Cleveland Clinic
School of Health Professions

Computed Tomography Supplemental Handbook

Handbook Publication Date: July 1, 2026

State of Ohio Board of Career Colleges and Schools
Certificate of Registration Number 2165

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Behavioral/Clinical Objectives

Professional development starts as a student and continues throughout the technologist's career. The work ethic and attitudes developed or influenced during the training period greatly impacts the degree of professional success a radiographer enjoys.

Students will:

- Show initiative by displaying motivation and energy in starting and completing tasks.
- Demonstrate a professional attitude by displaying and/or creating a positive emotional and psychological environment for patients and co-workers.
- Develop professional interpersonal relationships as evidenced by positive interactions with patients, families and co-workers.
- Possess appropriate patient perception skills by demonstrating the ability to perceive patient's needs and respond to them as needed.
- Be productive, as demonstrated by the volume of work accomplished.
- Perform high quality work, as evidenced by the accuracy and thoroughness of procedure performance.
- Possess organizational skills by demonstrating the ability to perform in a systematic and logical fashion.
- Demonstrate the ability to follow direction by possessing the ability and willingness to listen, reason and interpret tasks.
- Demonstrate flexibility by being willing to be guided and instructed.
- Demonstrate adaptability by being able to adapt the procedure to the patient.
- Demonstrate self-confidence.
- Demonstrate a professional demeanor.
- Present a professional appearance in accordance with School and program policy.
- Demonstrate dependability by being reliable and conscientious.
- Demonstrate accountability by taking responsibility for his/her actions and through attendance and punctuality.

In view of the critical role that communication plays in the successful provision of care to patients and to colleagues, all students will subscribe to the following principles:

Patients, their families and significant others are the most important people to the healthcare team.

- We communicate information that sets appropriate expectations and reduces anxiety.
- We take the time to understand their needs and preferences.

We lead by setting a good example.

We make ourselves accessible to others.

- We listen.
- We respond to requests in a timely way manner.
- We are open to the opinions of others, options, and ways of doing things.
- We are on time for patient related commitments.

We exhibit a personable, pleasant and professional demeanor.

- We know the people with whom we work and address them by name.
- We acknowledge and make eye contact with others.

- We appreciate similarities and value differences.
- We use “please”, “thank you”, and “I’m sorry” in our daily vocabulary.

We create a positive environment of support, respect and appreciation.

- We give and receive open and honest feedback to allow personal and professional growth.
- We praise each other publicly and provide constructive criticism privately.
- We refrain from gossip, rumors and malicious talk about others.
- We avoid indirect communication and speak directly with the person involved.
- We communicate in a clear and consistent manner using appropriate words, body language and facial expressions.

We are all Caregivers and help each other achieve our potential.

- We educate each other.
- We recognize value in every member of the care team.
- We select the best people for roles based on their skills, strengths and interests.

We manage stress appropriately both in the workplace and on a personal level.

- We manage stress to minimize impact on others.
- We exhibit appropriate non-verbal communications particularly when under stress.
- We take care of ourselves so we can take better care of others.

We value every member of the care delivery team equally and recognize the “main ingredient for success is the rest of the team.” (- *J Wooden***)**

- We set and communicate expectations in a collaborative manner.
- We ensure clarity of roles and responsibilities.
- Our actions reflect our commitment to quality, safety and efficiency.
- We recognize and reward people in ways they appreciate.

Competency Evaluations

Competency evaluations will be required as a means for students to demonstrate competence in necessary procedures. The required exams are taken directly from the ARRT clinical experience requirements.

1. Students will receive a list of exams (see link below) of which they must obtain completion signatures and competency evaluations to meet ARRT requirements. Students must have two signatures from a technologist on a given exam before they can attempt to receive a competency.

   CT Clinical Experience Requirements per ARRT:
   https://www.arrt.org/pages/arrt-reference-documents/by-document-type/clinical-experience-requirements

   With a technologist present, the student must complete the entire procedure with little to no assistance. The technologist may help in transferring the patient, transmitting images, and may assist the student minimally. If the technologist must assist the student to complete the exam, the student may still complete the exam for a signature but will not receive competency credit. The technologist must intervene if the student can potentially harm the

patient, such as irradiating a patient unnecessarily. The student is expected to independently complete the exam while the technologist supervises.

