Bachelor of Science in Radiologic Sciences

The University of South Alabama offers a curriculum leading to the degree of Bachelor of Science in Radiologic Sciences. The baccalaureate program is designed to provide graduates with enhanced career opportunities in radiology as administrators, educators, and advanced imaging specialists. The curriculum provides a broad education in liberal arts and basic sciences and an in-depth study in radiologic sciences.

Educational opportunities in diagnostic imaging and advanced imaging modalities such as mammography, magnetic resonance imaging, vascular radiography, computed tomography, radiology administration, ultrasound, and radiation therapy are offered. Following completion of the pre-professional component and admission to the professional component of the program, students will study general radiography for three semesters. At the end of this first year in the professional component, students will select one of the following tracks to complete: general radiography to include one advanced imaging modality, ultrasound, or radiation therapy.

The general radiography track curriculum includes diagnostic radiology and either mammography, computed tomography, magnetic resonance imaging, vascular radiography, or radiology administration. Students completing didactic and clinical requirements in these tracks will be eligible to apply for certification through the American Registry of Radiologic Technologists (ARRT) in radiography and the advanced modality studied (excluding radiology administration).

The other two baccalaureate tracks allow students completing the first year of general radiography curriculum to select either ultrasound or radiation therapy during their senior year. Those who choose one of these tracks will not be eligible to seek ARRT certification in radiography, but will be eligible to apply for ARRT certification in radiation therapy or ARRT and American Registry of Diagnostic Medical Sonographers (ARDMS) certification as an ultrasonographer upon completion of didactic and clinical requirements. Students who complete the general radiology track in order to obtain ARRT certification in Radiography may later continue their education to study ultrasound or radiation therapy.

Those who are already ARRT certified Radiographers and have completed all of the pre-professional (general education) requirements may apply for admission to the three semester (Fall, Spring and Summer) senior year of the professional curriculum for the Radiation Therapy track. Applicants must complete pre-professional requirements prior to admission, and must complete clinical and didactic requirements in the Radiation Therapy program to be eligible to apply for ARRT certification.

Mission

Our mission is to offer a diverse student body an engaging, academic environment that produces competent, well-educated healthcare professionals who deliver excellent patient-centered care, and enhance service to the community and the medical imaging and therapeutic professions.
The Radiation Therapist

Radiation therapy is a field of oncology in which ionizing radiation is used to treat malignant conditions. After the radiation oncologist (physician specializing in the treatment of cancer) has determined the best course of therapy, the radiation therapist is the medical professional who carries out the treatment plan by delivering targeted radiation to a very precise location. Radiation therapists are responsible for the operation of radiation-producing equipment, simulation of a patient’s treatment plan, and administration of treatment as prescribed by the radiation oncologist. Radiation therapists are educated in physics, radiation safety, cancer management, patient anatomy, and patient care. They typically see each of their patients five days a week throughout a five- to seven-week course of treatment. Depending upon the complexity of treatment, each patient’s set-up and treatment takes between 10 and 60 minutes, and involves not only the highly technical aspect of treatment delivery, but also provision of education and support to patients and their families as they cope with the stress associated with a cancer diagnosis.

Radiation therapists are expected to seek positions in hospitals and outpatient radiation therapy centers with opportunities for advancement in management, education, dosimetry, and radiation therapy equipment applications and sales. Employment opportunities for radiation therapists have been impacted by the recent downturn in the economy, although positions are available for those who are willing to relocate. Certification by ARRT as a radiation therapist is required by the vast majority of employers, but certification does not guarantee job placement. Salary varies by region of the country. For more information about job demand and salary see the latest Occupational Outlook Handbook published online by the US Department of Labor, Bureau of Labor Statistics.

To Learn More About the Profession

For more information about a career in Radiation Therapy, visit these sites

- American Society of Radiologic Technologists (ASRT)  [www.asrt.org](http://www.asrt.org)
- American Registry of Radiologic Technologists (ARRT)  [www.arrt.org](http://www.arrt.org)
- Joint Review Committee on Education in Radiologic Technology  [www.jrcert.org](http://www.jrcert.org)

Program Accreditation

The radiography and radiation therapy programs are accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 North Wacker Drive, Suite 2850, Chicago, Illinois 60606-3182.  [www.jrcert.org](http://www.jrcert.org). We encourage you to visit this website, where you can learn more about all programs accredited by JRCERT, including program effectiveness data such as ARRT first time pass rate, program completion rate, and job placement rate. Search the “Find a Program” tab at  [www.jrcert.org](http://www.jrcert.org). The Standards for an Educational Program in Radiation Therapy can also be reviewed there.

