



**CARRINGTON  
COLLEGE®**

# **Medical Radiography Clinical Handbook**

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## INTRODUCTION to CLINICAL EDUCATION

This handbook has been designed to serve as a guide for students, Clinical Instructors and Clinical Coordinators regarding the programs policies and procedures specific to the Medical Radiography clinical education courses as they work together to train and evaluate student progress toward the goal of becoming competent radiologic technologists. To ensure successful clinical education each student, Clinical Instructor and Clinical Coordinator participating in clinical education courses must have a full understanding of their respective roles and responsibilities and the foundational knowledge of competency-based system. It is the intent of the competency-based system to provide an objective and uniform method of evaluating the clinical performance of students.

The Medical Radiography standard plan of study follows a hierarchical progression from foundational to complex academic and clinical experiences with the primary goal of graduating an entry-level professional. Clinical education course work helps to integrate the cognitive, psychomotor and affective skills required of a radiologic technology professional. During clinical education, the cognitive, psychomotor and affective skills that students have acquired through classroom and laboratory study on campus is applied in actual medical settings, working with actual patients under the supervision of qualified professionals. Through this “real life hands-on” experience of performing the duties of a radiologic technologist, the student masters the cognitive, psychomotor and affective skills required by the profession.

The general model of clinical education has the student begin by observing and assisting a radiologic technologist in the execution of duties. As the student acquires experience, they move from passive observation to assisting the radiologic technologist in radiographic examinations. The rate at which the student progresses is dependent upon the ability of the student to comprehend and perform the various assigned tasks. As the student gains experience in the various examinations, the student progresses to the independent clinical performance stage. At this point, the student performs the examination under direct supervision of a radiologic technologist.

After demonstrating competence in performing a specific radiographic procedure while directly supervised by a radiologic technologist, the student may then be permitted to perform those procedures under indirect supervision. Indirect supervision means that the qualified radiologic technologist reviews, evaluates and approves the procedure as indicated above and is immediately available to assist the student regardless of the level of student achievement. “Immediately available” is interpreted as the presence of a qualified radiologic technologist adjacent to the room or location where a radiographic procedure is being performed. This availability applies to all areas where ionizing radiation equipment is in use.

## CLINICAL EDUCATION SETTINGS

Carrington College currently maintains clinical affiliations with JRCERT affiliated hospitals and clinics in several states across the country. These affiliates serve as clinical education settings where students are assigned under the supervision of qualified professionals. Enrollment in the program signifies the student’s agreement that he or she will attend clinical education at the settings randomly selected at the College for the hours and times assigned by the College. Clinical education settings affiliated with Carrington College’s Medical Radiography program are subject to change.

## KEY PERSONNEL IN CLINICAL EDUCATION

### **Clinical Coordinator**

The Clinical Coordinator is a full-time faculty member of the Carrington College Medical Radiography program who has been approved by the Joint Review Committee on Education in Radiologic Technology (JRCERT) based on training and experience to perform as a Clinical Coordinator. The Clinical Coordinator is the College's instructor who is responsible for the training and evaluation of the student assigned to one of the clinical courses in the fourth, fifth or sixth semesters.

During the student's second semester, the students are assigned their clinical education settings. This program provides that every student shall be assigned to clinical education settings with the opportunity to achieve all required competencies within the forty-eight weeks that comprise the clinical education portion of the program.

Once the student has begun attending the clinical education setting, the Clinical Coordinator begins regular visits to the setting to observe, train and supervise the student. The Clinical Coordinator also meets with the Clinical Instructor to review the student's progress. The Clinical Coordinator may visit each student every semester but will adjust the schedule as necessary to assure that the student's progress is monitored appropriately, and clinical education is proceeding as expected. When "in person" visits are not possible, the Clinical Coordinator performs supervision and advisement with the student and Clinical Instructor by telephone or other acceptable means of communication.

The Clinical Coordinator receives periodic reports on the student's progress from the Clinical Instructor and combines this information with the Clinical Coordinator's own observations to provide the student with ongoing guidance and direction. At the semester mid-term, the Clinical Instructor summarizes student progress to that point. Significant issues where the student's progress in the cognitive, psychomotor, or affective skills are below expectations will result in a written notice of the area to be improved by the end of the semester for the student to pass the clinical course. This information will be compiled by the Clinical Coordinator and presented to the student for improvement, if necessary.

At the end of the semester, the Clinical Coordinator evaluates the student's progress and assigns a grade for the course. Other duties of the Clinical Coordinator include but are not limited to:

- Receiving and verifying student attendance and reporting it to the Registrar on a timely basis,
- Problem solving student and site issues to assure that program mission and goals are met,
- Evaluating each clinical education setting against program objectives and accreditation criteria,
- Evaluating each Clinical Instructor according to program objectives and accreditation criteria,
- Participating in staff meetings and other activities designed to evaluate program effectiveness and to assure coordination of didactic education and clinical education.

### **Clinical Instructor**

The Clinical Instructor is a professional radiologic technologist employed in a clinical education setting who has been approved by the JRCERT based on training and experience to perform the duties of a

Clinical Instructor. The Clinical Instructor is the student's direct supervisor while the student is at the clinical site.

