

# B.S. IN RADIATION SCIENCES

## Have You Considered a Bachelor's Degree?

Improved marketability is a key reason for obtaining a Bachelor's degree with a major in Radiation Sciences. Possessing a Bachelor's degree makes it possible to pursue further advancement academically, as well as in the fields of radiology, business, and public health. Positions in management, supervision, and education usually require advanced degrees.

## Bachelor of Science in Radiation Science Program (Online)

The online Bachelor of Science in Radiation Sciences (BSRS) degree provides the Radiologic Technologist with foundational skills necessary to advance within the profession. The BSRS program can be completed in one year, depending on the individual academic plan. The BSRS Program accepts students every quarter. Students interested in completing an emphasis in Administration, Education, Science, Advanced Medical Imaging, pre-MS in Radiologist Assistant, or Imaging Informatics may be able to do so concurrently with the core program. Please check with the program director about this. Applications are accepted year-round. Students are advised to apply six months prior to the quarter they want to start. On-campus courses in the BSRS Program are offered each Fall. Contact the Program Director for details. Prior to applying, it is advisable to contact the program director for an unofficial work-up. Visit [www.llu.edu](http://www.llu.edu) to apply!

## Application Requirements

To be eligible for admission, the applicant must be a graduate of an approved program (or the equivalent) in Radiologic Technology, CT, MRI, Radiation Therapy, Nuclear Medicine, or Diagnostic Medical Sonography (Ultrasound), and have certification from and be in good standing with the American Registry of Radiologic Technologists (ARRT) or its equivalent. Medical Radiography applicants who are eligible to take the ARRT examination for certification, but who have not had opportunity to do so, are given provisional status for one quarter. Eligibility to continue is subject to obtaining certification. Applicants must also submit official transcripts, three references, an essay, and participate in an interview with program faculty.

## The Program Objectives

1. Graduate practitioners who are leaders in the profession and who are capable of serving the greater community in the public, private, and nonprofit sectors.
2. Graduate managers, administrators, and educators who contribute to the profession's body of knowledge through leadership roles, publications, professional presentations, and advocacy.

## Program Student Learning Outcomes

Upon completion of the program, the graduate should be qualified to:

1. Communicate effectively
2. Demonstrate moral leadership skills
3. Evaluate current and future advancements in their discipline

## Areas of Emphasis

Beyond the required BSRS core courses, students must choose an area of emphasis:

### Non-clinical (Online)

- Administration (includes a Health Care Administration minor)
- Education
- Imaging Informatics (PACS Administration)
- Pre-MS in Radiologist Assistant
- Science (Students planning on advancing into areas such as PA, RA, Dental or Medical School will find this to be the best choice.) Natural Science courses can be completed at any regionally accredited college.

### Clinical (On Campus) (A clinical emphasis requires a separate application process)

- CT (Computed Tomography)
- MRI (Magnetic Resonance Imaging)
- Nuclear Medicine
- Radiation Therapy
- Diagnostic Medical Sonography
- Advanced Medical Imaging



**Bachelor of Science in Radiation Technology**  
**Department of Radiation Technology**  
**School of Allied Health Professions**  
**Loma Linda University**  
**Nichol Hall A829**  
**Loma Linda, CA 92350**  
**Phone: (909) 558-4931**  
**Fax: (909) 558-7965**  
<http://www.llu.edu/llu/sahp>

**Program Director: Timothy Seavey, [tseavey@llu.edu](mailto:tseavey@llu.edu)**



# SCHOOL OF ALLIED HEALTH PROFESSIONS

## Financial Information

Tuition and fees are subject to change each year. Students are responsible for all tuition fees, books, living expenses, and transportation. Financial aid is available. Loan application can begin before being accepted. For financial aid information call: (909) 558-4509.

## Bulletin

For more detailed information consult the current Loma Linda University bulletin, available online or in print from the Admissions Office for \$10.00: Admissions Office, School of Allied Health Professions, Loma Linda University, Loma Linda, CA 92350.

## Accrediting Associations

Loma Linda University is accredited by the Western Association of Schools and Colleges, Accrediting Commission for Senior Colleges and Universities, and the Radiologic Health Branch of the Department of Health Services. The A.S. in Medical Radiography at Loma Linda University is also accredited by the Joint Review Committee on Education in Radiologic Technology.

## Curriculum

### Prerequisite/Co-requisite

Students should be fall within 12 quarter units of completion of General Education (GE) requirements in order to be considered for the Bachelor of Science degree in radiation Radiation sciences Sciences core program or have developed a academic plan with the program director.

### General Education

**Humanities**—28 units minimum (choose minimum of three areas from: history, literature, philosophy, foreign language, art/music appreciation/history). Included in this minimum, 4 units of religion per year of attendance at a Seventh-day Adventist college or university. Five units of religion are included in the B.S. degree core as a co-requisite. A total of 28 quarter units are required to fulfill this area.