Steps to Admission, Department of Radiologic Sciences

1. Completion of all required pre-professional courses by the end of the summer semester prior to desired admission for Fall semester. Students are admitted to the professional component in the Fall semester only.
2. Completion of a Department of Radiologic Sciences application, available at  [www.southalabama.edu/alliedhealth/radiologicsciences](http://www.southalabama.edu/alliedhealth/radiologicsciences).
3. Acceptance to the University of South Alabama.
4. Submit to the Radiologic Sciences Department official college transcripts for all coursework not completed at the University of South Alabama. Transcripts are not required if the coursework has already been transferred to USA.

5. Application deadline is May 1.

6. Submit official ACT or SAT scores, regardless of previous educational background. If individual scores for Math, English or Natural Sciences on the ACT are below 18, it is strongly advised that the test be retaken. ACT or SAT scores must be submitted by the application deadline of May 1.

7. Submission of three (3) completed professional reference forms by the application deadline. Reference forms are available at www.southalabama.edu/alliedhealth/radiologicsciences.

8. Have a minimum cumulative GPA of 2.0 (“C” average) on previously completed college-level courses. Transcripts must be submitted by the application deadline. For students who are attending or have attended USA, the USA GPA will be used. GPA’s from outside courses are not averaged into the USA GPA.

9. Students applying for admission to the professional component must complete four (4) hours of observation in a hospital Radiology department prior to reporting for admission interview. Following submission of the departmental application, applicants may call the Department of Radiologic Sciences at (251) 445-9346 any time after January 10th during the year in which they plan to enroll, and schedule a hospital observation appointment. Observation form and instructions are available at www.southalabama.edu/alliedhealth/radiologicsciences.

10. Meet program technical/core performance standards. Core performance standards are fundamental tasks and skills that are required for successful completion of the program. They have been outlined and are available upon request and on the department web site.

11. Complete a brief writing assignment conducted on the day of interview.

12. Complete a personal interview with members of the Radiologic Sciences Admissions Committee.

13. Applicants will be screened on the basis of past educational performance and potential number of openings available. **Therefore, acceptance into the University does not guarantee admission into the program.** Likewise, admission into the program does not guarantee a position in a particular track/modality for one’s senior year.

14. Student acceptance into the program is provisional pending completion of a drug screen and background check requirements as specified in the acceptance letter. Refusal to submit will result in nullification of acceptance into the program.

15. Proof of medical insurance must be provided following official notification of acceptance into the program. Due date will be specified in the acceptance letter.

16. ARRT certified radiographers who have completed the pre-professional component and are seeking the baccalaureate degree may apply for admission into the second year (senior year) of the professional component. A four (4) hour observation in a Radiation Therapy department is required of all candidates prior to reporting for admission interview for the Radiation Therapy track. Observation form is available at www.southalabama.edu/alliedhealth/radiologicsciences.

**Radiologic Sciences Admissions Timeline**

This schedule represents the admissions timeline in a typical year. The schedule may be adjusted as needed:

| May 1       | Deadline for applications and supporting documents |
| April – June| Admissions interviews are conducted               |
| By mid-June | Decisions are made and letters mailed             |
| July 15     | Deadline for completion of drug screen and background check requirements for those accepted into the program. |
| Late August | Students begin first semester of program           |
Admission Considerations

The Admissions Committee evaluates candidates according to the following criteria:

- ACT or SAT scores
- Grade point average
- Written communication skills
- Results of a personal interview
- Applicant History (BS/BA degree, already an R.T., number of times applied, etc.)
- As a state institution, Alabama residents are given additional consideration

The above criteria or categories have been assigned various point values. The above categories (criteria) are totaled, and those students receiving the highest scores are admitted. However, regardless of the total score, all applicants who have previously completed college-level courses must have a minimum GPA of 2.0 (C average) and an ACT or SAT score in order to be admitted. It is therefore easy to see that one's past academic performance is of paramount importance.

Curriculum

Students must complete the pre-professional component prior to enrolling in professional component courses.