The Clinical Instructor provides training and student performance evaluations of assigned tasks and responsibilities at the clinical site. The Clinical Instructor, as necessary, provides the Clinical Coordinator updates on the student's cognitive, psychomotor, and affective skill evaluations by phone or email. These combined with the Clinical Instructor written evaluations are used by the Clinical Coordinator to determine if the student is progressing toward the goal of becoming an entry-level radiologic technologist.

It is the Clinical Instructors responsibility to verify the accuracy of the student's weekly time sheet by providing a signature. Time for lunch or other significant breaks away from the department must be removed from the timesheet. It is the Clinical Instructors responsibility to document any significant incidents involving the student so that the College may respond appropriately, particularly where the student's conduct raises disciplinary questions or questions the student's ability to continue in the clinical setting or in the profession.

Finally, it is the expectation of the Medical Radiography program that the Clinical Instructor participates in meetings with the Clinical Coordinator to provide feedback on the programs clinical education of the students to ensure alignment to the program's mission, goals, policies, and procedures.

### COMPETENCY BASED CLINICAL EDUCATION

Clinical education involves three phases: observation, assistance, and performance. The intent of competency-based education is to provide an objective and uniform method of evaluating the clinical performance of students in the program.

In the initial phase of clinical education, the goal is for the student to learn through observation of radiographic technologists in the execution of their duties with actual patients at the clinical site. During this phase the Clinical Coordinator, Clinical Instructor, or other radiologic technologists direct the student observing to specific steps and critical procedures to facilitate the student's learning. It is the expectation that the student progresses to a more active mode of assisting the radiologic technologist. The rate at which the student progresses from observer to assistant depends on the specific procedure involved and the ability of the student to comprehend and assimilate the necessary skills.

As the student gains experience in each of the various procedures, it is the expectation that the student progresses to the independent clinical performance stage. At this point, the student should be performing the examination under the direct supervision of a radiologic technologist. The student is responsible for ensuring that proper supervision is provided for every exam they perform.

"Direct Supervision" means that the qualified practitioner:

- Reviews the request for the examination in relation to the student's achievement.
- Evaluates the condition of the patient in relation to the student's achievement.
- Is present while conducting the examination, and
- Reviews and approves the radiographs.

It is critical that all clinical students understand the requirements of Direct Supervision and that they ensure that they do not perform any procedures prior to establishing competency in that specific procedure without having a qualified radiologic technologist present and observing. Failure to observe this requirement is very

serious and will result in disciplinary action!

When the student feels confident that he or she has mastered a specific procedure, it is expected that the student asks a qualified radiologic technologist to evaluate them performing the procedure utilizing the skill competency evaluation form. Ordinarily the student will ask the Clinical Instructor or Clinical Coordinator for this evaluation. If the evaluator, deems that the student has demonstrated the required professional competence in the procedure, the evaluator should “sign off” on that competency. After a skill competency has been ‘signed off’, the student may then be permitted to perform the procedure under indirect supervision of a radiologic technologist. The student is responsible for ensuring that the proper level of supervision is provided for every exam they perform.

"Indirect Supervision" means that the qualified practitioner

- Reviews, evaluates, and approves the procedure as indicated above.
- Is immediately available to assist the student regardless of the level of student achievement.

"Immediately available" is interpreted as the presence of a qualified radiologic technologist adjacent to the room or location where a radiographic procedure is being performed. This availability applies to all areas where ionizing radiation equipment is in use.

It is critical that all clinical students understand the requirements for Indirect Supervision and that they always ensure that they do not perform any procedure after establishing competency in that specific procedure without having a qualified radiologic technologist immediately available!

“Repeat Examinations” are any exposures that must be re-made for any reason. All repeat examinations must be made under Direct Supervision. This is true notwithstanding that the student has already been checked off as competent in the procedure and notwithstanding the reason the repeat is necessary.

According to the JRCERT’s “Standards for an Accredited Educational Program in the Radiologic Sciences”, 2021 edition, the supervising radiological technologist MUST be present in the radiographic room if any repeat exposures are made. It is critical that all clinical students understand and observe this requirement! Failure to observe this requirement is very serious and will result in disciplinary action.

During the student's clinical education, their competency performance is evaluated primarily by the Clinical Instructors on an on-going basis. The student is evaluated on the specific radiographic examinations as outlined in this handbook. In addition, the Clinical Instructor is expected to provide the Clinical Coordinator with ongoing feedback on the student’s progress in demonstrating necessary affective skills, as previously determined.

A student must continue to attempt each specific procedure until that procedure is mastered. The number of attempts before mastery does not affect the clinical grade. In anything, students who take the initiative to perform as many exams as possible before and after attaining competency are likely to develop their skills more fully and achieve a higher grade. No more than one competency will be granted for the same procedure. For example, a portable wrist will not count as a wrist and a portable orthopedic.

