

RADIOLOGIC TECHNOLOGY

Associate of Applied Science degree



Program and Career Description:

Radiologic Technology is a health profession that involves producing diagnostic images of patient's internal structures for use by the radiologist or referring physician in diagnosing medical problems and disorders. As a professional, the radiographer is required to observe the ethical and professional standards expected of all persons involved in caring for patients in health care settings.

How long is the program?

Columbia State offers a 22-month, full scope program in Radiologic Technology.

What does the program provide?

- Classroom instruction in crucial areas prior to clinical rotations.
- Hands-on training at clinical sites within approximately 60 miles of Columbia State.
- Clinical competencies that exceed American Registry of Radiologic Technologists requirements.
- Graduates experience excellent career mobility.
- Opportunities for introductory rotations in specialty modalities such as ultrasound, magnetic resonance imaging (MR), computed tomography (CT), radiation therapy, nuclear medicine, and cardiac catheterization.
- Encouragement toward life-long learning through involvement in local, state, and national conferences and organizations.

How is the job market?

Those qualified to perform more than one type of imaging procedure, for example MR, CT, and Mammography, will have the best employment opportunities. The American Society of Radiologic Technologists 2013 salary survey, based on survey responses, reports a national mean annual compensation of \$53,680 and a mean in Tennessee of \$46,750.

Career	Beginning Salary	Experienced Salary Median
Radiologic Technologists (TN)	\$36,420	\$54,020
Radiologic Technologists (US)	\$38,110	\$56,670

Salaries are not guaranteed and vary dramatically by area of the country, state, and community as well as setting (ie, hospital, clinic, or physician's office.)

www.columbiastate.edu/radiologic-technology

Opportunities

Columbia State's 22-month program prepares graduates for the national registry examination in radiography administered by the American Registry of Radiologic Technologists (ARRT). Graduates may pursue additional formal education (certificates, BS or MS degrees) at other institutions through traditional or online formats. Future employers may also offer on the job training in various specialty areas.



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Major in Radiologic Technology (A.A.S.)

(Designed for the student who does not intend to transfer into a baccalaureate degree program. Many B.S. Radiologic Science programs do accept the A.A.S. degree along with certification by the ARRT as part of their academic entry requirements)

The total program is 22 months in length and requires clinical and didactic competency as outlined in the curriculum. Clinical competency is obtained through completion of practicum objectives in approved clinical education settings throughout middle Tennessee. Transportation to and from clinical education settings is the sole responsibility of each individual student.

Program enrollment is limited by clinical education settings capacity and interview or admission is not guaranteed. Formal interviews with the Radiologic Technology Advisory Committee are held in the spring each year. New classes begin the second summer term. Applicants should schedule a information/screening session in the summer or fall to allow sufficient time for completion of all required forms prior to February 1 of the following year. Applicants with the highest combined academic potential scores and screening scores who have completed all admission requirements will be considered for interviews with the advisory committee.

Following the formal interviews applicants will be notified of their admission status by the Radiologic Technology department. Those students accepted to the program will receive instructions on how to complete the Health Requirements prior to clinical orientation in the fall.

Criminal background checks and routine drug screening are requirements at most affiliated clinical training sites. Based on the results of the criminal background check or drug screen, an affiliated clinical site may determine to not allow a student's presence at their facility. This could result in the inability to successfully complete the requirements of a specific course and the program. More information is available from the program director.

Notice of Felony or Misdemeanor Convictions

The American Registry of Radiologic Technologists (ARRT) has stringent rules regarding misconduct and eligibility to take the national registry exam. The ARRT offers an Ethics Review Pre-Application as an early ethics review of violations that would otherwise need to be reported on the Application for Certification and Registration upon completion of an ARRT-recognized education program. The process is designed for those who are not yet enrolled in an ARRT-recognized education program or are enrolled in an ARRT-recognized educational program and are at least six months away from graduation. The Ethics Review Pre-Application may be used to report criminal proceedings including misdemeanor charges and convictions, felony charges and convictions, military court-martials, and/or disciplinary actions taken by a state or federal regulatory authority or certification board, and/or honor code violations. Program candidates may complete the pre-application review process with the ARRT prior to program enrollment to avoid delays and uncertainty regarding certification eligibility. The Ethics Review Pre-Application is downloadable from the Ethics section of ARRT's website at www.arrt.org or by phoning ARRT at (651) 687-0048, ext. 8580.

In the event that a student or graduate of the Radiologic Technology Program is concerned about ARRT eligibility, it

is the sole responsibility of the student or graduate to certify eligibility with the ARRT.

Upon satisfactory completion of the program, students are awarded the Associate of Applied Science degree and are eligible to apply for the certification exam by the American Registry of Radiologic Technologists (ARRT).