FRESHMAN and SOPHMORE YEARS

Pre-Professional Component

<table>
<thead>
<tr>
<th>Required</th>
<th>Sem Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition (EH 101)</td>
<td>3</td>
</tr>
<tr>
<td>English Composition (EH 102)</td>
<td>3</td>
</tr>
<tr>
<td>Precalculus Algebra (MA 112)</td>
<td>3</td>
</tr>
<tr>
<td>Biology with lab (BLY 101/101L or 121/121L)</td>
<td>4</td>
</tr>
<tr>
<td>Biology with lab (BLY 102/102L or 122/122L)</td>
<td>4</td>
</tr>
<tr>
<td>Psychology (PSY 120)</td>
<td>3</td>
</tr>
<tr>
<td>History (HY 101, 102, 135, 136)</td>
<td>3</td>
</tr>
<tr>
<td>Social Science or 2nd History in a sequence*</td>
<td></td>
</tr>
<tr>
<td>(HY 101, 102, 135, 136, AN 100, 101, CA 100, 211, ECO 215, 216, GEO 114, 115, GS 101, IS 100, IST 201, PSC 130, PSY 250, SY 109, 112, AIS 115, 201)</td>
<td>3</td>
</tr>
<tr>
<td>Social Science (HY 101, 102, 135, 136, AN 100, 101, CA 100, 211, ECO 215, 216, GEO 114, 115, GS 101, IS 100, IST 201, PSC 130, PSY 250, SY 109, 112, AIS 115, 201)</td>
<td>3</td>
</tr>
<tr>
<td>Public Speaking (CA 110)</td>
<td>3</td>
</tr>
<tr>
<td>Fine Arts (ARH 100, 103, 123, ARS 101, DRA 110, MUL 101)</td>
<td>3</td>
</tr>
<tr>
<td>Literature (EH 215, 216, 225, 226, 235, 236)</td>
<td>3</td>
</tr>
<tr>
<td>Humanities or 2nd Literature in a sequence*</td>
<td></td>
</tr>
<tr>
<td>(AFR 101, CA 275, EH 215, 216, 225, 226, 235, 236, IST 105, LG Any language course except LG 190, 290, or 390, LGS Any language course except LGS 190, 290 or 390, PHL 110, 120, 121, 131, 231, 240, REL 100, 200, 201)</td>
<td>3</td>
</tr>
<tr>
<td>Anatomy &amp; Physiology (BMD 251)</td>
<td>4</td>
</tr>
<tr>
<td>Anatomy &amp; Physiology (BMD 252)</td>
<td>4</td>
</tr>
<tr>
<td>Required</td>
<td>Sem Hrs</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Physics (PH 104 or 114)</td>
<td>4 or 5</td>
</tr>
<tr>
<td>Statistics (ST 210 or BUS 245, ST 305)</td>
<td>3</td>
</tr>
<tr>
<td>Intro Computer (CIS 150) or demonstrate</td>
<td>0-3</td>
</tr>
<tr>
<td>proficiency (CIS 010)</td>
<td></td>
</tr>
<tr>
<td>Optional General Elective (If needed to</td>
<td>Optional</td>
</tr>
<tr>
<td>increase pre-professional</td>
<td></td>
</tr>
<tr>
<td>component)</td>
<td></td>
</tr>
<tr>
<td>Pre-Professional Component Total:</td>
<td>56 up to 63 hrs^</td>
</tr>
</tbody>
</table>

*Must complete a sequence in either History or Literature.

^Factors that influence required hours include 1) Physics course taken, 2) Intro to Computer vs. passing Proficiency Exam, 3) being exempt from EH 101 based on ACT, 4) whether or not HSC 101 was taken, 5) receiving credit by examination, and 6) if general elective needed to bring total up.

**JUNIOR YEAR**

Professional Component (38 semester hours)

The professional component (junior and senior years) consists of two years of academic and clinical study in Radiologic Sciences. The program is six semesters in length, including two summer terms. All candidates must have satisfied the pre-professional component to qualify for the degree-seeking professional component, but completion of the professional component does not guarantee admission to the professional component. Enrollment in the professional component is limited by the number of clinical positions available.

All students admitted to the professional component are required to complete the following professional courses during their first year in the professional component of the program:

- **Fall:** RAD 300, RAD 304, RAD 307, RAD 310, RAD 312 (15 hrs)
- **Spring:** RAD 301, RAD 308, RAD 315, RAD 318, RAD 335 (15 hrs)
- **Summer:** RAD 302, RAD 309, RAD 320 (8 hrs)

After completing the first year of the professional component curriculum, students will have the opportunity in their senior year to: 1) continue studies in Radiography plus one advanced imaging modality, 2) study Ultrasound only, or 3) study Radiation Therapy only.

**SENIOR YEAR**

Professional Component (Semester hours dependent upon modality studied)

Three tracks of study are available to students who have completed their first year of study in Radiologic Sciences. Enrollment in a particular modality is limited by the number of clinical positions available, and students cannot be guaranteed a position in the modality of their choice. Course requirements and semester hours vary based on the educational track followed.

