

# Advanced Imaging Modalities

HANDBOOK



Additional Policies in the Jefferson College Course Catalog & Student Handbook *It is the policy of Jefferson College that no person shall, on the basis of age, ancestry, color, creed, disability, genetic information, marital status, national origin, race, religion, sex, sexual orientation, or veteran status, be subject to discrimination in employment or in admission to any educational program or activity of the College. In compliance with Federal Rules and Regulations, Jefferson College has adopted*

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### CT Course Information

**RAD250 Computed Tomography Registry Review Course:** This course is designed to provide an ARRT Registered Radiologic Technologist or future registered technologist the structured educational requirements needed to be eligible for post-primary certification in Computed Tomography with the ARRT. This course is a hybrid design where the students will meet for one 8-hour lecture and continue with 8 weeks online education. The course consist of the four major CT content categories: patient care, safety, image production and procedures.

### MRI Course Information

**RAD260 MRI Registry Review Course** This course is designed to provide an ARRT Registered Radiologic Technologist the structured educational requirements needed to be eligible to take their ARRT post-secondary Magnetic Resonance Imaging (MRI) registry. Each of the four content areas for the ARRT exam will be covered, including: patient care, safety, image production, and procedures.(S)

### Mammography Course Information

**RAD270 Mammography Registry Review Course** This course is designed to provide an ARRT Registered Radiologic Technologist the structured educational requirements needed to be eligible to take their ARRT post-secondary Mammography (M) registry and 40 hours of initial education requirements needed for Mammography Quality Standards Act (MQSA) approval. Each of the three content areas for the ARRT exam will be covered, including: patient care, image production, and procedures (Su).

### Clinical Education

Clinical education is available to any student completing a registry review course. Clinical placement is limited and based on a first-come-first-serve basis. Students performing clinical rotations at their place of employment need not register for clinical education through the school. Participants who have not previously been a student at Jefferson College will need to complete the application process prior to clinical placement.

CT and MRI clinical education is open to the current years graduating students and ARRT Registered Radiologic Technologists that complete Jefferson Colleges RAD250/RAD260 course.

Mammography clinical education is open to ARRT registered technologists only. Mammography students must have completed RAD270 prior to clinical placement.

**RAD190 Independent Study:** This independent study course is designed to give the student the opportunity to study and be tested on specific areas of radiologic technology that they may be interested in. This self-paced course is designed to assist the radiologic technology student and technologist in obtaining their clinical competencies required for registration. Students have the opportunity to repeat this course as many times as they would like.

**Exam Tracking:** Students will be required to track their own clinical education requirements through their "My ARRT" portal on [www.ARRT.org](http://www.ARRT.org). Per the ARRT guidelines candidates for Computed Tomography, MRI and mammography certification and registration must document the performance of a minimum number of procedures. See attached ARRT Clinical Experience

Requirements for full details. Completion of each procedure must be verified by an ARRT certified and registered technologist (post-primary certification not required) or an interpreting physician. The verification process is described within the online tool.

Once all the procedures have been completed, the student will need to provide the Program Director with a copy of the “Computed Tomography/ MRI Requirements Documentation/ Mammography Requirement Documentation” page from their “MyARRT” and submit for supervisor verification. Only after the required documentation have been reviewed will the Program Director sign-off on approval.

If students do not have access to the ARRT portal, the application for “Student Online Account Access Form” (attached) must be completed by the student and Radiology Director prior to clinical placement. If the student is not enrolled in the Jefferson College Radiology Program, access and signatures must be granted from student’s school of attendance.

### Background Screening and Immunizations

Current Jefferson College Radiology student will be required to maintain their CastleBranch account to ensure immunizations are up-to-date in accordance with Jefferson College Radiologic Technology Program guidelines. Any applicant who has been convicted of felonies/and or misdemeanors after initial background check was completed must immediately report incident to the Radiologic Technology Program Director.

