



EMORY
UNIVERSITY

MEDICAL IMAGING PROGRAM

CLINICAL HANDBOOK

2024 – 2027

The Clinical Handbook is reviewed annually by the Advisory Committee of Emory University's Medical Imaging Program. The current committee members are:

*Ms. Karen Bell-Moore
Mr. Ted Brzinski
Ms. Ajeenah Bullock
Ms. Debra Carter
Dr. Kim Cross
Ms. Beth Curtis*

*Mrs. Jacki Harmon
Ms. Lamiis Khalifa
Mr. Michael Panas
Dr. Colin Segovis
Mr. Sean Strickler
Chris Reed*

*Shelton Franklin
Alexandria Simmons
Jesse Green
Guadalupe Godoy-Morfin*

TABLE OF CONTENTS

<u>Section</u>	<u>Description</u>	<u>Page</u>
I.	Glossary	4
II.	General Information	
	Introduction.....	7
	Purpose.....	7
	Course Syllabi.....	8
	Clinical Assignment.....	8
	Parking.....	8
	Routine Day Shift Clinical Hours.....	8
	Holidays.....	9
	Attendance.....	9
	Symplr.....	12
	Contact Number List.....	13
	Dress Code.....	15
	Electronic Device Policy.....	18
III.	Professional Conduct	
	Expectations.....	19
	Students as Interpreters.....	21
	Evaluation of Professional Conduct.....	21
	Medical Imaging Program Specific Standards.....	22
	Use of Social Media.....	23
	Violation of Professional Suitability.....	24
	Academic Standing and Academic Dismissal	26
	Grade Point Average Requirement.....	27
	Clinical Probation	27
	Health Insurance Portability and Accountability Act.....	27
IV.	Objectives	
	General.....	28
	Example Script.....	28
	Attitudinal.....	29
	Chest.....	29
	Emergency Room.....	29
	Fluoroscopy.....	30
	Genitourinary.....	30
	Orthopedic.....	31
	Portables.....	31
	Surgery.....	31
V.	Clinical Education Master Plan	32
VI.	Student Clinical Competency Evaluation	
	Rationale.....	33
	Clinical Courses.....	33
	Competency Evaluation.....	34
	Competency Exams and Prerequisite Numbers.....	35

Technologist's That May Perform Competencies.....	38
Criteria for Competency Evaluation.....	39
Minimum Pertinent Anatomy.....	41
Emory Diagnostic Radiology Protocols.....	46
Dx Hanging and Sequence Protocol.....	49
Sample Competency Record Table.....	50
VII. Clinical Grading System	
First Semester.....	51
Second Through Eighth Semesters.....	52
VIII. Protection Policies	
Accidents.....	56
Clinical Orientation.....	56
Infection Control Policy.....	57
Laboratory Safety Policy.....	59
MRI Safety Policies.....	60
Pregnancy Policy.....	61
Radiation Monitoring.....	62
Repeat Policy	65
Transportation Policy.....	65
Safety Policies – Miscellaneous	65
IX. Trajecsys.....	67
Time Tracking Clock in/out	67
Orientation Checklists/Student Evaluation of Clinical.....	70
Patient Prep – Case Log.....	71
APPENDIX A. Wheelchair/Stretcher Chest Demonstration.....	73
1. SECTION I: GLOSSARY	
Clinical Education	The portion of the educational program conducted in a health care facility that provides the opportunity for students to translate theoretical and practical knowledge into cognitive, psychomotor and affective skills necessary for patient care. It consists of two clinical clerkships, three clinical internships and three clinical practicum courses.
Clinical Notebook	A digital notebook containing clinical policies, information and forms. The digital clinical notebook is accessible to students at all times while they are in their clinical site and outside of clinical. Each student can view the handbook on Canvas but they should also download the handbook from the Learning Management System
Clinical Organization.....	The ability of the student to document their clinical records and review those records. The clinical grade is affected by the student's clinical organizational skills.
Clinical Participation.....	A series of eight (8) clinical education courses designed to rotate the student through all routine diagnostic areas in a clinical affiliation to

develop performance skills.

