the additional program information and fees.

View Additional Program Information and Fees (PDF) (<https://www.slu.edu/doisy/degrees/program-pdfs/rt-accreditation-0918.pdf>)

Learning Outcomes

Doisy College of Health Sciences Learning Outcomes

1. The radiation therapy student will be able to articulate ethical behaviors in clinical practice.
2. The radiation therapy student will evidence appropriate written communication appropriate for the profession of radiation therapy.
3. The radiation therapy student will demonstrate complex radiation therapy treatment procedures.
4. The radiation therapy student will present a complex radiation therapy treatment procedure to an audience.
5. The radiation therapy student will demonstrate professional behaviors in the clinical setting.

Radiation Therapy Programmatic Mission

The radiation therapy program at Saint Louis University's 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 Learning Outcomes and Goals

Goal A: Students will be clinically competent

1. The radiation therapy student will position patients as directed in treatment record.
2. The radiation therapy student will set treatment machine as indicated in patient treatment record.
3. The radiation therapy student will practice patient confidentiality.
4. The radiation therapy student will practice proper radiation protection and safety.

Goal B: Students will demonstrate problem-solving and critical-thinking skills.

1. The radiation therapy student will demonstrate complex radiation therapy procedures.
2. The radiation therapy student will present a complex radiation therapy treatment procedure to an audience.
3. The radiation therapy student will demonstrate appropriate problem-solving skills for the practice of radiation therapy when provided with a case for analysis.

Goal C: Students will demonstrate effective communication skills.

1. The radiation therapy student will appropriately communicate with patients.
2. The radiation therapy student will show evidence of appropriate written communication for the profession of radiation therapy.
3. The radiation therapy student will demonstrate proper presentation skills.

Goal D: Students will demonstrate professional growth and development.

1. The radiation therapy student will demonstrate professional behavior.
2. The radiation therapy student will be able to articulate ethical behaviors in clinical practice.
3. The radiation therapy student will have knowledge of professional organizations.
4. The radiation therapy student will demonstrate the concepts of compassionate care.

The program annually tracks student learning outcomes as they relate to the above student goals.

Requirements

Code	Title	Credits
University Undergraduate Core (https://catalog.slu.edu/academic-policies/academic-policies-procedures/university-core/)		
BIOL 1240 & BIOL 1245	General Biology: Information Flow and Evolution and Principles of Biology I Laboratory (satisfies CORE 3800)	4
CHEM 1080 & CHEM 1085	Principles of Chemistry 1 Lecture and Principles of Chemistry 1 Lab	4
CHEM 1480 & CHEM 1485	Principles of Chemistry 2 Lecture and Principles of Chemistry 2 Lab	4
DIET 2080	Foundations in Nutrition	2

ENGL 1900	Advanced Strategies of Rhetoric and Research (satisfies CORE 1900)	3
ENGL 2xxx	Literature: satisfies CORE 3400	3
HCE 1600	Embodiment, Life, and Death in Context (satisfies CORE 1600)	3
HIM 4750	Fundamentals of Clinical Medicine	3
HSCI 2100	Health Care Management	3
HSCI 2200	Medical Terminology	3
HSCI 3200	Health Law and Policy	3
HSCI 3300 & HSCI 3310	Anatomy & Physiology I and Anatomy & Physiology I Lab	4
HSCI 3400 & HSCI 3410	Anatomy and Physiology Lecture II and Anatomy & Physiology II Lab	4
HSCI 4700	Quality Management	3
IPE 2100	Interprofessional Collaboration and Healthcare in Global Context	3
IPE 4200	Applied Decision-Making in Interprofessional Practice	3
IPE 4900	Interprofessional Community Practicum	3
MATH 1200	College Algebra	3
MATH 1400	Pre-Calculus	3
PHYS 1220 & PHYS 1235	General Physics I and General Physics I Lab (with Lab)	4
PHYS 1240 & PHYS 1255	General Physics II and General Physics II Lab (with Lab)	4
PSY 1010	General Psychology (satisfies CORE 3600)	3
SOC 1100	Introduction to Sociology	3
STAT 1300	Elementary Statistics with Computers (satisfies CORE 3200)	3