Registered Technologist who have not previously attended Jefferson College Radiology Program will be required to submit immunization records, completed background check and drug testing prior to clinical placement. Applicants unable to complete any of the aforementioned requirements may not be eligible for clinical placement.

### Immunization and Background Check Requirements

1. Child Abuse/Neglect Records – Division of Family Services
2. Senior Care Registry (EDL) Disqualification List
3. Missouri Statewide Criminal History Record Search
4. Social Security Number Trace
5. Residential History Search
6. Nationwide Sex Offender Registry
7. Federal Criminal History Record Search
8. Office of the Inspector General (OIG) Sanction Report
9. General Services Administration (GSA) Excluded Parties List
10. Missouri State Highway Patrol- Missouri Automated Criminal History System (MACHS)

Students listed on the Employee Disqualification lists will not be allowed to continue in the program.

### Required Immunizations

The following immunizations are required for clinical placement. All immunization records must be uploaded into CastleBranch and approved prior to clinical placement. In addition, any student rotating through a Mercy facility must complete the “Mercy Health System Student/Shadow Vaccination Verification Form” prior to rotation (form attached).

1. Hepatitis B Vaccine- this vaccine is a 3 vaccine series that is completed in intervals recommended by the CDC. If a negative HBsAB is found after a completed first series, a second series may be indicated. If a second negative HBsAB is resulted after a completed second series, diagnosis of non-responder is needed.
2. Documentation of negative **2-step** Mantoux test ( TB Skin Test) for tuberculosis in the last 12 months- a two step skin tests placed at lead 1 week apart, but within the last year  
**OR** or a negative chest x-ray in the past two years **with** documentation of report (for positive skin test only  
**OR** A TB blood test **within the last 12 months-** - IRGA, T-Spot, Quantiferon Gold etc. are accepted
3. An immunization history with proof of 2 doses of MMR after the age of 12 months given one month apart  
**OR** born prior to 1957 (exempt)  
**OR** positive titers to Measles, Mumps, and Rubella  
**OR** Documentation of 2 Measles, 2 Mumps and 1 Rubella vaccination
4. Tetanus/Diphtheria/Pertussis (Td/Tdap) within the last 10 years
5. Yearly Influenza vaccination
6. Varicella (chickenpox) series of 2 doses **OR** immunity by positive blood titer
7. Polio vaccination
8. Health Insurance
9. Physical Exam
10. COVID Vaccination and Booster

Students are required to report any illness, communicable disease or other condition that might affect the health of the student, patients, or staff to the program director as soon as they become aware of such condition. Appropriate student confidentiality will be maintained.

If the student is exposed to body fluids by needle stick, other puncture wounds or by other means such as splashes in the classroom or during clinical experience it is the responsibility of the student to report the incident immediately to an instructor. The instructor will inform the student of the appropriate action to be taken.

Each Radiologic Technology CT, MRI, or Mammo Program student is responsible for his/her own health and hospital insurance coverage. Neither Jefferson College nor any of the affiliated clinical sites are responsible for payment of charges incurred due to student's illness or injuries. Use of the Emergency Department will be billed to the student. **Students are not covered under Workman's Compensation; therefore, all students are required to have some type of medical hospitalization insurance. Clinical site rotations may be limited if the student does not possess their own healthcare insurance.**

## Ethical Behavior Eligibility Requirements

The ARRT ethical behavior eligibility requirements specify that every applicant for certification must "be a person of good moral character and must not have engaged in conduct that is inconsistent with the ARRT Rules of Ethics," and they must "agree to comply with the ARRT Rules and Regulations, the ARRT Standards, and the ARRT Standards of Ethics."

One issue addressed by the Rules of Ethics is the conviction of a crime, including a felony, a gross misdemeanor or a misdemeanor, with the sole exception of speeding and parking violations. All alcohol and/or drug related violations must be reported.