Clinical Quiz A quiz given over policy and various radiographic topics. These quizzes are available on line, the honor code applies.

Competency Evaluation.....The procedure by which a student's performance is evaluated according to the program's prescribed standards. Competency evaluation consists of the knowledge, skills and affective behavior required of an entry-level radiographer.

Direct SupervisionUntil a student achieves and documents competency in any given procedure, all clinical assignments shall be carried out under the direct supervision of qualified radiographers. The parameters of direct supervision are:

1. A radiographer reviews the request for examination in relation to the student's achievement;
2. A radiographer evaluates the condition of the patient in relation to the student's knowledge;
3. A radiographer is present in the room during the conduct of the exam;
4. A radiographer reviews and approves the images.
5. A radiographer must be present in the room during ANY repeated image. This includes exams the student has already proven competency in.

Trajecsys..... The programs online clinical record keeping system.
www.trajecsys.com

Final Clinical Grade.....The final grade received in clinical. The clinical grade includes an assignment and work ethic grade. It incorporates such qualities as knowledge of discipline, organizational and technical skills, dependability and reliability, industriousness and initiative, rapport with patients and co-workers, professionalism, etc.

Final Competency Evaluation.... A reassessment of previously obtained competency. It occurs in the last two semesters.

Grand Rounds.....Morning conferences for the radiology department; covering a variety of imaging topics. Students should attend as directed on their syllabi.

Honor CodeA pledge by the student to do their own work on all clinical assignments, quizzes, etc. The student also pledges not to falsify records. Breaking the honor code has serious consequences including suspension and expulsion.

Image Critique..... An oral review of anatomy, positioning, technique etc. on images produced by the student. These critiques are done during the junior and senior years with the faculty members. Sophomore students observe

junior and/or senior image critiques. Requirements are outlined in the clinical syllabi.

- Indirect Supervision Supervision provided by a qualified radiographer (R.T. ARRT) immediately available to assist students regardless of the level of student achievement. “Immediately available” is interpreted as the physical presence of a qualified radiographer adjacent to the room or location where a radiographic procedure is being performed.
- Interval Checks.....An evaluation on previous semester competencies. An unsatisfactory Interval Check will require individualized remedial work until the examination in question can be performed satisfactorily. Interval checks are performed with Clinical preceptors and recorded in Trajecsys.
- Laboratory A separate work area for student practice. It includes phantoms, a radiographic table, overhead tube, and accessories.
- Laboratory PracticeThe practice of proper positioning methods utilizing role-playing activities with another student, following the appropriate instruction. Exposures are never taken on fellow students.
- Lunch and Learn.....Lunch time sessions in which students present exams they have performed to the class and discuss positioning, technique, anatomy, etc.
- No Call No Show (NCNS).....Failing to contact the clinical site or the clinical coordinator when the student will be absent from clinical. Students must contact the appropriate personnel prior to the start of the scheduled shift to avoid grade deductions. Each NCNS results in a **letter grade deduction** of the clinical grade.
- Performance Objectives..... Objectives to be achieved each semester that focus on the actual performance of certain duties. The staff technologists, clinical preceptors, and faculty will monitor the successful completion of these objectives. Checklists covering these objectives are on Trajecsys.
- Practicum.....The last year of clinical and that portion of clinical education in the student’s minor track; MRI, CT, Education or Management.
- Prerequisite The required number of exams done prior to the performance of a competency. These exams are **performed** by the student under direct supervision. The number of prerequisites varies by exam type. All images must be marked correctly with the student’s own initialed markers.
- Trajecsys
- Radiographic Examination.....A series of images produced with medical imaging techniques to demonstrate anatomical structures.
- Recommended Additional Clinical Time... A recommendation by the faculty or clinical personnel that the student participate in additional clinical time to improve their skills.
- Record Keeping..... The accurate completion and organization of clinical documentation in

Trajecsys and the clinical notebook.