2. Once the student has completed the procedure, the technologist must then complete a competency evaluation in Trajecsys. The students will also fill out their portion of the competence in Trajecsys.
3. Students must complete 25 competency procedures for CT
4. For a student to receive credit for competency, he/she must receive a score of 3 (out of 5) or better for each aspect of the exam listed on the competency form.
5. Any procedure that does not receive full credit will not be granted competency but may still receive signature credit to be used towards registry requirements.
6. Clinical competencies cannot be performed during employment hours. All competencies must be completed during scheduled clinical time as a student.
7. Students are responsible for meeting the clinical requirements. Any requirements not met will affect the student's clinical grade.

Contingency Plan

If a catastrophic event prevents clinical involvement for the safety of the students or patients, faculty will make every effort to mitigate the loss of clinical education through schedule alterations, reassignments, simulated clinical experiences and virtual demonstrations, such as ASRT clinical resources. When restrictions are lifted and at the discretion of program faculty, students may be responsible for completing all or a portion of missed clinical assignments to satisfy graduation requirements and qualify for participation in the ARRT credentialing examination.

Severe Weather:

1. In the event of severe weather, such as excessive snow or ice, the Program Director will make a determination regarding closure, including both classes and clinical.
2. The Program Director will contact the program faculty and students via text message. The clinical preceptors will be contacted via email.

Fire Plan Rally Point:
The rally point at the Cleveland Clinic Administrative Campus is the Building 2 sidewalk under the skyway between buildings 2 and 4. When at the clinical site, the clinical preceptor will review the fire plan with students.

Emergency Codes:
The students are educated on the Emergency Codes and the procedures associated with each code as indicated below during orientation. .

Conduct & Performance

Students enrolled in the program must conduct themselves in an appropriate and professional manner and must adhere to the rules and regulations of the School of Health Professions, program, and clinical sites. The purpose of this section is to provide guidelines to assist with managing student performance or conduct issues that interfere with the safe, orderly, effective, and efficient operation of the program and the organization. It provides

standards and rules governing performance and a procedure for consistent, non-discriminatory application of the rules in the interest of maintaining the highest quality patient care and educational environment.

RECORD OF DISCIPLINARY ACTIONS:

- Records of attendance are retained for a period of 10 years after program completion and are reviewable for matters pertaining to employment references, dismissal, and reinstatement after dismissal.
- Records of disciplinary actions remain active in the student's record for a 10- year period. Records of disciplinary actions received by a student in their role as an employee (if applicable) may also be considered when relevant.
- Any student receiving a second disciplinary action suspension within the length of time the student is enrolled in the program, whether the two suspensions are for related or unrelated conduct, shall be terminated.
- The receipt of all disciplinary action may result in denial of access to clinical sites and/or dismissal from the program.
- The School of Health Professions Administration reserves the right to fully disclose all issues of disciplinary actions received prior clinical site reassignment.
- If a student is denied access to the clinical site, and cannot be reassigned to another site, the student will not be able to complete the program's requirements and is therefore dismissed from the program.

PROCEDURE:

All students are expected to conduct themselves in a professional and caring manner at all times. If professional behavior is not exhibited, disciplinary actions may be implemented up to and including dismissal from the program. When it becomes necessary to implement disciplinary actions for performance deficiencies, acts contrary to established policies or procedures, or to assure that the program and clinical site best interests are served, reference will be made to the categories below which relate the severity of the offenses to the disciplinary action. However, categories are not all-inclusive, and students may be disciplined for actions not specifically designated. Students who disagree with the action taken may proceed through steps outlined in the Grievance Procedure in the SOHP Catalog. If a student is dismissed from the program, utilizes the Grievance Procedure, and is denied re-acceptance, that student will not be permitted to reapply to the program.

IMPLEMENTATION:

Students who fail to abide by established standards and rules may be subject to disciplinary action. The step of disciplinary action may vary depending upon the nature of the infraction, the circumstances surrounding the offense, and the student's past records. If a student does not conduct him/herself in a professional manner, the following disciplinary actions may take place. How rapidly a student goes through the following progressive steps, or at what stage the disciplinary actions will be initiated, will depend upon the seriousness of the offense. The Program Director will use their judgment to determine the appropriate step which applies in each particular circumstance. Regardless of the category in which an offense is listed, a flagrant violation may result in more severe discipline than that which is indicated for that category. Conversely, if mitigating circumstances are judged to exist, less severe discipline may be imposed than would otherwise be indicated for the category of offense involved. Some infractions are not progressive in nature.