Students are responsible for arranging for a qualified evaluator to be present during the competency. Clinical instructors, registered staff radiologic technologists or college faculty may do the observation and evaluation of the student’s procedural skills during the competency. Competencies may be rejected by the Clinical

Coordinator if deemed necessary due to failure of evaluators to note errors during the competency (gross positioning errors, wrong markers, etc.).

### **Imaging Critiques**

Image critiques must be completed for all competencies and must be completed with the actual radiographs image produced for the original competency. The only exception is when there is documented proof by the Clinical Instructor of missing images. In this case, students may substitute images from the same procedure on another patient for the image critique portion of the competency. Image critiques must be reviewed within one month of the performance of the examination.

All portions of the procedure must be critiqued even though they are not part of the required competency projections or positions. Image critiques may be filled out during clinical time only with permission of the Clinical Instructor. When the caseload is heavy, students are expected to be actively involved in performing or assisting with radiographic procedures.

### **Proficiencies**

A student must first be competent in a procedure before proficiency may be obtained. Proficiencies are designed to encourage students to strive for continued improvement in radiographic skills even though competency has already been achieved. Proficiency is not required for a specific procedure, but rather is required for a group of procedures. For example, there may be two proficiencies required for the axial skeleton in each semester.

The Clinical Coordinator or Clinical Instructor may challenge any competency at any time and require the student to demonstrate mastery of the procedure. If the student fails to demonstrate competency on a challenged competency, then the Clinical Coordinator will remove that competency from the student's list of accomplished competencies until competency is reestablished in a subsequent procedure.

## **AFFECTIVE SKILLS EVALUATION**

The competency-based evaluation described above primarily focuses on the student's development of the cognitive and psychomotor skills required of radiographic technologists. The third critical area of student development centers around the professional behaviors or affective skills required of radiographic technologists. Carrington College evaluates the following affective skills throughout the student's education.:

- Attendance – being at work for hours scheduled
- Responsible - accountable for one's actions
- Respectful to others – patients, peers, supervisors
- Communicates clearly and appropriately – receptive and expressive skills
- Takes initiative – self-starter who pitches in
- Cooperation – team player works well with others
- Follows direction – listens and carries out supervisor orders
- Seeks supervision – where appropriate
- Professionalism – adheres to the policies and procedures of the profession
- Positive attitude – expects and seeks good outcomes

The Clinical Coordinator, through personal observation and reports from the Clinical Instructor and other professionals at the clinical site, evaluates each student as either "satisfactory" or "unsatisfactory" at the mid-point and the end of each semester. Unsatisfactory ratings at the mid-point result in a written warning to the

student including the deficiencies that must be corrected. Unsatisfactory ratings at the end of a semester result in the student failing the semester.

## CLINICAL ROTATION MASTER PLAN

There are three 16-week clinical education courses in the Medical Radiography program:

- Clinical Education I (RAD 209) is a 640-hour course in the fourth semester. Students are assigned a clinical site determined 40 hour per week schedule.
- Clinical Education II (RAD 253) is a 640-hour course in the fourth semester. Students are assigned a clinical site determined 40 hour per week schedule.
- Clinical Education III (RAD 283) is a 520-hour course in the fourth semester. Students are assigned a clinical site determined 32.5 hour per week schedule.

### Assignment of Rotations

The Clinical Coordinator is responsible for determining the clinical assignments for each student. Clinical sites are chosen in the Medical Radiography program to meet the student's need for a comprehensive education and to meet the mission and goals of the program, and ensure the appropriate opportunities are provided to all Medical Radiography students to allow them to achieve entry level competency. To provide the variety, depth, and breadth expected for clinical experiences, students will typically be placed at two different sites per clinical education course, based on clinical site availability. This procedure is designed to increase learning experiences by exposing the student to a wide variety of administrative styles, diagnostic procedures, and imaging equipment. Exceptions to this policy are made when the circumstances ensure a well-rounded and complete education. Students are assigned to a site as a learning experience and are not to be considered or utilized as support staff at any time. Students are encouraged to report to their Clinical Coordinator any actual or perceived violations of this policy.

As a part of the clinical placement process the Clinical Coordinator will consider several factors including clinical site availability, geographic location of students, and student skill level. Clinical site availability can vary throughout each academic year. For geographic location, the Clinical Coordinator will take into consideration the distances students will have to travel, as able, based on clinical site availability. For Clinical Education II and Clinical Education III, students are advanced to medical and hospital-type settings to further their advance their skills and allow for exposure to more diverse patient populations. This also allows students the ability to complete the required competencies.

Student preferences for assignment to specific clinical education settings or to specific locations or locales may be considered by the Clinical Coordinator in making clinical assignments. However, the College makes no guarantee that a student will be able to attend a preferred clinical site for the duration of the clinical education course. The patient population, frequency performed procedures and load at each clinical site can vary. Consequently, not every clinical site can provide the student with sufficient experience to achieve all competencies. Therefore, the Clinical Coordinator will monitor each student's competency achievement and assure that each student is assigned to the appropriate clinical sites that together will give the student the opportunity to achieve all needed competencies.

The Clinical Coordinator will track the student placements for each clinical education course utilizing a clinical education tracking document. The Clinical Coordinator makes the final determination for all student placements.