**Natural Sciences**—Additional natural science units from: chemistry, geology, mathematics, physics, and statistics. Must have a total of 12 quarter units of natural sciences (no more than 6 units in any one area from the natural sciences may be used). Two years of high school mathematics with grades of C or above, or intermediate algebra in college.

**Social Science**—Must have a total of 12 quarter units of social science. Select additional quarter units from: economics, geography, political science, psychology, sociology, or anthropology.

**Communication**—English composition, complete sequence. Additional communication units may include courses in computer information systems, critical thinking, and public speaking. Minimum of 9 units are needed to complete this area.

**Health and Wellness**—Personal health or nutrition and two physical activity courses to meet the minimum of 3 quarter units.

**Electives**—Electives are to meet the minimum requirements of 192 quarter units.

## II. Radiation Technology Core Curriculum

BSRS Core – 30 units	Units	Offered
RTCH 493 Senior Portfolio I	3	Every Qtr
RTCH 494 Senior Portfolio II	3	Every Qtr
HCAD 414 Sustainability for Health Care Management	3	Sum/Wint
RTCH 387 Writing for Health Care Management	3	Sum/Wint
AHCJ 475 Health Care Research and Statistics	4	Fall/Spring
RTCH 464 Moral Leadership	4	Fall/Spring
HADM 305 Healthcare Communications	3	Summ/Wint.
RTCH 325 Applications for Radiology Managers	2	Fall/Spring
RTMR 467 Management of a Radiology Service	3	Summ/Wint
RTCH 385 Radiologic Trends in Health Care	2	Fall/Spring
Religion Courses	6-9	Every Qtr

## III. AREA OF EMPHASIS

You may choose one of the following for your area of emphasis (all emphases start in the Fall term):

### Administration (includes Health Care Administration Minor) (24 Units) (Online)

HCAD 316	Economics for Health Care	3 units
RTCH 485	Digital Management in Radiology	3 units
RTCH 418	HIM and Coding for Radiology Mngrs	3 units
HCAD 374	Human Resources in Health Care	3 units
HCAD 464	Managerial Finance	3 units
HCAD 336	Legal Environment of Health Care	3 units
RTCH 413	Management Practicum I	3 units
RTCH 414	Management Practicum II	3 units

### Education (24 Units) (Online)

RTED 485	Technology and Education	3 units
RTED 474	Instructional Techniques	3 units
RTED 476	Adult Learning Theory	3 units
RTED 475	Curriculum Dev. in Health Science	3 units
RTED 411	Student Teaching Practicum I	3 units
RTED 412	Student Teaching Practicum II	3 units
RTED 477	Learning Activities & Assessment	3 units
RTED 478	Online Instructional Design	3 units

### Imaging Informatics (PACS Administration) (24 units) (Online)

RTII 354	Introduction to Informatics	3 units
RTII 356	Information Tecnology in Radiology	3 units
RTII 358	PACS Planning and Implementation	3 units
RTII 364	Administrative Issues in Informatics	3 units
RTII 368	Communication and Edu. in Informatics	3 units
RTII 374	Image Management	3 units
RTII 378	Systems Management in Informatics	3 units
RTII 384	Advanced Imaging Informatics	3 units

### Pre- MSRA (15 Units) (Online)

RTAM 478	Intro to Computed Tomography	3 units
RTII 354	Intro to Imaging Informatics	3 units
RTAM 454	Advanced Patient Care	3 units
AHCJ 225	History of Radiation & Imaging 1890-1940	3 units
AHCJ 226	History of Radiation & Imaging 1940-present day	3 units

### Advanced Medical Imaging (22 Units) (On Campus)

RTAM 454	Advanced Patient Care	3 Units
RTAM 458	Advanced Imaging Procedures	3 Units
RTAM 464	Imaging Pathology	3 Units
RTAM 468	Advanced Imaging Principles	3 Units
RTAM 474	Patient Edu. & Evidence Based Medicine	3 Units
RTAM 401	Advanced Clinical I	2 Units
RTAM 402	Advanced Clinical II	2 Units
RTAM 403	Advanced Clinical III	2 Units
RTAM 404	Advanced Clinical IV	2 Units

### C. Clinical Practice

A 9-24 month, full time internship in a clinical specialty can be selected from the following areas: Units given towards the B.S.:

Diagnostic Medical Sonography	39 units
Cardiac Sonography	23 units
Nuclear Medicine Technology	18 units
Special Imaging Technology	11-18 units
Radiation Therapy Technology	28 units

### D. Science

15-20 quarter units selected from the natural sciences in the areas of biology, microbiology, chemistry, math, or physics. Courses must be taken from of two different content areas with the approval of the program director. These courses are taken at your local college/ university. A minimum grade of C+ (2.5) is required for all courses. The following courses are recommended for students interested in applying to the Physician's Assistant or Medical School programs (see program catalogue for details):

- General Biology (w-lab) – 8 units (The full sequence of anatomy & physiology, and microbiology)
- General or Inorganic Chemistry (w-lab) – 8 units
- Organic Chemistry (w-lab) – 8 units
- General Physics (w-lab) – 8 units

Revised: 1/5/2013