The four steps of Corrective Action (*as defined in the SOHP Corrective Action* Policy) are as follows:

- **Step 1: Documented Counseling**
- **Step 2: Written Disciplinary Action**
- **Step 3: Suspension or Final Written Disciplinary Action**
- **Step 4: Dismissal**

A. CATEGORY I

- 1st Offense: Documented Counseling
- 2nd Offense: Written Disciplinary Action
- 3rd Offense: Suspension or Final Written Disciplinary Action
- 4th Offense: Dismissal

1. Attendance related offenses (see Attendance policies in SOHP Catalog).
2. Failure to inform the clinical site and the program regarding absence within two hours of scheduled start time, whether scheduled or unscheduled (no call/no show) for clinical rotation.
3. Failure to call the program faculty for a class or clinical absence.
4. Loitering during scheduled working and off-duty hours.
5. Eating or drinking in unauthorized areas.
6. Violation of hospital parking regulations.
7. Sleeping during class or clinical.
8. Unauthorized extended meal period or breaks.
9. Failure to get approval from program officials for clinical schedule changes.
10. Failing score on more than three competency examinations in one clinical semester (see Failed Competency Exams for details).
11. Failure to perform in a courteous, conscientious, and caring manner in responding to the needs of patients, visitors, fellow students, or employees.
12. Unauthorized use of the internet, electronic devices, or cell phone during class, lab or clinical.
13. Failure to adhere to reasonable standards of personal hygiene, grooming and dress code. This includes failure to adhere to established uniform requirements and failure to wear the appropriate CC identification badge.
14. Copying answers directly from the answer key for workbook and classroom assignments.

B. CATEGORY II

- 1st Offense: Written Disciplinary Action
- 2nd Offense: Suspension or Final Written Disciplinary Action
- 3rd Offense: Dismissal

1. Arriving to your assigned area late or leaving your assigned area early.
2. Conduct prejudicial to the best interest of the hospital and/or SOHP.
3. Unacceptable or unsatisfactory job performance including causing or contributing to unsanitary or unsafe conditions and performing unsafe procedures.
4. Profane or unprofessional language.
5. Careless neglect or improper or unauthorized use of hospital, SOHP, or program property or equipment.

6. Collecting funds or accepting gratuities.
7. Repeated or chronic infractions of hospital, SOHP, or program policies with no evident improvement in performance or conduct.
8. Failure to observe program policies regarding required supervision and during repeat scans.
9. Inefficiency, incompetence or negligence in performance of duties.
10. Reporting to class, lab, or clinical in an unfit or unsafe condition to work.
11. Failure to perform duties at minimally acceptable standards after counseling and guidance.
12. Repeated failure to pass an additional competency examination in one clinical semester.
13. Violation of Academic Integrity Policy.
14. Unauthorized use of Cleveland Clinic identification badge.
15. Improper or negligent acts that cause damage to/waste of supplies, equipment or other property.
16. Any other failure of good behavior or neglect of duty to include not properly screening MRI patients.

C. CATEGORY III

- 1st Offense: Suspension or Final Written Corrective Action
- 2nd Offense: Dismissal

1. Reporting to classes or clinical experience under the influence of alcohol or narcotics as evidenced by:
    a) inability to perform assigned duties or participate in class
    b) demonstration of undesirable characteristics (such as the odor of alcohol or other substances, attitude, uncooperativeness toward patients, staff, students, visitors, others).
2. Refusing to submit to a medical evaluation including testing when reasonably suspected of being under the influence of alcohol or drugs.
3. Inappropriate treatment of a patient for any reason.
4. Failure to fulfill responsibilities at clinical to an extent that might reasonably or does cause injury.
5. Insubordination or refusal to perform a reasonable assignment after having been instructed to.
6. Immoral or illegal conduct and any acts of dishonesty, including cheating or copying another person's work.
7. Sale, loan or gift of a parking pass.
8. Any serious failure of good behavior or serious neglect of duty.
9. Failure to conform to professional ethics.
10. Fighting or gambling on Cleveland Clinic premises.
11. Repeated failure to pass another competency examination in one clinical semester after failing five competencies.
12. Solicitation and/or distribution of literature in violation of hospital policy.
13. Posting any information or event regarding patients, visitors, students, or employees that occur at the clinical site or class on social media.
14. Clocking in and not reporting to your assigned area without permission or leaving your assigned area without permission.
15. Using an unapproved method/device to clock in and out for class, lab, or clinical.