Conviction as used in this provision includes a criminal proceeding where the individual enters a plea of guilty or nolo contendere. All potential violations must be investigated by the ARRT in order to determine eligibility. Further information may be found on the ARRT web site in the handbooks for radiography certification.

Individual clinical sites may prohibit students to rotate through their facilities if a felony conviction is found on the background check, regardless of ARRT ethics board results/investigation. If the Program cannot place a student in a clinical site due to ethics violations, the student may not be able to complete the clinical component of the Program and may be subject to dismissal from the program.

If after being accepted into the Program, a student receives a felony conviction, the student is subject to a Review Board Hearing and may be dismissed from the Program due to the inability to place in a clinical site. Students must immediately inform the Program Director of any convictions while in the Program.

Applicants should be aware of these limitations at clinical sites and on certification prior to entering the Radiologic Technology Program. Practice of deceit in the application procedure is cause for dismissal from the Program.

If a student has concerns regarding eligibility to sit for the ARRT examinations, please contact the ARRT at:

The American Registry of Radiologic Technologists  
1255 Northland Drive  
St. Paul, MN 55120  
(651) 687-0048  
[www.arrt.org](http://www.arrt.org)

## Prohibition Policy Against Drug and Alcohol Abuse

Jefferson College and the Radiologic Technology Program intend to provide a drug free, healthy, and safe educational environment for students and other members of the College community and the patients we serve in the clinical setting.

The following policy is set forth in order to:

- Maintain a working, learning and clinical education environment that is safe and healthy for students, faculty, staff, and the patients we care for,
- Ensure a positive reputation of the College and its graduates within the community, and,
- Minimize the number of accidental injuries to person or property.

All students and program faculty members are prohibited from being under the influence of alcohol or illegal drugs during classroom/clinical hours. The unlawful manufacture, distribution, dispensing, possession, or use of an illegal or controlled substance while in a College vehicle, on College property, or at a College sanctioned activity is strictly prohibited. Possession of prescription drugs, on campus or at clinical sites, by any person other than the one for whom it was prescribed is prohibited. Such drugs will be used only in the manner, combination, and quantity prescribed.

An alcoholic beverage is any beverage that may be legally sold and consumed and has an alcoholic content in excess of 3% by volume. A drug is any substance capable of altering an individual's mood, perception, pain level, or judgment. A prescription drug is any substance prescribed for individual consumption.

The Jefferson College Radiologic Technology program will adhere to the clinical sites' requirements for drug and alcohol testing. Drug screenings will be performed on all admitted students prior to the start of clinical education in the fall of their first year. Random drug/alcohol tests may be requested periodically throughout the year. Drug testing may be required if the student is involved in an accident at the clinical site, if he or she is observed using a prohibited substance, if he or she exhibits a severe and prolonged reduction in productivity, or any other reasonable cause. If the initial testing is positive, a second test may be required to determine the exact substance. All tests will be performed at the student's expense. If the results of testing prohibit the student from entering the clinical site, the student must appear before the Review Board, for a hearing to determine continuance in the Program. The Review Board will determine the appropriate course of action which may include immediate dismissal from the program. Positive results will be reported to appropriate authorities and to the clinical site. During the period in which the student is awaiting a Review Board Hearing, they will not be allowed to participate in any clinical activity or classroom lab activity. Any student who fails to submit to a required testing will be considered positive and subject to discipline, including immediate dismissal from the program. Please refer to the "Prohibition Policy Against Drug and Alcohol Abuse" in Jefferson College Student Handbook for further information and sources of assistance.

## Pregnancy Policy

Students should be aware that there is a possibility of radiation injury to an unborn fetus with the greatest risk occurring during the first trimester. A female student has the option of whether or not she wants to notify program officials of her pregnancy. If the woman chooses to voluntarily inform officials of her pregnancy, it must be in writing and indicate the expected date of delivery. The pregnant student can also withdraw her declaration of pregnancy at any time during the pregnancy, this must be done in writing to the Program Director.