- Remedial Education The portion of the educational program where the student obtains additional instruction, practice and reevaluation.
- Repeat Exams An image that must be repeated due to technique, positioning, centering, artifacts, etc. ***Any repeated image must be completed under direct supervision for all students and documented in Trajecsys.***
- Seminars Lectures given for continuing education to registered technologists. Seminars are used to familiarize the student with continuing education requirements of the registered technologist.
- Simulation An examination on a live subject (not a patient) with a simulated exposure.
- Student Clinical Evaluations.....Evaluations completed by the technologists and/or faculty with whom the student worked. The student's performance and affective behavior are evaluated. It is the student's responsibility to be sure their evaluations have been completed on Trajecsys by the Clinical Preceptor/supervisor.
- Student Evaluation of Clinical...Ongoing online evaluations of the clinical areas by students in the program. They provide students an avenue to provide input regarding their rotations so program faculty can evaluate the educational integrity of the areas. These evaluations are assessed by the clinical coordinator and shared with the program faculty and radiology administrators/supervisors of the clinical sites. Positive comments are often shared with the clinical sites. These are completed on Trajecsys.
- Symplr.....Children's Healthcare of Atlanta credentialing company.
- Time Tracking.....The procedure used to document clinical experience on Trajecsys. Students must document their time each clinical day and are responsible for ensuring it is correct and validate by the appropriate personnel.
- Work Ethic..... An aspect of the final clinical grade that takes into consideration the student's attendance, tardiness and compliance to dress code policies, etc.
- Written Clinical Assignments... Assignments that typically include study questions, case studies, and worksheets.

SECTION II: GENERAL INFORMATION

INTRODUCTION

Students enrolled in the Emory University Medical Imaging Program will be responsible for observing university rules and regulations as stated in the current and any subsequent university catalog and student handbook, in addition to those applicable to their clinical affiliation assignments. Clinical facilities are considered an integral part of the university campus for student clinical assignments.

The rules and regulations stated in this handbook represent a **contractual** agreement between Emory

University and the Medical Imaging student for the duration of the program. Failure to comply with the rules and regulations in this handbook will affect student evaluations and grades and may result in dismissal from the Medical Imaging Program if the student shows no improvement or makes no attempt to correct errors after counseling. If rules and regulations change or are updated, the student will be notified in advance.

PURPOSE

The major goal of a program in Medical Imaging is to enable the student to develop skills that will allow him or her to perform the duties of a Radiologic Technologist successfully. The first step in this process is the acquisition of knowledge through classroom and laboratory learning experiences. It is then necessary to practice these skills until they are mastered.

During the first semester of clinical participation the student will attend various mandatory orientation sessions. Following these orientation sessions students will spend time observing the staff technologist at work and learning patient care skills, such as, communication, patient transportation, appropriate patient attire, etc.

Participation in the clinical area becomes increasingly more active, with the student assisting the staff technologist with radiographic procedures, then actually performing the procedure under direct supervision by the technologist. Finally, after proving competency the student will actually perform the procedures with only indirect supervision, with the exception of surgical and all mobile procedures, including mobile fluoroscopy, where the student must be directly supervised regardless of their level of competency. All repeated images are performed under direct supervision.

COURSE SYLLABI

Each semester the student will have access to the Clinical Course Syllabus. The syllabus will contain the course description, objectives, requirements, assignments, etc. The Clinical Coordinator or designee will explain the syllabus at the beginning of each semester.

CLINICAL ASSIGNMENT

Students enrolled in the Emory University Medical Imaging Program will be scheduled and rotated through the various clinical assignments by the Clinical Coordinator in consultation and agreement with the clinical sites. These assignments are in accordance with the Master Plan of Clinical Education. The Master Plan is subject to change due to the addition, consolidation or deletion of clinical education settings but rotations will be as equitable as possible.

Your clinical assignment for the entire semester will be posted and you will be given a copy. The schedule is prepared so that there will be an orderly flow in the department, adequate supervision and an adequate and equal clinical education experience for the students. **It is the student's responsibility to read and abide by all clinical assignment schedules.** Any missed time due to a student's failure to adhere to the clinical schedule will result in demerits. **Students may not attend additional clinical time without scheduling it through the clinical coordinator.**

Students may be employed while enrolled in the Medical Imaging Program provided the work does not interfere with regular academic and clinical responsibilities. Due to the amount of time required to be successful in the program it is recommended that the students not work more than twenty hours per week.