D. CATEGORY IV

- 1st Offense: Dismissal

1. Possession, use, or sale of alcohol, narcotics or controlled substances on hospital premises.
2. Threat of or actual physical or verbal abuse of patients, visitors, staff, employees or students.
3. Falsification of any official hospital or program records.
4. Unauthorized use of time keeping by having someone else clock in and out on your behalf.
5. Any act of academic dishonesty as described in the Academic Integrity Policy in the SOHP Catalog.
6. Willful damage to or theft of property of the program, hospitals, patients, visitors, employees or students.
7. Absence from class, lab, or clinical experience without justifiable reason or without reporting off for two consecutive clinical and/or class/lab days, or two incidents of no-call/no-show in a 12 month period.
8. Possession of firearms or other weapons on program/hospital premises.
9. Unauthorized possession, use, copying or revealing of confidential information regarding patients, employees, students, hospital, SOHP, or program activity including on social media sites.
10. Sexual, racial or other harassment or verbal or physical threats against a fellow student, employee, visitor or patient.
11. Conviction of a felony.
12. Theft, removal of unauthorized possession, tampering with or use of property belonging to others.
13. Failing of the fourth competency examination in one clinical semester.
14. Any conduct seriously detrimental to patient care, fellow students, employees, and the program or Cleveland Clinic operations.
15. Any other serious failure of good behavior or gross neglect of duty.

The list of offenses contained herein is meant to be illustrative and not all inclusive. Engaging in activity which is inconsistent with ordinary and reasonable standards of behavior necessary to the mutual welfare of Cleveland Clinic, its employees, patients, and visitors will also subject a student to disciplinary action.

GENERAL

Providing the best possible patient care and understanding customer service is a priority at Cleveland Clinic. In support of this philosophy, Cleveland Clinic does not allow inappropriate treatment or behavior towards the customer. "Customer" is defined as any individual that comes in contact with the department or student during the normal course of doing business. This could include patients, visitors, family members, co-workers, etc. All students are expected to conduct themselves in a professional and caring manner at all times when interacting with the customer.

Evaluations and Counseling

1. Students are required to have their clinical preceptor or other department technologist complete four student evaluations per clinical site. The student evaluations can be found in Trajecsys for the technologist at each facility, and they may review them with

the student if desired. All four evaluations should not be submitted at the end of a clinical rotation. Evaluations should be completed on a regular basis throughout the clinical rotation to accurately demonstrate student progress.

2. Counseling sessions will be conducted during clinical site visits with the student to review:

    a. Summary of student evaluation forms
    b. Student competency examination summary form
    c. ARRT mandatory and elective summary form
    d. Semester grades
    e. Attendance
    f. Additional counseling sessions will be conducted if the program director, education coordinator or clinical preceptor finds them necessary.

3. Information regarding the number of exams performed is to be used as a counseling tool, not as a liability towards the student's letter grade.

4. Students will be held responsible for non-compliance issues and receive corrective action accordingly.

5. Additional counseling sessions will be conducted if the Program Director, Clinical Coordinator or Clinical preceptor finds them necessary.

Pregnancy

This section provides guidance regarding occupational exposure considerations for Computed Tomography students who are pregnant.

As specified in 10 CFR 20.1208 of the U.S. Nuclear Regulatory Commission, it is the program's/hospital's responsibility to ensure that the dose to the embryo/fetus from the occupational exposure of a declared pregnant student/worker not exceed 5 mSv over the entire pregnancy. The program must also make an effort to avoid substantial variations in a uniform monthly exposure.

PROCEDURE:

A. Declaration of Pregnancy

The declaration of pregnancy must be in writing and is voluntary. That is, the pregnant student need not declare her pregnancy if she chooses. To declare pregnancy, the student must request a copy of the School's Declaration of Pregnancy form from the Program Director. In addition to completing the School's form, the student must complete the Cleveland Clinic Radiation Safety Program's Declaration of Pregnancy form to obtain a fetal dosimeter. The Cleveland Clinic Radiation Safety Program's form requires an estimated date of conception. The estimated date of conception will be necessary in the determination of the accumulated dose the embryo/fetus may have received prior to the declaration of pregnancy.