A student who notifies the program of her pregnancy has the following options:

**Option #1:** The student may continue the educational program without modification or interruption.

**Option #2:** The student may continue in the program with the following restrictions being imposed on clinical rotations:

The pregnant student will have limited exposure to the following:

1. Fluoroscopic procedures
2. Portable procedures
3. Surgical procedures
4. Procedures involving radium-implant patients
5. Nuclear Medicine procedures

Substitute clinical rotations will not be provided. All clinical rotations missed by the student will be made up at the end of the program. This will result in a delay in the completion of the program. In addition to the clinical restrictions, the pregnant student will be expected to complete all of the standard clinical requirements.

**Option #3:** A pregnant student may request a leave of absence not to exceed one year and either withdraw from or attempt to complete the courses she is currently enrolled in. There would be a place reserved for the student in the next accepted class, and it would not be necessary to submit another application for admission to the program.

**Option #4:** A pregnant student may request to withdraw from the program for an indefinite period of time. If she wished to be reinstated, she must submit an application and compete for readmission to the program. Any previous coursework taken would be reevaluated at the time of readmission to assure that competency has been maintained.

## Radiation Protection

There are potential hazards associated with exposure to ionizing radiation. The biological effects of ionizing radiation can depend, among other factors, on: the amount of the dose and the rate at which it is received; the type of tissue irradiated; and the age and gender of the exposed person. The biological damage is primarily due to the fact that charged particles (ion pairs) that result from ionization yield highly reactive free radicals. These radicals then readily interact with molecules in the irradiated cells to break chemical bonds or produce other chemical changes.



Because it is difficult to demonstrate the relationship between low levels of occupational dose and effect (somatic, genetic or developmental), it is imperative that all students and staff take the proper precautions when in the room during ionizing radiation exposures.

In the Jefferson College Radiologic Technology Code of Ethics, it states the "Radiation Protection Standards must always be maintained in, and outside of the radiology department." In the ARRT's Code of Ethics for Radiologic Technologists, it states "The radiologic technologist utilizes equipment and accessories, employs techniques and procedures...and demonstrates expertise in limiting the radiation exposure to the patients, self and others of the health care team."

No excuses will be acceptable for not taking the proper radiation safety precautions. Students MUST take the proper precautions when performing portable exams or any other radiographic procedure. Lead aprons MUST always be worn when in the room when ionizing radiation is being produced.

The radiography program administration and faculty view this issue to be serious. Failure to follow these standards will warrant appropriate disciplinary action. Student safety is important.

As radiation exposure is known to be hazardous, student exposure will be monitored on an on-going basis. Students will be provided with radiation monitoring badge. Students are expected to wear their radiation badges at all times in the clinical setting and during laboratory experiences when exposures are being made. "Student" badges should be kept separate from employment badges. Each student will be responsible for maintaining badges and reading badges monthly through their Instadose account. At the end of the clinical education course(s) the student will return the badge to the Program Director. Failure to do so will result in a charge to the student's account of \$100.

### Personal Appearance

As an advanced modality student, you represent Jefferson College, classmates, and radiology as a profession; to the public, patients and their visitors. A student's conduct, dress, and appearance are important. Cleanliness and neatness are necessary because of the nature of our work. The following requirements have been established:

- Attire: The student shall wear either khaki pants with a black polo or black scrubs while in the clinical setting. A Jefferson College ID badge or hospital ID badge shall be worn at all times along with a radiation dosimeter.
- Good daily personal hygiene in both classroom/clinical - includes daily bath, use of effective deodorant and good oral hygiene. (Persistent halitosis and/or body odor, for whatever reason will be cause for dismissal).
- Cologne, perfume or after-shave lotion should be avoided.
- Hair must be clean, simply styled, well-groomed and off the collar while in uniform. If hair is long enough to fall into the student's eyes, the front must be secured away from the face. If the back is long enough to fall past the shoulders all of the hair must be secured away from the face. Large decorative barrettes, large colored bows, and ribbons are not allowed while at clinical sites.