## Clinical Education Schedules

The Clinical Instructor and site determine the students schedule and daily assignments. The schedule and daily assignments should be determined to best meet the educational needs of the student and clinical education course learning outcomes. The weekly schedules need to be approved in advance by the Clinical Coordinator in collaboration with the Clinical Instructor. This schedule needs to include the starting and ending times for each day of the week and must not total more than 40 hours per week. Students may be assigned day or evening shifts. Some assignments may include weekend hours. Students should be allowed the same time for breaks as the clinical site radiologic technologists. Lunch breaks taken away from the workstation cannot be counted as hours of attendance in clinical education courses. For example, a day that begins at 7:30 AM and ends at 4:00 PM with a half hour lunch break is an 8-hour day, not an 8.5-hour day for attendance purposes.

The Clinical Coordinator and the Clinical Instructor must approve any deviation from the approved schedule in advance. This includes any change in start or end times or days of the week, and any temporary changes such as volunteer hours. Clinical schedules will NOT be changed to accommodate student work schedules or other personal situations. Students will only be credited with the actual hours of attendance that are pre-approved. If a student attends hours that are not pre-approved, those hours will not count towards clinical attendance. Students can volunteer to attend more than 40 hours in a week, but the decision solely rests on the student. Volunteer hours more than 40 hours will not count towards clinical attendance for that week. The Clinical Instructor or Clinical Coordinator will make every effort to give students advance notice of schedule changes as needed.

## Traditional vs Non-Traditional

Traditional assignments have been defined by JRCERT as any scheduled clinical hours between **5:00 AM and 7:00 PM** Monday through Friday. Hours outside this parameter are considered non-traditional assignments and must be supported by the school and clinical site for the learning and experiential benefit of the student. JRCERT states that evening and weekend assignments should occur only after students have acquired the knowledge to benefit from them. As such, students in Clinical Education I will not receive non-traditional assignments.

Based upon the eight criteria for evening and weekend non-traditional assignments declared by JRCERT, the school will ensure that, of the required 1800 clinical hours, non-traditional assignments scheduled over the 12-month clinical education course cycle will be at least a cumulative of **5% (90 hours)**. Documentation of non-traditional assignments hours will be recorded by the student in a separate section of the time sheet. In no case will the evening and/or weekend hours exceed the maximum allowable by JRCERT, **25%** of the total clinical hours scheduled.

## Vacation and Holidays

Vacations during clinical courses are not allowed. Students may not attend clinical rotations during school-observed holidays. Students may not be assigned to clinical settings on holidays that are observed by the sponsoring institution.

## Recording of Clinical Education Time

All students are required to be present in their assigned areas for clinical education during the hours established and approved by the Clinical Coordinator and Clinical Instructor. Students may not leave the radiology department or clinical education setting without notifying the Clinical Instructor or the Clinical Instructor's designee.

The student must accurately record time of arrival and departure and total hours of attendance on a time sheet provided by the Clinical Coordinator. The student and Clinical Instructor must sign this timesheet verifying the hours. The student is responsible for the accuracy and thoroughness of the timesheet. The student is responsible for submitting the timesheet into Canvas weekly by the posted due date. Timesheets that are not accurately completed will be returned to the student to complete correctly before hours will be recorded towards attendance. If a student falsifies time records by reporting inaccurate hours or by falsifying signatures, they will be subject to a code of conduct hearing that may result in discipline, up to and including expulsion from the program.

### Student Commitment to Professional Excellence

At Carrington College, we maintain a professional environment similar to what you will encounter in your new career. We have a responsibility to employers to uphold the high level of professionalism expected in the workplace. Students are expected to always conduct themselves in the most professional manner and be aware of the following guidelines in addition to the HIPAA and Privacy Expectations and Code of Conduct outlined in the Student Handbook.

Students are expected to:

- consider all aspects of the Medical Radiography program in the clinical education setting and the patient to be totally confidential. These aspects are not to be discussed with other students, friends, or family outside of the clinical education setting. Violation of this professional trust will result in discipline that may include dismissal from the program, even for a first offense
- refrain from making personal telephone calls on institutional telephones except in the case of an emergency. Public phones are to be used for all non-institutional business. Personal phone calls during scheduled training hours are to be restricted to emergencies.
- Not smoke in the clinical education setting; clinical education settings are smoke free environments.
- only visit friends or family who are patients according to hospital rules and regulations and only during non-clinical education hours. Remember that students are not permitted in hospitals during non-clinical education hours unless visiting according to hospital policy.
- follow the [American Registry of Radiologic Technologists Code of Ethics](#). This code serves as a guide for radiologic technologists to evaluate their professional conduct as it relates to patients, health care consumers, employers, colleagues, and other members of the medical care team. The Code is intended to assist radiologic technologists in maintaining a high level of ethical conduct.

Any violation of the Carrington College Code of Conduct or ARRT's Code of Ethics may result in may result in discipline, up to and including expulsion from the program.