The program is not required to restrict the dose to the embryo/fetus to 5 mSv until a written declaration of pregnancy is made. It should also be noted that the declaration can be revoked by the pregnant student at any time. The revoking of the declaration of pregnancy must also be in writing. To revoke the declaration, students may request a Withdrawal of Declaration of Pregnancy form from the Program Director.

The accumulated dose the embryo/fetus may have received prior to the declaration of pregnancy will have to be subtracted from 5 mSv to determine the dose the embryo/fetus will be allowed to receive during the remainder of the pregnancy. If the dose is determined to be 4.5 mSv or greater by the time the declaration is made, it is the program's/hospital's responsibility to ensure that the embryo/fetus receives only 0.5 mSv during the remainder of the pregnancy.

B. Calculations of Exposure

The 5 mSv dose limit shall be the sum of the deep-dose equivalent to the declared pregnant worker from external sources of radiation and the dose from radionuclides in the embryo/fetus and/or pregnant student. Radionuclides that may have been administered to the worker for diagnostic or therapeutic procedures should not be considered.

It is the responsibility of the designated Radiation Safety Officers to implement this requirement.

PREGNANCY ACCOMMODATIONS:

Whether or not a student declares a pregnancy, students are entitled to request pregnancy accommodation. Information about requesting accommodation can be found in the School Catalog.

PREGNANCY INFORMATION:

When at the clinical site, all students must adhere to radiation safety practices. Since exposure to radiation may affect a developing fetus, it is in the best interest of the pregnant student to report the pregnancy to have the radiation exposure monitored accurately. However, the student is under no obligation to do so. If the student chooses to do so, she should notify the Program Director in writing.

It is the responsibility of the Computed Tomography program that no program objective should be sacrificed however, consideration will be given to a change in the clinical rotation assignments due to pregnancy. It is advised that, based upon the knowledge that a fetus is particularly sensitive, the student should decide whether the added risk of working with radiation is sufficiently low. The student is advised that the American College of Radiology recommends that no consideration be given for termination of pregnancy if the fetus exposure is less than 100 mSv. This amount of radiation to a technologist/student is unheard of in routine diagnostic radiology. The recommendation applies to a patient who has received repeat x-ray examinations directly to the abdomen during pregnancy.

As part of the initial information provided to new students, the National Council on Radiation Protection and Measurements Report No.116 recommends that the whole pregnancy exposure be limited to less than 5 mSv. If, during the course, the student wishes further information or a review of the known effects of radiation on the unborn, then this information may be obtained by contacting the program's radiation safety officer.

The student should notify her physician that she is enrolled in a Computed Tomography program and obtain a statement of recommendation for continuance in the program.

INFORMATION FOR THE STUDENT RADIATION WORKER:

By definition a toxic substance is one which is able to cause some harm to humans. The factors which influence the harm depend upon the type of toxic substance, the dose given to the human and the susceptibility of the human. In general, humans are at reduced risk from toxic substances when the cells are either not dividing or dividing quite slowly as in the case of the oldest members of society. On the other hand, it is generally agreed that the fetus has a greater sensitivity to any toxic substance since its cells are dividing at an incredibly rapid rate. Even an individual that is four or five years old has a markedly reduced rate of growth when compared to the fetus. For this reason, radiation protection has always been directed towards the fetus and only recently have the other toxic substances in our environment been identified by the general population as being hazardous to the fetus. The NRC has reviewed the available scientific literature and has concluded that the 5 mSv limit specified in 10 CFR 20.1208 provides an adequate margin of protection for the embryo/fetus. This dose limit reflects the desire to total lifetime risk of leukemia and other cancers associated with radiation exposure during pregnancy.

PERSONNEL MONITORING:

The declared pregnant student that is likely to receive, from external sources, a deep dose equivalent in excess of 1 mSv must wear a second personnel monitoring device at waist level behind the lead apron, if applicable, to record the most representative exposure to the embryo/fetus. Since it is a requirement of the School of Health Professions for students to wear a dosimeter at the collar level, a second personnel monitoring device must be issued to be worn at waist level for the declared pregnant student. In this way the most representative exposure to the embryo/fetus can be recorded while maintaining a consistency with previous exposure records.

STUDENT RESPONSIBILITIES:

Once the declaration of pregnancy has been made in writing, a review of the individual's exposure history must be made. If it is determined to be unlikely that the embryo\fetus will receive in excess of 5 mSv during the entire gestation period, reassignment or restrictions may not be necessary. However, if it is determined that the dose to the embryo/fetuses is likely to exceed 5 mSv consideration may be given to reassignment of the declared pregnant student to an area of little or no radiation exposure or to placing certain duty restrictions on the individual to limit the exposure to the embryo/fetus. Clinical time missed during the clinical leave of absence must be completed prior to graduation.