Radiation Therapy

XRT 4310	Radiation Physics	2
XRT 4320	Radiation Therapy Practice I	3
XRT 4330	Treatment Techniques	3
XRT 4340	Treatment Planning	3
XRT 4350	Clinical Practicum I (satisfies CORE 3500)	10
XRT 4360	Emerging Technologies	2
XRT 4420	Radiation Therapy Practice II	3
XRT 4440	Clinical Dosimetry	3
XRT 4450	Clinical Practicum II	8
XRT 4500	Radiation Oncology Patient Care and Quality Management	3
XRT 4510	Radiobiology and Radiation Protection	2
XRT 4960	Capstone in Radiation Therapy	1

Total Credits 139

Second Degree Option for students with a Bachelor's Degree

Total semester credits vary based on applicable courses completed in an undergraduate program. The specific course plan is individually designed for each applicant.

Code	Title	Credits
General Electives and/or Transfer Credits		51
Prerequisite Courses		
Pre-Calculus		3

Principles Chemistry I with Lab	4	
Principles Chemistry II with Lab	4	
General Physics I with Lab	4	
General Physics II with Lab	4	
Anatomy and Physiology I with Lab	4	
Anatomy and Physiology II with Lab	4	
Medical Ethics	3	
Oral and Written Communication	3	
Basic Human Nutrition	2	
Theology	3	
Radiation Therapy		
XRT 4310	Radiation Physics	2
XRT 4320	Radiation Therapy Practice I	3
XRT 4330	Treatment Techniques	3
XRT 4340	Treatment Planning	3
XRT 4350	Clinical Practicum I	10
XRT 4360	Emerging Technologies	2
XRT 4420	Radiation Therapy Practice II	3
XRT 4440	Clinical Dosimetry	3
XRT 4450	Clinical Practicum II	8
XRT 4500	Radiation Oncology Patient Care and Quality Management	3
XRT 4510	Radiobiology and Radiation Protection	2
XRT 4960	Capstone in Radiation Therapy	1

Total Credits 132

Continuation Standards

Students must maintain a cumulative grade point average (GPA) of 2.70 to remain in good standing.

Roadmap

Roadmaps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Courses and milestones designated as critical (marked with !) must be completed in the semester listed to ensure a timely graduation. Transfer credit may change the roadmap.

This roadmap should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor/mentor each semester. Requirements, course availability and sequencing are subject to change.

Course	Title	Credits
Year One		
Fall		
CHEM 1080 & CHEM 1085	Principles of Chemistry 1 Lecture and Principles of Chemistry 1 Lab	4
CORE 1000	Ignite First Year Seminar	2
CORE 1500	Cura Personalis 1: Self in Community	1
ENGL 1900	Advanced Strategies of Rhetoric and Research (satisfies CORE 1900)	3
HCE 1600	Embodiment, Life, and Death in Context (satisfies CORE 1600)	3

MATH 1200	College Algebra	3
Credits		16
Spring		
CHEM 1480 & CHEM 1485	Principles of Chemistry 2 Lecture and Principles of Chemistry 2 Lab	4
IPE 2100	Interprofessional Collaboration and Healthcare in Global Context	3
MATH 1400	Pre-Calculus	3
PSY 1010	General Psychology (satisfies CORE 3600)	3
STAT 1300	Elementary Statistics with Computers (satisfies CORE 3200)	3
Credits		16
Year Two		
Fall		
BIOL 1240 & BIOL 1245	General Biology: Information Flow and Evolution and Principles of Biology I Laboratory (satisfies CORE 3800)	4
CORE 1200	Eloquentia Perfecta 2: Oral and Visual Communication	3
CORE 2800	Eloquentia Perfecta 3: Creative Expression	2-3
IPE 4200	Applied Decision-Making in Interprofessional Practice	3
ENGLXXXX	English Literature Elective: satisfies CORE 3400	3
Credits		15-16
Spring		
CORE 1700	Ultimate Questions: Philosophy	3
CORE 2500	Cura Personalis 2: Self in Contemplation	0
DIET 2080	Foundations in Nutrition	2
HSCI 2100	Health Care Management	3
HSCI 2200	Medical Terminology	3
SOC 1100	Introduction to Sociology	3
Credits		14
Year Three		
Fall		
HIM 4750	Fundamentals of Clinical Medicine	3
HSCI 3200	Aspects of Health Law	3
HSCI 3300 & HSCI 3310	Anatomy & Physiology I and Anatomy & Physiology I Lab	4
PHYS 1220 & PHYS 1235	General Physics I and General Physics I Lab	4
Credits		14
Spring		
HSCI 3400 & HSCI 3410	Anatomy and Physiology Lecture II and Anatomy & Physiology II Lab	4
HSCI 4700	Quality Management and Performance Improvement	3
IPE 4900	Interprofessional Community Practicum (satisfies CORE 4000)	2
PHYS 1240 & PHYS 1255	General Physics II and General Physics II Lab	4
Credits		13