Accreditation

The Radiologic Technology Program is fully accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT).

Joint Review Committee on Education
in Radiologic Technology
20 N. Wacker Dr., Suite 2850, Chicago, IL 60606-3182
312.704.5300 • www.jrcert.org

Accreditation guidelines concerning program requirements, standards, general information, etc., are contained in the Standards for an Accredited Educational Program in Radiologic Sciences published by the Joint Review Committee on Education in Radiologic Technology (JRCERT) and available in faculty offices and accessible via the JRCERT Web site at www.jrcert.org. The Standards and additional program information are available in the Radiologic Technology Applicant Handbook located Online at www.columbiastate.edu/radiologic-technology.

Mission Statement

We endeavor to provide educational experiences leading to success, professionalism, and opportunity in the radiologic sciences.

Fulfillment of the program's mission is assessed by the degree to which the following goals and outcomes are achieved by students, graduates, and/or the program:

- Goal 1: Students will demonstrate clinical competence in the performance of diagnostic radiographic procedures
 - 1.1 Students will accurately position patients for radiographic examinations.
 - 1.2 Students will select appropriate exposure factors for radiographic exams.
 - 1.3 Students will apply the principles of radiation protection to the patient, self and others.
- Goal 2: Students will demonstrate communication skills
 - 2.1 Students will utilize acceptable verbal skills in the clinical setting.
 - 2.2 Students will demonstrate oral and written communication skills.
- Goal 3: Students will develop critical thinking and problem solving skills applicable to radiography
 - 3.1 Students will modify routine imaging parameters based on patient condition and environmental conditions.
 - 3.2 Students will evaluate images for diagnostic quality.
- Goal 4: Students will exhibit professionalism
 - 4.1 Students will exhibit desirable work ethic behaviors.

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- 4.2 Students will develop the habit of lifelong learning.
- Goal 5: Graduates will contribute to the needs of the medical imaging community
- 5.1 Students will complete the program within the scheduled time frame
 - 5.2 Graduates will successfully complete the national certification examination.
 - 5.3 Graduates will accept positions in radiography and related modalities.
 - 5.4 Graduates will express satisfaction with their radiography education.
 - 5.5 Employers will express satisfaction with graduates as entry-level radiographers.

The program mission and goals are consistent with the mission and goals of the college. Achievement of the goals are measured by the program's Outcomes Assessment completed annually.

Admission Requirements

1. Meet all college general requirements for admission as a degree-seeking student as stated in the catalog and be admitted to the college.
 2. Review "Programs with Special Admissions Requirements," in the Columbia State Catalog.
 3. Exemption from or satisfaction of Learning Support competencies in reading, writing, and math as determined by college placement standards by the end of the fall semester prior to the year in which admission is sought.
 4. ACT or SAT exam results are required of all applicants. Applicants must have an ACT composite score of 19 or higher (equivalent to an SAT score of 990 on the 1600 scale and 1340 on the 2400 scale).
 5. Have earned a cumulative grade point average (GPA) of 2.5 or above on a 4.0 scale for prior college level coursework. The high school GPA is used for students who have earned less than 12 college credit hours. An applicant who has not earned 12 credit hours of college-level credit that has no high school GPA must have an average standard score of at least 450 on the GED® or 45 on the HiSET®.
 6. Schedule, attend and complete a information/screening session. Go to <http://www.columbiastate.edu/academics/health-sciences/radiologic-technology> and select "Information/Screening Session" Sign Up. Information/Screening sessions are conducted from early August through December. You should receive a ticket for the information/screening session. Print this ticket to bring with you to the information/screening session. Applicants will receive all paperwork and a full explanation of the program and profession. Attend a information/screening session at the earliest possible date to give yourself ample time to submit required materials by the February 1 deadline.
 7. Program application requirements listed above must be completed before February 1. This includes the two Letter of Recommendation forms provided at the information/screening session, completion of the clinical observation assignment and review of the Radiologic Technology Applicant Handbook available Online at <http://www.columbiastate.edu/academics/health-sciences/radiologic-technology/handbook> The handbook contains the Radiologic Technology Student Policy Manual, a copy of the Standards adopted by the JRCERT, the Radiography Practice Standards, the ARRT's Standard of Ethics, and an estimated cost sheet.
 8. Applicants must be able to physically manipulate and operate equipment, manipulate patients, and visually assess patients, test results, and the working environment. They must be able to clearly communicate, both verbally and in writing, make appropriate judgment decisions in emergency or other situations, and demonstrate emotional stability and psychological health in day-to-day interaction with patients, their family members, and personnel.
 9. In compliance with the Americans with Disabilities Act, students are encouraged to register with the Office of Counseling/Disability Services for possible assistance with accommodations. It is the student's responsibility to voluntarily and confidentially provide appropriate documentation regarding the nature and extent of a disability. Students requesting special accommodation are (strongly) encouraged to contact the counseling/disability services office at the beginning of the semester.
 10. College credit for Human Anatomy & Physiology I & II and approved math courses, must be current within the past five (5) years to count toward the Radiologic Technology degree or the course(s) must be repeated. Please check Radiologic Technology curriculum for approved math courses.
- Completion of the items listed above denotes consideration for an interview but in no way implies or guarantees an interview or admission to the program.**
11. Once admitted, students are required to submit documentation of the following clinical access requirements prior to the first day of clinical assignment. If the documentation is not completed on time, students will not be permitted to go to clinic and may be forced to withdraw from the program.
 - a. Health Requirements: All radiologic technology students must submit evidence of good health by returning a completed Physical Examination form. Forms are given to the student upon acceptance into the program. All students must have a:
 1. Documented negative TB skin test and/or chest x-ray yearly. TB skin tests must be within three months of the start of the program.
 2. Evidence of Immunity for:
 - a. Rubella (positive titer).
 - b. Varicella zoster (chicken pox) (positive titer).
 - c. Rubeola titer (positive titer).
 - d. Tetanus/diphtheria/pertussis booster within the past ten years.
 - e. Hepatitis B
 - f. Seasonally current Influenza immunization
 - b. CPR (Cardiopulmonary Resuscitation) Requirements: All admitted students must submit evidence of current BLS (Basic Life Support) Provider certification compliant with American Heart Association (AHA) standards. Inclusion of two-person CPR and AED (Automatic Electronic Defibrillator) use is required. In order to meet clinical affiliate expectations, AHA HeartCode® (blended learning) nor HeartSaver® are accepted. BLS classes are available through numerous providers and are periodically offered by Columbia State through the Economic & Workforce Development (EWD) office. Certification must be maintained continuously for the duration of enrollment.

