

University of South Alabama

Ultrasound Program



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).

Alternative 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/or American Registry of Diagnostic Medical Sonographers (ARDMS) certification as a sonographer 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.

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 Sonographer

Ultrasound is a pain-free medical procedure utilizing high-frequency sound waves to produce visual images of organs, tissues, or blood flow inside the body. Depending on the situation, ultrasound can be used to examine the abdomen, breasts, prostate, female reproductive organs, heart, blood vessels, and various other areas.

Job skills needed to become a successful sonographer include:

- **Attention to Detail** – A sonographer must scan a patient with accuracy and attention to detail in order to produce diagnostic images that will allow the physician to diagnose or treat the patient.
- **Hand-Eye Coordination** - A sonographer must be able to move the transducer during the scan while at the same time watching a monitor demonstrating the images being obtained.
- **Good Interpersonal Skills** – A sonographer must work closely with patients. The patients can have a multitude of issues. Patient cooperation is essential (usually) in order to obtain the necessary images. In addition, the sonographer must interact with family members as well as other medical professionals who may be dealing with the patient. The sonographer should be able to remain calm and supportive during difficult situations.
- **Stamina** – A sonographer may be required to work on their feet a majority of the day. Lifting and moving patients who are unable to get on and off of the exam table may also be necessary.
- **Technical Skills** – Operation of complex equipment and computers will be required in every situation. A sonographer should be able to understand how the equipment works and be able to operate it correctly in order to produce optimum images.
- **Communication Skills** – Communication with patients is an essential part of a sonographer's job. Answering questions clearly and concisely about exams and possibly what is being displayed on the screen is a daily occurrence. Communication with family members, fellow sonographers, physicians, and other medical personnel and staff is also required.
- **Discretion** – Sonographers may be the first to identify a medical problem/issue, but are trained that sonographers do not diagnose or inform patients of their medical condition.
- **Writing Skills** – Following an exam, a sonographer many times must complete a written summary of their findings to be sent to the physician along with the images for review.
- **Team Mentality** – A sonographer is only a part of a team of medical professionals who are working toward providing the best and most effective care for the patient.
- **Time Management** – For the most part, a sonographer works one-on-one with each patient. Therefore, time management skills are an essential part of managing patient appointments and completing exams in a timely manner.

Sonographers are expected to seek positions in hospitals, outpatient imaging centers, physician's offices, as imaging/application specialists or in sales with equipment manufacturers, and education. Employment opportunities in the southern region (Gulf Coast) are limited, but job opportunities are available nationwide for those who are willing to relocate. Certification by ARDMS (American Registry of Diagnostic Medical Sonographers) or the ARRT(S) (American Registry of Radiologic Technologists) as a sonographer 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 Ultrasound, visit these sites:

- American Registry of Diagnostic Medical Sonographers (ARDMS) www.ardms.org
- Society of Diagnostic Medical Sonographers (SDMS) www.sdms.org
- American Registry of Radiologic Technologists (ARRT) www.arrt.org
- Joint Review Committee on Diagnostic Medical Sonographers (JRC-DMS) www.jrcdms.org

Program Accreditation

The University of South Alabama is accredited by the Southern Association of Colleges and Schools Commission on Colleges through 2023. The Ultrasound Program is voluntarily seeking accreditation by the Joint Review Committee on Education in Diagnostic Medical Sonography (JRC-DMS) 6021 University Boulevard, Suite 500, Ellicott City, MD 21043. If you have any questions, please contact the Program Director.

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/radiologicsscience .
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/radiologicsscience.
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/radiologicsscience.
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.

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

Required	Sem Hrs
English Composition (EH 101)	3
English Composition (EH 102)	3
Precalculus Algebra (MA 112)	3
Biology with lab (BLY 101/101L or 121/121L)	4
Biology with lab (BLY 102/102L or 122/122L)	4
Psychology (PSY 120)	3
History (HY 101, 102, 135, 136)	3
Social Science or 2nd History in a sequence* (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)	3
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)	3
Public Speaking (CA 110)	3
Fine Arts (ARH 100, 103, 123, ARS 101, DRA 110, MUL 101)	3
Literature (EH 215, 216, 225, 226, 235, 236)	3
Humanities or 2nd Literature in a sequence* (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)	3
Anatomy & Physiology (BMD 251)	4
Anatomy & Physiology (BMD 252)	5
Physics (PH 104 or 114)	4 or 5
Statistics (ST 210 or BUS 245, ST 305)	3
Intro Computer (CIS 150) or demonstrate proficiency (CIS 010)	0-3
Optional General Elective (If needed to increase pre-professional component)	Optional
Pre-Professional Component Total:	56 up to 63 hrs^

FRESHMAN and SOPHMORE YEARS Pre-Professional Component, continued:

*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 that component does not guarantee admission to the professional component. Enrollment in the professional component is limited by the number of clinical positions available. During the professional component, students must be prepared to travel up to 90 miles from campus in order to participate in the clinical education component of the curriculum.

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

SENIOR YEAR

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.

Track 2: Ultrasound

Semester	Course	Course ID	Hours
Fall	Abd & Superficial Structures US	RAD 417	4
	Rad. Pathology	RAD 411*	4
	US Clinical Education I	RAD 423	5
Fall Total Hours			9-13
Spring	OB/GYN Ultrasound	RAD 418	3
	US Clinical Education II	RAD 424	5
	US Physics 3	RAD 421	3
	Rad. Sci. Research I	RAD 496	1
Spring Total Hours			12
Summer	US Clinical Education III	RAD 425	5
	Procedural Guidelines in US	RAD 427	3
	Rad. Sci. Research II	RAD 497	1
	Cross Sectional Anatomy	RAD 320*	2
Summer Total Hours			9-11
Track 2 Senior Year Total Hours			30-36

*RAD 320 and 411 required if not previously completed

Grading Scale

The Department of Radiologic Sciences maintains the following grade scale for both didactic (lecture) and clinical classes:

90 – 100 = A	
80 – 89 = B	
70 – 79 = C	Minimum grade required of each course during program
60 – 69 = D	
0 - 59 = F	

Clinical Obligations: Ultrasound

Classes and clinical assignments are scheduled Monday – Friday throughout the three semester Ultrasound Program (Fall, Spring and Summer). Lecture classes and laboratory sessions are held on campus. Students will be required to attend clinical sessions and class on campus on 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 20 hours per week during the academic year.

Clinical Education Settings:

- USA Health System University Hospital
- Mobile Infirmary Medical Center
- Springhill Medical Center
- USA Strada Patient Care Center – USA OB/GYN Perinatal Unit
- USA Children & Women’s Hospital (OB/GYN rotations)

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.

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 are graduates of a college-based program have the following options for studying Ultrasound, 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.
 - Non-B.S. seeking students
 - For radiographers who already hold a baccalaureate degree in Radiologic Sciences, but wish to continue their education by studying Ultrasound
 - For radiographers who wish to study ultrasound as a means of continuing education.
- **Note that financial aid is not available to non-degree seeking students.**

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.

Ultrasound Program Costs

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

- Tuition and fees: See the latest USA Bulletin.
- Books: Approximately \$500
- 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

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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/radiologicsscience/>

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