### THE PATIENT'S BILL OF RIGHTS

Students are expected to cooperate with the [American Hospital Association's The Patient Care Partnership](#). Replacing the American Hospital Association's Patients' Bill of Rights, The Patient Care Partnership informs patients about what they should expect during their hospital stay about their rights and responsibilities. As a student radiologic technologist, you are obligated to respect these rights.

## RADIATION PROTECTION AND MONITORING

Medical Radiography students shall practice appropriate radiation safety procedures in protecting themselves, their patients, and other personnel from unnecessary exposure. The students will be provided their initial radiation badge reports on campus. Subsequent radiation badge reports will be sent to the students on clinical, whereby they will initial receipt documenting that they are aware of the results and have checked the total accumulated exposure dose. This will occur within 30 days of the school's receipt of the badge reports from the manufacturer.

Student operation of fluoroscopic equipment of any type with human subjects is only allowed when the student is under direct supervision of a physician or qualified radiologic technologist. Students are not to be involved in holding patients during routine radiographic procedures. Students should not be present in the room during a routine radiographic exposure.

### Film Badge Policy

Students in the Medical Radiography program will always wear a film badge at the collar when using ionizing radiation and energized laboratory procedures during clinical education. During fluoroscopy, the film badge will be worn outside the lead apron at the collar. If a thyroid collar is worn, the film badge should be worn outside the collar.

Students are expected to adhere to As Low as Reasonably Achievable (ALARA); and avoid exceeding the threshold limits set by the International Council on Radiation Protection and Measurement (ICRP) 20 mSv. (MilliSieverts). The following guidelines are provided to facilitate the student's understanding and awareness of radiation safety by utilization of their personal Thermoluminescent Dosimetry (TLD) badge reports.

- Annual occupational dose limits: **0.05 Sv (5 rem)**;
- A lens dose equivalent (annual) of **0.15 Sv (15 rem)**;
- A shallow dose equivalent (annual) of **0.50 Sv (50 rem)** to the skin of the whole body or to the skin of any extremity.
- Dose equivalent to an embryo/fetus during the entire pregnancy does not exceed **5 mSv (0.5 rem)**.

Each student is responsible for his or her badge. Loss or accidental exposure of a film badge shall be reported to the Clinical Coordinator immediately. A voicemail shall be left the day of the incident with a significant incident report to follow in person as soon as possible. If the badge is lost or damaged, the student will not be allowed to continue at the clinical site until a new badge is issued. This could result in considerable loss of clinical time and will result in corrective action. Students will be assessed for all loss badge charges. Film badges should never be left in your car!

If threshold dose limits are exceeded, the student will closely monitor their subsequent readings along with the Clinical Coordinator (Radiation Safety Officer), the Clinical Instructor and the Program Director. High readings are investigated, discussed with the student, and documented by the Program Director. A continuation of exceeding dose limits may require removing the student from exposure to ionizing radiation at the clinical site.

### MRI Safety

The JRCERT has designated in Objective 4.3 MRI safety as having the same potential concerns in magnetic resonance environment as radiation safety. Prior to clinical education courses each student is required to

complete MRI safety training and successfully pass and exam. Upon successful completion of the MRI safety exam the student receives a MRI Safety letter that is contained in their clinical file.

## ILLNESS OR PREGNANCY

According to United States Nuclear Regulatory Commission (USNRC) guidelines a pregnancy must be declared in writing to the Program Director to activate pregnancy policy options. The student will be given a copy of the [USNRC Regulatory Guide 8.13](#). A student has the right to NOT declare pregnancy OR to undeclare a pregnancy at any time. Students suspecting pregnancy are encouraged to give notice to the Clinical Instructor, Clinical Coordinator, and the Program Director as soon as possible to allow clinical education course assignments to be modified to minimize fetal exposure during the critical first trimester of a pregnancy when exposure to ionizing radiation is the most critical.

Students who become ill or pregnant while in the program are encouraged to seek medical advice from their physician and assistance from the Office of Student Services at [ada@carrington.edu](mailto:ada@carrington.edu). Students should be aware of the following.

- Some clinical sites may require a letter from your physician each semester verifying that you are able to perform the physical tasks required during that clinical rotation and that you have been properly advised of the potential risks to you and/or your baby of contact with blood borne pathogens, common chemicals agents commonly used at the medical practices, and exposure to radiation when applicable.
- Students may consult with their Clinical Instructor regarding the risks to them and/or their pregnancy, but this consultation should not take the place of a medical consultation or the Office of Student Services.
- Students are expected to take full responsibility for the health of themselves and/or their fetus if electing to continue in the program after a physician state it is safe for the student to continue in the program.
- Postnatal, the student must obtain a written release from their physician stating that they can resume clinical education and the program.
- The student has the right to revoke their declaration in writing at any time.
- The student's total accumulated exposure during their pregnancy shall not exceed 0.5 rem, and 50 mr in any month. In the event this exposure is exceeded; the student will be removed from clinical education for the remainder of their pregnancy.