- **Track 1:** Bachelor degree in Radiologic Sciences, General Radiography to include either mammography, computerized tomography, magnetic resonance imaging, vascular radiography, or radiology administration. It should be noted that students who follow this track may meet eligibility requirements to sit for the ARRT certification examination in Radiography as well as the advanced modality studied following graduation. Students who complete Track 1 will be eligible to apply for continuation in the program to study any additional modality to include ultrasound and radiation therapy.
- Track 2: Bachelor degree in Radiologic Sciences, Ultrasound modality only.
- Track 3: Bachelor degree in Radiologic Sciences, Radiation therapy only

### Track 3: Radiation Therapy Professional Curriculum (42/44 semester hours)

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course</th>
<th>Course ID</th>
<th>Sem Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>Clinical Education I</td>
<td>RAD 441</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Radiation Therapy Physics</td>
<td>RAD 448</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Cross Sectional Anatomy</td>
<td>RAD 320*</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Orientation to Radiation Oncology (W)</td>
<td>RAD 446</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Patient Care in Radiation Oncology</td>
<td>RAD 450</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Principles &amp; Practice of Radiation Oncology I</td>
<td>RAD 452</td>
<td>3</td>
</tr>
<tr>
<td>Spring</td>
<td>Clinical Education II</td>
<td>RAD 442</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Dosimetry and Treatment Planning I</td>
<td>RAD 455</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Principles &amp; Practice of Radiation Oncology II</td>
<td>RAD 453</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Cancer Management in Radiation Oncology (W)</td>
<td>RAD 458</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Radiologic Sciences Research I (W)</td>
<td>RAD 496</td>
<td>1</td>
</tr>
<tr>
<td>Summer</td>
<td>Clinical Education III</td>
<td>RAD 443</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Dosimetry and Treatment Planning II</td>
<td>RAD 456</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Quality Management in Radiation Oncology</td>
<td>RAD 454</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Radiologic Sciences Research II</td>
<td>RAD 497</td>
<td>1</td>
</tr>
</tbody>
</table>

*RAD 320 required if not previously completed

### Summary of Hours by Track

<table>
<thead>
<tr>
<th>Track</th>
<th>Freshman &amp; Sophomore</th>
<th>Junior Year</th>
<th>Senior Year</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-Professional Component</td>
<td>Professional Component</td>
<td>Professional Component</td>
<td></td>
</tr>
<tr>
<td><strong>Track 1:</strong> General Radiography and one modality</td>
<td>56-63</td>
<td>38</td>
<td>39-52</td>
<td>133-140</td>
</tr>
<tr>
<td><strong>Track 2:</strong> Ultrasound</td>
<td>56-63</td>
<td>38</td>
<td>30-36</td>
<td>124-137</td>
</tr>
<tr>
<td><strong>Track 3:</strong> Radiation Therapy</td>
<td>56-63</td>
<td>38</td>
<td>42-44</td>
<td>136-145</td>
</tr>
</tbody>
</table>
Grading Scale

The Department of Radiologic Sciences maintains the following grade scale:

Both Didactic and Clinical Courses

- 90 - 100 = A
- 80 - 89 = B
- 70 - 79 = C
- 60 - 69 = D
- 0 - 59 = F

Clinical Obligations: Radiation Therapy

Classes and clinical assignments are scheduled Monday – Friday throughout the three semester Radiation Therapy program (Fall, Spring and Summer). Students may be required to attend class on campus and participate in clinical laboratory exercises or clinical education experiences during the same day. Schedules limit the combined hours for clinical education and didactic instruction to not more than 40 hours per week and not more than 10 hours per day. Students are assigned to clinical education rotations 25-35 hours each week during the academic year. Students will be assigned to up to seven different clinical education settings while enrolled, and should be prepared to travel to sites up to 90 miles from campus.

Clinical Education Settings:

- University of South Alabama Mitchell Cancer Institute, Mobile, AL
- The Cancer Center at Providence Hospital, Mobile, AL
- Urology and Oncology Specialists, PC. operating at Springhill Medical Center, Mobile, AL
- Infirmary Cancer Care, Mobile, AL
- The Regional Cancer Center, Singing River Health Systems, Pascagoula, MS
- Forrest General Cancer Center, Hattiesburg, MS
- Woodlands Medical Specialists, P.A., Pensacola, FL

Radiographers: Options for Continued Education at USA

USA offers graduates of JRCERT accredited college-based radiography programs the option of earning a B.S. degree in Radiologic Sciences or completing an advanced modality only. Radiographers who complete a modality-only track may later continue their education to meet bachelor degree requirements. To earn the B.S. degree, both the prerequisite education and the advanced modality course requirements must be met. For Radiation Therapy, radiographers who do not possess a B.S. at time of enrollment do not have the option of studying Radiation Therapy only, without completing requirements for the bachelor degree.