The pregnant Computed Tomography student has the following options available:

- Continue in the Computed Tomography Program as scheduled with no change in clinical rotation.

- Request pregnancy accommodation.
- The student can rescind the declaration of pregnancy at any time in writing.

Duties that may be considered for restriction because they represent a higher probability for the embryo/fetus to exceed 5 mSv are as follows:

- Radiology: General, Fluoroscopy, Portables, Specials, and CT: No restrictions necessary.
- Surgery: No restrictions necessary.
- Cath Lab: Wrap-around aprons with 0.5mm of lead or equivalent should be worn.
- Nuclear Medicine: The declared pregnant student should be restricted from involvement in I-31 therapies for the treatment of hyperthyroidism or thyroid carcinoma.
- Radiation Therapy: The declared pregnant student should be restricted from handling brachytherapy source.

EDUCATION:

Educational material is made available for the pregnant student to review. Examples of suggested publications are:

1. NRC Regulatory Guide 8.13
2. NCRP Report No.116

The pregnant student should already have reviewed the most recent NRC Regulatory Guide. "Instruction Concerning Prenatal Radiation Exposure" and the facility's policy for a pregnant radiation student during her initial training. Upon declaration, both the most recent Regulatory Guide and the program's pregnancy requirements should be presented to the pregnant student for review. All records of exposure to the embryo/fetus and the written declaration of pregnancy will be maintained on file. During Computed Tomography program orientation and also upon declaration of pregnancy, there will be documentation of the student's review of NRC Regulatory Guide 8.1 3, NCRP Report No.116, and the program's requirements for the declared pregnant Computed Tomography student.

Radiation Safety – Individual Monitoring Devices and Exposure Reports

The purpose of this section is to establish guidelines for the recording of exposures and use of Individual Monitoring Devices by students completing clinical rotations at Akron General Hospital or any other clinical site that is not a Cleveland Clinic facility. This section does not apply to students completing clinical rotations at any other Cleveland Clinic facility.

Quarterly dosimeters will be provided by the program to each student and must be worn whenever the student is at the clinical site or in the lab. Failure to do so will result in a disciplinary action. If a student comes to clinical or lab without their dosimeter, they will not be permitted to continue their clinical experience or lab day until the dosimeter has been obtained.

LOCATION OF DOSIMETERS:

- If only one IMD is worn, it shall be worn at the collar level outside the lead apron.
- If two monitors are worn, one shall be at the collar level outside the lead apron and one shall be worn at the waist level under the apron. In case of pregnancy, a fetal badge should be worn at waist level, under a lead apron when one is worn (see

Pregnancy Information section).
- When two monitors are worn, they must never be interchanged. In accordance with Ohio Administrative Code 3701:1-38-12(A)(4)(6)(i)(ii), the reported deep dose equivalent for the single IMD may be multiplied by 0.3 for determination of effective dose equivalent (EDE). For double IMD personnel, the EDE may be determined by multiplying the waist IMD reported value by 1.5 and adding the calculative value to the collar IMD dose value, multiplied by 0.04.

EXCHANGE OF INDIVIDUAL MONITORING DEVICES:
- A new dosimeter will be provided quarterly.
- No one shall purposely expose a personnel monitor.
- Since personnel monitors are designed to measure only radiation received occupationally, it should never be worn when receiving diagnostic and/or therapeutic radiation exposures as a patient.
- IMD must be worn only by the person to whom it is assigned.
- In the event of pregnancy, see the Pregnancy Information section.
- The student is responsible for returning the old dosimeter to the program designee for processing.
- If the dosimeter is lost, damaged, or not returned within 90 days of the wear date, a $25.00 replacement fee will be assessed. This fee is charged to the program by the monitoring company and passed to the student via the Office of the Bursar and Financial Aid.
    - The student must complete the 'Lost, Damaged, or Not Returned Dosimeter Report' provided by the program and submit payment to the Office of the Bursar and Financial Aid.

REVIEW OF PERSONNEL MONITORING RECORDS:
Each student must review and initial the monthly radiation exposure reports indicating they are aware of their radiation exposure.