Year Four**Fall**

XRT 4310	Radiation Physics	2
XRT 4320	Radiation Therapy Practice I	3
XRT 4330	Treatment Techniques	3
XRT 4340	Treatment Planning	3
XRT 4360	Emerging Technologies	2
XRT 4500	Radiation Oncology Patient Care and Quality Management	3
XRT 4510	Radiobiology and Radiation Protection	2
Credits		18

Spring

XRT 4350	Clinical Practicum I (satisfies CORE 3500)	10
XRT 4420	Radiation Therapy Practice II	3
XRT 4440	Clinical Dosimetry	3
XRT 4960	Capstone in Radiation Therapy	1
Credits		17

Summer

XRT 4450	Clinical Practicum II	8
Credits		8

Total Credits 131-132**Second Baccalaureate Degree Track**

Code	Title	Credits
General Electives and/or Transfer Credits		51
Prerequisite Courses		
	Pre-Calculus	3
	Principles Chemistry I with Lab	4
	Principles Chemistry II with Lab	4
	General Physics I with Lab	4
	General Physics II with Lab	4
	Anatomy and Physiology I with Lab	4
	Anatomy and Physiology II with Lab	4
	Medical Ethics	3
	Oral and Written Communication	3
	Basic Human Nutrition	2
	Theology	3
Radiation Therapy		
XRT 4310	Radiation Physics	2
XRT 4320	Radiation Therapy Practice I	3
XRT 4330	Treatment Techniques	3
XRT 4340	Treatment Planning	3
XRT 4350	Clinical Practicum I	10
XRT 4360	Emerging Technologies	2
XRT 4420	Radiation Therapy Practice II	3
XRT 4440	Clinical Dosimetry	3
XRT 4450	Clinical Practicum II	8
XRT 4500	Rad Onc Pat. Care & Qual Manag	3
XRT 4510	Radiobiology/Rad Protection	2
XRT 4960	Capstone in Radiation Therapy	1
Total Credits		127

Program Notes

Second degree option for students with a bachelor's degree:

This 12-month program is identical to the senior year of the degree option. Successful completion leads to a second baccalaureate degree in radiation therapy. This option is designed as an alternative for the student who already possesses a bachelor's degree and is motivated to become a practicing radiation therapist in 12 months.

To be considered for the second baccalaureate degree, the applicant must have satisfactorily completed a baccalaureate degree, with a minimum GPA of 2.7 (on a 4.0 scale), including the prerequisite courses listed above.

The application must include evidence of shadowing, observation or documented work experience in the field of radiation therapy. The applicant must complete the application for the professional year and submit official transcripts of prior college work through the SLU admission website at <http://www.slu.edu>.

The applicant must show satisfactory evidence of good character and physical ability to perform functions of the radiation therapist's role. All applicants must meet the professional performance and technical standards required by the profession. Students must also successfully complete a drug screen and criminal background check prior to the start of the professional year.

Application to the 12-month option is via a competitive application process with admission granted on a space-available basis. The selection process includes a personal interview for qualified applicants.

Contact Us

Apply for Admission (<https://www.slu.edu/admission/>)

Contact Doisy College of Health Sciences:

Julie Miller
Recruitment Specialist
314-977-2570
dchs@health.slu.edu