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- c. Malpractice insurance is required for all radiology clinical practicum courses. A group policy is available. The fee is assessed annually as a part of the registration fees.
- d. Health insurance is required. Students must provide evidence of health insurance coverage before clinical assignments may begin.
- e. Criminal background checks and routine drug screens are required at most affiliated clinical training sites as a condition of participation in clinical education. Based on the results of these tests, an affiliated clinical site may determine to not allow your presence at their facility. This could result in the inability to successfully complete the requirements of a specific course and the program. More information is available from the program director.

Admission Procedures

1. Submit the following to the Admissions office.
 - a. Completed Application for Admission to the College.
 - b. Official college transcripts from all colleges previously attended.
 - c. High school transcripts or High School Equivalency Diploma - HSE (GED® or HiSET®).
 - d. ACT or SAT exam results.
2. Schedule and attend an information/screening session listed at <http://www.columbiastate.edu/academics/health-sciences/radiologic-technology>
3. Submit completed program application forms received at an information/screening session.
4. If an applicant does not meet the admission criteria, he/she will be notified in writing. If the applicant wishes to apply in the future, the application process must be repeated and new application documents submitted.

Continuation Requirements

In order to continue in the Radiologic Technology Program, students must meet the following academic requirements:

1. Earn a "C" or higher in each radiologic technology course and each required math and science course.
2. Maintain a minimum GPA of 2.0 after admission and prior to enrollment as well as during each term of enrollment in the program.
3. Maintain professional conduct as outlined in the Radiologic Technology Student Policy Manual.
4. Enroll in and successfully complete all required general education courses during (or before) the semester listed in the curriculum outline.
5. Submit annual TB skin test results to the Health Sciences Records Clerk's office in the William R. Walter Bldg. on the Columbia campus.
6. Maintain evidence of uninterrupted medical insurance coverage in designated program/institutional offices.

Students who do not meet the continuation requirements will be dismissed from the Radiologic Technology Program. Students who have been dismissed from the program may be qualified to continue courses in the College, but will not be permitted to register in radiology courses without readmission to the program.

Readmission Requirements

Only one readmission into the Radiologic Technology Program is permitted. Readmission into the Radiologic Technology Program after dismissal is not guaranteed, regardless of the reason for dismissal. A student who wishes to apply for readmission must do so, in writing, within 90 days of dismissal from the program. Regardless of the reason for dismissal, it is the sole responsibility of the student to request readmission in writing to the program director. The advisory committee for the Radiologic Technology Program will make a readmission decision after reviewing all student records and interviewing the student.

Due to the rapid change of technology in the field of radiology:

1. If three or more years has elapsed since enrollment in the program, the radiology courses must be repeated.
2. If five or more years have elapsed since previous college enrollment or completion of the following courses, these requirements apply:
 - a. Anatomy and Physiology courses must be repeated.
 - b. Required college level math course (Elementary Statistics or Pre-Calculus Algebra) must be repeated.
 - c. All current application/enrollment requirements will apply and must be met.
3. A Conference Record form completed upon the student's dismissal from the program must be on file to be eligible for readmission.