- Students receiving doses in excess of over ALARA Level II limits, Level 1= 125 mrem (1.25 Sv) and Level II = 375 mrem (3.75 Sv), will be notified as soon as possible. For those individuals with doses in excess of Level II, an investigation will be performed and documented immediately as to the cause with possible suggestions for prevention of such doses in the future.
- The dosimetry reports are retained indefinitely by the program. Annual written reports of occupational exposure are available for review at the end of the first month of the next calendar year.

OVEREXPOSURE AND REPORTING OVEREXPOSURES TO THE STATE:
All exposures in excess of the legal limits as stated in Ohio Code 3701:1-38-21 will be investigated immediately. A written report will be filed to include the circumstances surrounding the overexposure and the measures taken to prevent it from happening again. Any individual receiving in excess of 5 rem (50 mSv) will report to the RSO any condition that may have led to the excess. All overexposures will be reported to the State in accordance with Ohio Code 3701:1-38-21 which states the following:

- Immediate notification by telephone if there is an exposure or threat of an exposure to the whole body ≥25 rems (0.25 Sv), to the lens of eyes of 75 rems (0.75 Sv), or a shallow dose to the skin or extremities or total organ dose of ≥250 (2.5 Sv) rems.

- Twenty-four hour notification by telephone if there is an exposure or the threat of an exposure to the whole body ≥ 5 rem (0.05 Sv), to the lens ≥ 15 rem (0.15 Sv), or a shallow dose to the skin or total organ dose to the extremities of ≥ 50 rem (0.50 Sv).

In addition to the notification, a written report will be filed with the State within 30 days. The report will include a description of the licensed or registered source of radiation involved. If it is a radioactive material, the report will state kind, quantity, chemical and physical form. For radiation generating equipment, the report will state manufacturer, model and serial number, type and maximum energy of radiation emitted. The report will include for each occupationally overexposed person, the name, social security number, and date of birth. The individual who received the overexposure will also be notified no later than notifying the state in writing.

STATE REQUIRED EXPOSURE LIMITS FOR EDUCATION AND TRAINING:

Whole Body; Head & Trunk	1 mSv / year
Active Blood Forming Organs	500 mSv / year
Lens of the Eyes; or Gonads	15 mSv / year
Hands, Forearms, Feet & Ankles	50 mSv / year
Skin of Whole Body	50 mSv / year
Embryo/Fetus– entire pregnancy	5 mSv / term

Scheduling of Clinical Experience

1. Clinical rotations begin in spring semester.

2. Student clinical schedules will be posted prior to the beginning of the clinical experience. To maximize the type of learning experiences and educational opportunities for the students, clinical schedules may include day, evening, or weekend shifts. Students are expected to adhere to their clinical schedule; failure to do so will result in disciplinary action (see the Attendance Policy in the SOHP Catalog).

3. Student clinical times will vary dependent upon the student's availability and the requested clinical site. The student is responsible for maintaining their schedules. The student will input their schedule in MyLearning, and the student will also give their schedule to their designated clinical site.

4. A student's clinical site will be determined by the Clinical Coordinator and may not be altered by the student without approval by the coordinator.

5. If an assigned clinical site becomes unavailable, all efforts will be made to reassign the student to another clinical site. If another clinical site is not available, the student must wait until another appropriate site becomes available.

6. It is the responsibility of the clinical site to ensure that student experience has educational merit. Students must not be used in place of employees.

7. If a student's supervising technologist leaves the department for any reason (illness, flex time, doctor's appointment, etc.) and there is no one to assume supervision of that student, the student will be sent home. This will not result in disciplinary points towards the student but will result in a loss of the remaining scheduled clinical hours on that day.

8. Decisions are made at the discretion of program officials. All decisions are final.

Signature Procedure

A signature can be given to a student when performing a procedure on a patient, with a technologist present, asking minimal questions. Performing a procedure requires the student to:

1. Review clinical history and screening
2. Set up the procedure room
3. Position the patient
4. Select appropriate protocols and parameters
5. Evaluate image display
6. Archive and transmit images
7. Give post procedure instructions
8. Evaluate the subsequent images for completeness and optimal demonstration of the anatomy in question and the image quality.

A signature cannot be given for observation or simulation of a procedure. Procedures must be performed on patients for a signature to be received.

A student may obtain only one signature per patient. If a patient has multiple procedures, they must select the procedure that they want to document for their ARRT clinical requirements.