## STUDENT CLINICAL EVALUATION

Radiologic technologists must be competent in both the art and science of radiography. The science of radiography is the radiation physics, anatomy, pathology and other knowledge needed to produce diagnostic radiographs. The art of radiography is the ability of the radiologic technologist to accurately and consistently position and care for the patient while producing those images. Both the science and art are practiced and perfected in the clinical setting. The Medical Radiography Program evaluates the student's skill in both science and art through a competency-based clinical evaluation.

The Clinical Coordinator and Clinical Instructors evaluate the students' skills in the required and elective procedures, but also in their cognitive and application abilities to solve real world problems. They also evaluate the students' professional attributes such as the ability to work closely with a variety of patients and health care professionals, acceptance of responsibility for personal actions, dedication, initiative, ethical decision making, attendance, and manner and appearance. It is expected that students are advised as necessary where they can improve. The student's response to this advice can itself demonstrate whether he

or she has what it takes to be trusted with professional responsibility. Final grades in clinical courses will reflect progress in demonstrating the knowledge, skills and professionalism required of radiologic technologists.

### **Monthly Progress Report**

This form is utilized by the Clinical Coordinator to receive feedback from the Clinical Instructor regarding the student's progress in knowledge, skill, and professional conduct. The student and Clinical Coordinator will discuss any reports of negative or positive nature.

### **Mid-Term Evaluation**

Approximately halfway through the semester, the Clinical Coordinator prepares a summary of the student's progress to this point. This report is discussed with the student. If the student has been marked as showing unsatisfactory progress in the cognitive, psychomotor, or affective domains, a plan to remediate the deficiency is agreed to and documented.

### **Final Evaluation**

During the final two weeks of the semester the Clinical Coordinator prepares a summary report on the student's progress and assigns a pass/fail grade for the semester. As mentioned previously, any serious deficiency in any of the cognitive, psychomotor, or affective domains will result in the student failing the clinical course.

In general, grading is based on the assessment by the Clinical Instructors assessment of the student's cognitive, psychomotor and affective skills in relation to the student's performance in the clinical site. This assessment is based on regular reports from the Clinical Instructor who assesses the student's knowledge, skills and professionalism; on the Clinical Coordinator's observations of the student; and on the student's attainment of the required competencies below.

As of January 2017, The American Registry of Radiologic revised the competency requirements to the following:

- 10 mandatory general patient care activities.
- 37 mandatory imaging procedures.
- 15 elective imaging procedures selected from a list of 34 procedures.
- One of the 15 elective imaging procedures must be selected from the head section.
- Two of the 15 elective imaging procedures must be selected from the fluoroscopy studies section, one of which must be either upper GI or contrast enema.

Furthermore, the candidate may perform simulations either on patients or on phantoms without activating the x-ray beam. The elective competencies are outlined on the competency evaluation form. Achievement of competencies by each student is monitored throughout each course, and if it becomes apparent that a student is not being provided appropriate opportunities at a given setting, then the student will be reassigned unless adjustments at the setting can remedy the problem.

It is generally expected that the student will achieve not less than 17 mandatory competencies by the completion of the fourth semester, and not less than a total of 32 mandatory competencies by the end of the fifth semester. A student achieving only these minimum expectations will have to achieve an additional 18 competencies in the sixth semester, to reach the necessary 52 total.

Students who achieve all required and elective competencies with at least six weeks remaining in the sixth semester can request that they be allowed to “rotate” through an advanced modality. Therefore, upon completion of all required competencies, the student will select for observation one of these three listed advanced modalities: Computed Tomography (CT), Magnetic Resonance Imaging (MRI) or Ultrasound Sonography (U/S). Since all clinical sites have these as a minimum, all students will have an equitable chance of observing one. Carrington College cannot promise that specialty experiences beyond the required competencies needed for graduation can be made available since this availability depends on factors at the clinical site. The program makes every effort to afford all students the opportunity to observe advanced modalities.

Students must successfully complete all clinical education assignments. Students will not graduate without demonstrating the knowledge, skill, and professionalism demanded of an entry-level radiologic technologist. Students will also not graduate without documenting the successful completion of the 46 mandatory and elective competencies. The specific grading requirements for each clinical education can be found in the syllabus for each course.

### **Unsuccessful Completion of a Clinical Education Course**

Students in clinical education courses are evaluated and advised regarding their ability to care for patients in a professional and ethical manner. Serious deficiencies in any of the cognitive, psychomotor, or affective domains will result in the student failing the clinical course. Failure of a clinical course triggers a mandatory conference with the student, Clinical Coordinator and Program Director to determine whether the student can remediate the deficiency and then progress forward; whether the student must repeat the clinical education course in its entirety; or whether the student is dismissed from the program.

Students who require additional clinical opportunities due to their own failure to meet course requirements in the time allotted will not be allowed to occupy clinical site spots designated for other students who are progressing normally. In other words, the opportunity to complete clinical education courses after the expected time of completion will be subject to availability with those who are progressing normally having preference.

It is the program’s policy that once the clinical site is chosen, the student is obligated to complete the training at that site. If for some unforeseen valid reason, the student must drop and re-enter and is required to select a different clinical site, the following directive will apply. The returning student will be afforded an opportunity to engage a new clinical site only after the students who will be going on their first clinical rotation have completed their course. After their course is completed, the returning student may petition for any of the remaining, non-selected sites they choose. In effect, the returning student will not compete with the second semester students during their site selection.