In order to simplify the transfer credit process from community college radiography programs to the department’s Bachelor of Science degree in Radiologic Sciences, the department has adopted the following provision in its admission process:

In addition to meeting all other admission requirements, associate degree transfer radiography students seeking a B.S. degree are required to take a 6-hour bridge course (RAD 491-Concepts of Professional Radiologic Practice). Upon completion of all graduation requirements, students who have completed the bridge course will be awarded 38 semester hours of upper level credit for the student’s previous radiography training. This course is offered once each year, during the summer semester. Radiographers who wish to complete the B.S. degree with a concentration in Radiation Therapy must complete the bridge course as a prerequisite to admission.
Radiographers who are graduates of a college-based program have the following options for studying Radiation Therapy, depending upon their educational background:

- **Earn a B.S. in Radiologic Sciences**
  - For radiographers who do not have a baccalaureate degree
  - For radiographers who have a baccalaureate degree in a major other than Radiologic Sciences, but choose to seek a second baccalaureate degree in Radiologic Sciences. Student should meet with Allied Health advisor to determine their prerequisite requirements.

- **Post Baccalaureate Radiation Therapy studies (non-B.S. seeking)**
  - For radiographers who already hold a baccalaureate degree in Radiologic Sciences, but wish to continue their education by studying Radiation Therapy.
  - For radiographers who already hold a baccalaureate degree in a major other than Radiologic Sciences and choose to study only Radiation Therapy, without earning a second baccalaureate degree. Students are required to complete college physics (PH 104/114) and pre-calculus/college algebra or higher (MA 112), but other prerequisite requirements do not have to be met.
  - Note that financial aid is not available to non-degree seeking students.

**IMPORTANT NOTE:** The Radiation Therapy professional curriculum (clinical and didactic) is identical for both B.S.-seeking students and Post-Baccalaureate radiographers who are non-B.S. seeking except that RAD 496 and RAD 497 (2 semester hours total) are not required of Post-Baccalaureate radiographers who are not seeking another B.S.

**Transfer Students**

Students may transfer no more than 60 semester hours from a community college. A minimum of 25% of the credit hours required for the degree must be completed through instruction offered by USA in upper-division course work (300 & 400 levels). Students must complete 15 hours in the major.

**Radiation Therapy Program Costs**

Applicants should consider the following estimated expenses associates with the program:

- **Tuition and fees:** See the latest *USA Bulletin*.
- **Books:** Approximately $700
- **Uniforms:** Approximately $250
- **Drug Screen:** Approximately $25
- **Background Check:** Varies based on number of prior residences, but approximately $50
- **Personal Medical Insurance:** Must possess throughout program
- **Housing:** Student housing is available as well as many rental homes/apartments in the area.
- **Transportation:** Students must be prepared to travel up to 90 miles from campus to participate in clinical education experiences.
- **Professional Liability Insurance:** Provided by the University as a component of tuition.
More Information About USA

- University catalogue  USA Bulletin
- Student handbook  The Lowdown
- Student engagement  Student Affairs

Contact Information

Department of Radiologic Sciences
Patricia Brewer, M.P.A., R.T. (R)(T)
Radiation Therapy Program Director
5721 USA Drive North, HAHN 3015
Mobile, AL  36688-0002
Phone  (251) 445-9355
Fax  (251) 445-9347
Email: pbrewer@southalabama.edu

For academic advising for those already admitted to USA (including review of transcripts):
College of Allied Health Professions
Office of Academic Advising
5721 USA Drive North, HAHN 3028
Mobile, AL  36688-0002
Telephone:  (251) 445-9260
Fax:  (251) 445-9397
Website:  http://www.southalabama.edu/colleges/alliedhealth/ahealthadvisors.html

For general USA admissions information:
University of South Alabama
Office of Admissions
Meisler Hall Suite 2500
Mobile, AL  36688-0002
Telephone:  (251) 460-6141 or (800) 872-5247
Fax:  (251) 460-7876
E-mail:  admiss@southalabama.edu

http://www.southalabama.edu/alliedhealth/radiologicsciences/

Reviewed & Revised 1/3/2019