Students can earn a maximum of nine signatures per clinical day.

Multiple signatures may be obtained for quality control procedures only. The procedures may have the same date and time. This is the only category in which this is acceptable.

If a student obtain signatures for procedures required by the ARRT from an institution outside the assigned clinical site, the school can no longer be responsible to verify that student's ARRT requirements.

The ARRT has implemented an online verification process where the student is responsible for entering their procedures on the ARRT website. Once the procedures are entered, they will be verified by the faculty member assigned to the student as their verifier. This eliminates the audit process for post-primary exam applicants and keeps a running total of performed procedures for the student.

The faculty of the program will be performing the verification process as clinical preceptors. The clinical site technologists will continue to fill out all program documentation as stated in the policy manual.

The students will be required to enter their procedures on the ARRT website on a bi-weekly basis. After the student enters their procedures on the ARRT website, they will notify their clinical verifier, and the procedures will then be verified.

*Any procedures completed above the minimum requirement will carry over into the second clinical rotation for credit.

**See Competency Evaluation

Supervision of Students

1. Students shall not take responsibility for the position of qualified staff. Until students successfully complete a competency evaluation in each procedure, all clinical assignments must be carried out under the direct supervision of qualified technologists.
    - A qualified technologist reviews the requests and orders for examination in relation to the student's achievement.
    - A qualified technologist evaluates the condition of the patient in relation to the student's achievement.
    - A qualified technologist is present during the performance of the examination.
    - A qualified technologist reviews and approves the images

2. After demonstrating competency, students may be permitted to perform procedures with indirect supervision. Indirect supervision is defined as that of supervision provided by a qualified technologist immediately available to assist regardless of the level of student achievement. The following are the parameters of indirect supervision:
    - A qualified technologist reviews the request and orders for examination in relation to the student's achievement; the student is also required to review the patient orders for accuracy
    - A qualified technologist evaluates the condition of the patient in relation to the student's achievement
    - A qualified technologist is present in an area adjacent to the student
    - A qualified technologist reviews and approves the images

3. The number of students assigned to the clinical site must not exceed the number of clinical staff assigned to department. The student to technologist clinical staff ratio must be 1:1, in addition students are never allowed to work together. However, it is acceptable that more than one student may be temporarily assigned to one technologist during uncommonly performed procedures. In the event there are not enough technologists to maintain the 1:1 ratio, students may be reassigned to a different area to maintain proper supervision requirements.

4. Unsatisfactory scans must be repeated only in the presence of a qualified technologist.

5. Students must not perform examination without direct supervision until they have completed a competency evaluation with a score of 3 (out of 5) or better for each aspect of the exam listed on the competency form.

Program clinical preceptors are assigned in each of the clinical facilities. If the program clinical preceptors are unavailable because of illness, time off, schedule, etc., the positions will be covered by department clinical preceptors. These individuals will be the supervisors or their designee. This ensures that students always have a clinical preceptor to provide instruction and assistance.

Venipuncture

Students will receive a formal lecture on venipuncture.

When in the clinical environment students have the option, based on each clinical site, to demonstrate venipuncture competency a minimum of three times under direct supervision of personnel deemed qualified by the clinical site.

Even after the student demonstrates venipuncture competency, the student must have a qualified imaging professional present in the department whenever they are performing a venipuncture/injection procedure.

The student may be required to perform venipuncture competency more than three times in accordance with a specific clinical site policy.

ARRT - CT Certification – Post-Primary Pathway

To earn the Computed Tomography credential, the following requirements must be met:

- Complete the supporting category prerequisite by earning a certification in Radiography, Nuclear Medicine Technology, or Radiation Therapy.
- Be in good standing with the ARRT Standards of Ethics – verified via the application for certification.
- Complete 16 hours of structured education specific to Computed Tomography.
    - To earn the continuing education certificate for Cross Sectional Anatomy & Pathology and CT Physics, students must attend all classes per the ASRT.
- Complete the Computed Tomography clinical experience requirements.
- Pass the ARRT Post-Primary exam for Computed Tomography.

Log on to the ARRT website; www.arrt.org and click the following links to reach important CT post-primary certification documents.

Resources → Earn Additional Credentials/Post-Primary → Computed Tomography (from the left navigation pane)

These documents include:

Post-Primary Discipline Handbook
Structured Education Requirements
Clinical Experience Requirements
Content Specifications
Task Inventory