- Makeup must be conservative; nail polish may be worn, if colorless or pastel shades and in good repair. Artificial nails are **not** allowed.
- The wearing of jewelry is limited to one post style earring per ear, one ring and a watch. The size and shape of any item must be considered not to be a danger to patient or student.
- All visible tattoos shall be covered while in the clinical setting.
- Anytime a student presents to a clinical site, such as orientation, they shall wear their clinical attire or dress attire as designated by the Program faculty.

In all areas of personal appearance, the student is to judge his/her own dress. If there are any dress code or personal appearance related issues, the clinical coordinator or clinical instructor, will advise the student of such problem as it relates to professionalism. If the issue cannot be resolved by informal discussion, the issue will be addressed formally by the Program Director.

### Professionalism in the Clinical Area

As a Radiologic Technology student in the clinical sites, students will be involved with physicians, nurses, patients and their families. This will require that students conduct themselves in an attitude of quiet maturity. The health care facility is a therapeutic and learning environment where rowdiness, inappropriate language, practical jokes and other misbehavior may be cause for disciplinary action or immediate dismissal.

While working in the health care facility, the student will observe all policies of conduct for employees.

### Content Specification

Content specifications and clinical requirements should be downloaded from the ARRT website to ensure the most up-to-date information is utilized. Reference documents can be found in the "MyARRT" portal or by visiting <https://www.arrt.org/arrt-reference-documents/by-discipline>.

The attached log sheet is provided to help the student track exams.



# Clinical Affiliate Request Form:

**CT / MRI / Mammo** (circle one)

- Students seeking positions within existing Jefferson College Radiography clinical affiliations need not complete this form.
- The intent of this form is to confirm willingness of an imaging department to serve as a clinical site for Jefferson College for purposes of Computed Tomography OR Magnetic Resonance Imaging clinical rotations. This form is NOT a legally binding cooperative agreement and will not be used as such.
- This form should be given to the imaging department the student wishes to utilize for clinical rotations, signed by the imaging manager and turned into the Program Director upon completion. The Program Director will then contact the imaging department and legal parties within both organizations to develop an affiliation agreement.

Student name: \_\_\_\_\_

Imaging Department site: \_\_\_\_\_

Department Supervisor: \_\_\_\_\_

Phone number: \_\_\_\_\_

E-mail: \_\_\_\_\_

Director of Imaging: \_\_\_\_\_

Phone number: \_\_\_\_\_

E-mail: \_\_\_\_\_

### Basic Responsibilities of Clinical Affiliate:

All registered technologists in the department are considered “Clinical Instructors” for the purposes of the college. Responsibilities include:

- Orienting the student to the department
- Training the student on department protocols
- Training the student on department imaging protocols
- Evaluating the student as needed
- Confirming ARRT procedure competencies online through ARRT portal

### Program Information:

Specialty rotation students are required to complete basic clinical requirements on exams as outlined by the ARRT.

- Students will perform clinical rotations during the summer term and continue into fall term if needed.
- Student and clinical coordinator will work out a clinical schedule with the supervising technologist to meet the needs of the student and imaging department.
- Student are required to log exams on the ARRT “MyARRT” portal and supervising technologist is to verify exam(s).

Signatures on this form only indicates the understanding for *intent* and that the completions of this form does not guarantee placement in the clinical site. This form is not a legally binding cooperative affiliation agreement. Signing this form indicates the clinical sites *willingness* to allow student(s) into the clinical site. The Program Director will contact the site once this form is completed.

\_\_\_\_\_  
Student Signature

\_\_\_\_\_  
Director of Imaging Signature

Please contact Janet Akers-Montgomery – Radiology Director for more information: [jakers4@jeffco.edu](mailto:jakers4@jeffco.edu) 636-481-3523