## CLINICAL COMPETENCY EVALUATION

MANUAL TECHNIQUES - Students should use manual techniques whenever possible.

Student: Click or tap here to enter text.

Date/Time: Click or tap to enter a date.

Exam: Click or tap here to enter text.

Exam Reference: Click or tap here to enter text.  
Be sure to adhere to HIPAA guidelines

**Minimum 3 required in all categories**

**5 - Excellent 4 - Above Average 3 – Average 2 - Needs Improvement 1 - Unacceptable**

**1. Communication**

Choose an item.

Clear patient instructions  
Patient history taken

**2. Radiation Protection**

Choose an item.

Collimation  
Lead shielding  
Other guidelines followed

**3. Positioning**

Choose an item.

Pertinent anatomy demonstrated  
Correct CR placement  
Patient considerations

**4. Technique Factors**

Choose an item.

Diagnostic quality achieved

**5. Identification**

Choose an item.

Correct patient/correct exam  
Correct anatomical markers  
Permanent patient ID

**6. Equipment/Image Receptor**

Choose an item.

Proper cassette/film combination  
Proper cassette size  
Proper tube/bucky selection and manipulation  
Positioning aids

**7. Documentation:**

Choose an item.

Paperwork completed neatly, timely and correctly

Instructor's Signature \_\_\_\_\_

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

***Signatures are required for competency to be marked as completed.***

## CLINICAL INSTRUCTOR'S MONTHLY STUDENT PROGRESS REPORT

To be completed by the Clinical Instructor and emailed to the Clinical Coordinator at the end of the month.

<b>Student:</b>		<b>CI:</b>
<b>Month:</b>		
<b>Course Competencies</b> (Specific evaluation criteria are found in the syllabus)	<b>Score</b>	<b>Comments</b> (For any score of 3 or less provide comments to assist student)
<b>1. Educational Focus</b> Demonstrates a commitment to learning and a respect of the educational opportunity	Choose an item.	
<b>2. Knowledge of Exams</b> Demonstrates a thorough knowledge of what is required to efficiently produce radiographs	Choose an item.	
<b>3. Quality of Exams</b> Demonstrates the ability to consistently produce radiographs of diagnostic quality.	Choose an item.	
<b>4. Film Critique</b> Demonstrates the ability to identify films that are not of diagnostic quality and correct the films with one repeat. Students are expected to be able to critique films without significant input from an RT; however, an RT must be present during all repeat exams.	Choose an item.	
<b>5. Occupational Skills</b> Demonstrates an efficient and organized approach to exams	Choose an item.	
<b>6. Patient Communication</b> Demonstrates the ability to communicate with patients about the procedure.	Choose an item.	
<b>7. Inter-Staff Communication</b> Demonstrates the ability to communicate with facility staff professionally and effectively.	Choose an item.	
<b>8. Self-Directed</b> Demonstrates the ability to stay productive with educationally valid activities.	Choose an item.	
<b>9. Critical Thinking</b> Demonstrates the ability to analyze and solve problems. Students are encouraged to adapt procedures to fit unusual situations;	Choose an item.	



<p>however, they are to be expected to check with appropriate facility staff before taking action in unusual situations</p>		
<p><b>10. Professional Ethics</b> Consistently demonstrates the ability to act in accordance with the ASRT Code of Conduct and the policies of Carrington College and the clinical facility.</p>	<p>Choose an item.</p>	

## Scoring Criteria by Competency

Course Competencies	Clinical Grading Expectations
<b>1. Educational Focus</b>	<p>5 - Always willing to participate in exams and uses free time for study or practice</p> <p>4 - Always willing to participate in exams and uses the bulk of any free time for study or practice</p> <p>3 - Usually willing to participate in exam but does not use free time for study or practice</p> <p>&lt;3- Hesitant or reluctant to participate in exams</p>
<b>2. Knowledge of Exams</b>	<p>5 - Able to do <u>80%</u> of protocol exams without referring to books or asking for help</p> <p>4 - Able to do <u>70%</u> of protocol exams without referring to books or asking for help</p> <p>3- Able to do <u>60%</u> of protocol exams without referring to books or asking for help</p> <p>&lt;3 - Requires the assistance of an RT for more than 60% of protocol exams</p>
<b>3. Quality of Exams</b>	<p>5 -Less than 15% of the exams require repeat views</p> <p>4- Less than 25% of the exams require repeat views</p> <p>3 - Less than 35% of the exams require repeat views</p> <p>&lt;3 - More than 35% of the exams require repeat views</p>
<b>4. Film Critique</b>	<p>5 - Able to critique <u>90%</u> of films with the CI</p> <p>4 - Able to critique <u>80%-89%</u> of films with the CI</p> <p>3 - Able to critique <u>70-79 %</u> of films with the CI</p> <p>&lt;3 - Unable to properly critique at least 70% of the films with the CI</p>
<b>5. Occupational Skills</b>	<p>5 - Smooth and organized during <u>95%</u> of protocol exams; does not need to look at textbooks during the exam</p> <p>4 - Smooth and organized during <u>85%</u> of protocol exams; does not need to look at textbooks during the exam</p> <p>3 - Organized during protocol exams; needs to refer to RT or reference books <b>during</b> the exam on fewer than 1/2 of exams</p> <p>&lt;3 - Unorganized <b>during</b> exam and must refer to reference books or an RT <b>during</b> the exam on more than 1/2 of exams</p>
<b>6. Patient Communication</b>	<p>5 - Always able to discuss protocol exams with patients in a manner that is understandable and professional</p> <p>4 - Able to discuss most protocol exams with patients in a manner that is understandable and professional</p> <p>3 - Requires some assistance from the RT to explain protocol exams that is understandable and professional</p> <p>&lt;3 - Unable to explain protocol exams to patients in a manner that is reassuring even with the assistance of an RT</p>
<b>7. Inter-Staff Communication</b>	<p>5 - Always communicates with facility staff members professionally and effectively</p> <p>4 - Always communicates with facility staff members effectively; needs to improve professional communication</p> <p>3 - Usually able to communicate effectively but not always</p> <p>&lt;3 Struggles to communicate effectively with facility staff</p>