Readmission Procedures

1. Submit a written readmission request to the program director within 90 days of dismissal from the program.
2. Provide written documentation to the Radiologic Technology Program director stating the reason(s) for withdrawal or failure and indicate actions the student has followed to ensure success in the program if readmitted. This documentation must be submitted before a student's application for readmission will be considered.
3. The Radiologic Technology Program director will notify the student by mail when and where the interview will be held.
4. The Radiologic Technology Program director will notify the student by mail of his/her readmission status once the readmission process has been completed.

Program enrollment is limited by clinical education settings capacity and readmission will be considered only if there are positions available within the class.

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Program Requirements

The courses below are applicable to degree requirements. Students may be required to take additional Learning Support courses.

Communications Requirement
ENGL 1010 or 1020 and
SPCH 1010 or SPCH 1030

Humanities/Fine Arts (Take 1 course)
ART 1030
ARTH 2010, 2020
ENGL 2015, 2130, 2230, 2310, 2320, 2920, 2440
HUM 1130, 1131
MUS 1030
PHIL 1030, 2030, 2033
THEA 1030

Natural Sciences Requirement (Take 2 courses)
BIOL 2010 and 2020*

Mathematics Requirement (Take 1 course)
MATH 1130, 1530, 1630, 1710, 1720, 1730, 1830, 1910*

*Biology and math courses must have been completed no more than five years prior to start of the program.

Social/Behavioral Sciences (Take 1 course)
ANTH 1200, 1300
COMM 1010
ECON 2010, 2020
GEOG 2010
PHED 2120
POL 201
POLS 1030, 1501, 2010
PSYC 1030, 2130
SOCI 1010, 1020, 2010

Major Required Courses
COLS 101
INFS 1010
RAD 101, 106, 112, 113, 121, 122, 123, 190, 241, 251, 281, 291, 292, 294, 295

Readmission/Transfer Students: See details in catalog. All RAD courses must be repeated if three or more years have elapsed since prior enrollment.

Requirements for Graduation include:

- earning 25% of total program credits in residence at Columbia State.
- GPA of at least 2.0 in program courses.
- cumulative GPA must be at least 2.0 or higher
- taking the Exit Exam.

Detailed information is available via
www.columbiastate.edu/radiologic-technology

If you have completed TN eCampus courses, run a degree audit from the student tab in myChargerNet to determine how these courses apply to this program.

Sample Academic Plan

First Year – Summer Semester

___ RAD 101	Introduction to Radiography	2
___ RAD 112	Image Production I	2
___ Social/Behavioral Sciences		3
___ COLS 101	Columbia State College Success	1
		8

First Year – Fall Semester

___ RAD 113	Image Production II	2
___ RAD 121	Radiographic Positioning I	3
___ Mathematics Requirement*		3
___ ENGL 1010*	Composition I or	
___ ENGL 1020	Composition II	3
___ BIOL 2010*	Human Anatomy & Physiology I	4
___ INFS 1010	Computer Applications	3
		18

First Year – Spring Semester

___ RAD 106*	Radiation Physics	2
___ RAD 122	Radiographic Positioning II	2
___ RAD 123	Contrast Media Procedures	2
___ RAD 190	Radiologic Practicum I	3
___ BIOL 2020*	Human Anatomy & Physiology II	4
___ Humanities/Fine Arts		3
		16

Second Year – Summer Semester

___ RAD 291	Radiologic Practicum II	6
		6

Second Year – Fall Semester

___ RAD 241	Radiographic Special Procedures	2
___ RAD 292	Adv. Radiation Physics & Radiobiology	2
___ RAD 294	Radiologic Practicum III	8
___ SPCH 1010	Fundamentals of Speech Communication or	
___ SPCH 1030	Argumentation and Debate	3
		15

Second Year – Spring Semester

___ RAD 251	Survey of Medical & Surgical Diseases	2
___ RAD 281	Radiation Protection & Radiologic Seminar	2
___ RAD 295	Radiologic Practicum IV	8
		12

TOTAL CREDIT HOURS 75

*Critical Courses: Mastery of content and earned grades in these courses are linked to an increased likelihood of program completion.

Statewide Alignment:

Columbia State is in the process of adopting/implementing curriculum changes in accordance with TN Board of Regent's (TBR) statewide alignment initiative. Changes may involve (but are not limited to) general education requirements, core course sequencing, course titles/rubrics/numbers, and admission criteria. Prospective students should consult with program officials for guidance with individual academic plans based on projected enrollment dates.

For more information contact:
radtech@columbiastate.edu
or
Health Sciences Division office
931.540.2600 or 931.540.2599