PARKING

Students must adhere to these parking requirements:

- Clifton Campus: Parking while at the Clifton Campus sites is through the Emory parking office.
- Egleston: Students may not park at the CHOA parking deck at Egleston; the deck is very congested. Students will use their regular Emory parking facilities.
- Emory Musculoskeletal Institute: Students will park in level L or LL of the parking deck. P1, P2 & P3 are reserved for patient parking.
- EUH-Midtown: Students will park at the Beacon deck (530 West Peachtree St. NW, Atlanta, GA 30308) parking lot using their student ID. They will have student ID badge activated by security at EUHM.
- Emory St. Joseph and OPIC: Students will park in the employee parking deck (Purple deck South entrance, it is the last entrance on the left). They will have student ID badge activated by security at ESJH.

Any site not listed has general parking at the facility that the student may use as directed by the staff.

ROUTINE DAY SHIFT CLINICAL HOURS

Students will work these hours during a typical week: Most general clinical rotations will be scheduled Monday – Friday. Some Evening or weekend shifts may occur in the junior and senior year. Hours may vary slightly.

1st SEMESTER: FALL

Two – clinical tours	0845 – 1430 (<i>approximately</i>)
Eight; eight hour observations	Times vary by site, see clinical schedule
Two – forty hour weeks Monday – Friday	Times vary by site, see clinical schedule

2nd SEMESTER: SPRING

16 hours/week (Days/Times to be announced)
0700 – 1500, 0730 – 1530, 0800 – 1600, 0830 – 1630 (*Times may vary slightly.*)

3rd SEMESTER: SUMMER

16 hours/week (Days/Times to be announced)
0700 – 1500, 0730 – 1530, 0800 – 1600, 0830 – 1630 (*Times may vary slightly.*)

4th SEMESTER: FALL

16 hours/week (Days/Times to be announced)
0700 – 1500, 0730 – 1530, 0800 – 1600, 0830 – 1630 (*Times may vary slightly.*)

5th SEMESTER: SPRING

16 hours/week (Days/Times to be announced)

6th SEMESTER: SUMMER *Minor track weekend hours may be possible*

*16 hours/week – General Clinical (Days/Times to be announced)
*8 hours/week – Minor Track Practicum (Days/Times to be announced)
(*Evening rotations are possible*)

7th SEMESTER: FALL *Minor track weekend hours may be possible*

*16 hours/week – General Clinical (Days/Times to be announced)
*12 hours/week – Minor Track Practicum (Days/Times to be announced)
(*Evening rotations are possible*)

8th SEMESTER: SPRING *Minor track weekend hours may be possible*

*16 hours/week – General Clinical (Days/Times to be announced)
*16 hours/week – Minor Track Practicum (Days/Times to be announced)
(*Evening rotations are possible*)

**Practicums may be done as a block of time rather than 8- 16 hours/week*

HOLIDAYS

The Medical Imaging Program observes the following holidays:

Martin Luther King's Birthday	(1 day)
Memorial Day	(1 day)
Juneteenth	(1 day)
July 4th	(1 day)
Labor Day	(1 day)
Thanksgiving	(2 days)

ATTENDANCE

Medical Imaging students will attend **ALL** Clinical Assignments as scheduled by the Clinical Faculty. Students will be required to clock in and out of all clinical assignments on Trajecsys in order to keep an accurate record of clinical attendance and clinical hours. Clock in and out times must reflect the actual time the student arrived and was ready to work. Clocking in on time when you actually arrive late or clocking out on time when you leave early, is considered a falsification of clinical records and is a serious offense, Trajecsys does track IP addresses. Students must be in their clinical area when they clock in.