<b>8. Self- Directed</b>	<p>During your externship it is your responsibility to manage and use your time effectively. Your learning priorities are:</p> <ol style="list-style-type: none"> <li>1) Exams,</li> <li>2) Maintaining records,</li> <li>3) Maintaining the exam rooms,</li> <li>4) Front Office responsibilities,</li> <li>5) Other site-specific duties, and</li> <li>6) study for the Registry Exam (This priority becomes #2 for 6th semester students).</li> </ol>
<b>9. Critical Thinking</b>	<p>5 - Always able to recognize and adapt to unusual situations.  4 - Usually able to recognize and adapt to unusual situations.  3 - Usually able to recognize unusual situations; often needs help adapting procedures to fit the situation.  &lt;3 – fails to recognize unusual situations and fails to adapt procedures to fit the situation</p>
<b>10. Professional Ethics</b>	<p>It is expected that you will always act professionally and ethically. Instances where you do not will be dealt with on a case by-case basis and maybe grounds for additional disciplinary action based on the disciplinary policy.  &lt;3 -If the breach of professional behavior compromises patient safety, confidentiality, privacy, or health care</p>

## END SEMESTER EVALUATION

Student's Name [Click or tap here to enter text.](#)

Date [Click or tap to enter a date.](#)

Clinical Education Site [Click or tap here to enter text.](#)

Date [Click or tap to enter a date.](#)

Evaluator(s) [Click or tap here to enter text.](#)

Grading: Using the following scale, please rate the student's current level of performance. Satisfactory scores (3.0 or above) must be achieved in each category. Any area student does not achieve 3 or above, please specify changes needed to improve performance.

5 = Superior, near perfect

4 = Above average, student performs at or above expected level of education

3 = Average, student performs at expected education level

2 = Below average, student needs improvement and performs below expected education level

1 = Unacceptable, student performs below expected level and does not meet the specific standard

\*Grading scale allows for evaluator to use mixed numbers in evaluating 3.25, 4.5, etc.

### I. Professional Ethics

**Choose an item.** The student utilized hospital resources appropriately, maintains confidentiality, and interacts with patients and medical staff in a positive manner.

Comments: [Click or tap here to enter text.](#)

### II. Patient Care/Interpersonal Relations

**Choose an item.** The student exhibits positive verbal and non-verbal communication with patients and medical staff, can explain procedures to patients, listens well and shows willingness for improvement.

Comments: [Click or tap here to enter text.](#)

### III. Work Conduct

**Choose an item.** The student adheres to program policy regarding work schedule and responsibilities, uses time in a productive manner, and participates in all levels/types of examination.

Comments: [Click or tap here to enter text.](#)

### IV. Occupational Skills

**Choose an item.** The student completes exams effectively in a timely manner utilizing standard precautions, applies radiation protection measures, set appropriate technical exposure factors and discriminate between diagnostic and non-diagnostic radiographs and can identify radiographic anatomy.

Comments: [Click or tap here to enter text.](#)

### V. Problem Solving/Critical Thinking Skills

**Choose an item.** The student displays confidence in skills while recognizing limitations, performs tasks in a logical manner and analyzes performance for continual self-improvement and competency.

Comments: [Click or tap here to enter text.](#)

Number of performance Competencies attempted [Click or tap here to enter text.](#)

Number of performance Competencies passed on first attempt [Click or tap here to enter text.](#)

***The student MUST achieve an average of 75% of competencies passed on the first attempt or an unsatisfactory evaluation will result.***

Student's signature \_\_\_\_\_

Date [Click or tap to enter a date.](#)

Clinical Instructor's signature \_\_\_\_\_

Date [Click or tap to enter a date.](#)

Clinical Coordinator's signature \_\_\_\_\_

Date [Click or tap to enter a date.](#)

Email the completed form to the Clinical Coordinator