Clinical preceptors or supervisors in special modalities at the site must verify your attendance through Trajecsys. It is the student's responsibility to check these records weekly to see that they have been

validated. The clinical faculty member assigned to the site should be notified if there are problems. In the event that a clinical preceptor/supervisor is unavailable to sign the student in or out, students should call the clinical faculty member assigned to their site from a clinical site phone and leave a message. The voice mail system will record the time and location of the call. **DO NOT CALL FROM A CELL PHONE.** Once students are in their minor tracks they will call the instructor in charge of their minor track during those rotations.

When a student fails to follow the procedures for documenting clinical time; clinical time may be lost. See Trajecsys section on time tracking policies.

Absences affect the quality of achievement in theory and practical applications. Excessive or unexcused absences will NOT be tolerated. Students that miss over 24 hours of general clinical time in a semester will be required to make up that time over the semester break as scheduled by the clinical coordinator. **Unless the clinical time missed is due to a documented extenuating circumstance, the clinical grade will be calculated based on the initial time missed.** Failure to comply with attendance policies will result in clinical probation and possible prevention of registration for the next clinical semester.

- **Absences:** If you will be absent, notify the clinical faculty member assigned to your site and the Clinical preceptor or Site Supervisor at your assigned clinical site prior to the scheduled shift to avoid a letter grade reduction. (phone numbers are located in the handbook) If you become ill while at your clinical assignment or if you need to leave early for some other reason, you must notify the site supervisor and the clinical faculty member before you leave. Absences and failure to follow proper notification policies affect the final clinical grade as outlined in Section VII.
- **Tardiness:** If unavoidable circumstances will result in the student being more than thirty minutes late, please call the clinical faculty member and the supervisor or Clinical preceptor at the clinical site. The student should clock in at the actual time that they arrive. Excessive tardiness will not be tolerated. Tardiness affects the final clinical grade as outline in Section VII.
 - Students are expected to be ready to work at the start of the shift not just arriving to the area.
 - Students will be considered tardy any time they come in to clinical later than their normal scheduled time unless they have informed both the site and faculty before 3p the previous business day (M-F).
 - Students that fail to inform the clinical site and program within a reasonable amount of time that they will be more than 30 minutes late will receive a no call late (NCL) demerit.
 - Any time missed due to tardiness will be subject to the demerit schedule in Semesters II – VIII.
 - All tardies are rounded up to the nearest ¼ hour.
 - Any time missed due to tardiness in Semester I must be made up.
- **Lunch:** Lunch schedules will be assigned at the discretion of the clinical supervisor when students are on clinical assignments. Lunch breaks are limited to 45 minutes during full day shifts. Students must be back in their clinical rotations by 1:30 pm, which means the latest a student may go to lunch is 12:45 pm. There are no lunch breaks during part day rotations. No make-up time is allowed during lunch breaks; students may not forego their lunch in order to leave early. **Students should eat breakfast prior to starting day shifts.**
- **Extended absences:** Any extended absence greater than one week will require written confirmation from a physician of ability to return to full clinical duties. Extended absences due to **severe illness, injury or family emergency** will be considered on an individual basis by the

Program faculty and or Progress and Promotions Committee to determine if grade penalties will be incurred or if make up time without a grade penalty will be allowed. In the event of an extended absence it may be necessary to make up missed clinical time. Insufficient clinical hours will result in receiving a grade of "Incomplete" for that semester. The "Incomplete" cannot be changed until all clinical hours are completed. If the incomplete is not removed prior to the start of the next semester the student will not be allowed to register for the next clinical course. Extraordinary circumstances will be reviewed on a case-by-case basis.

- **Full performance of duties:** Students must be able to perform all physical activities required to be a full functioning radiographer. Therefore, if an illness, injury, condition, etc. prevents the student from performing the required activities, including but not limited to lifting, pushing, pulling, etc., the student may not attend clinical. In order to return to clinical a full release from the student's doctor is required.
- **Semester break clinical time:** In order to complete required competencies students will be allowed to attend extra clinical during finals week or the first week of the semester break at the discretion of the program faculty and clinical affiliate. Proper supervision must be available; all clinical policies must be adhered to. This will only be allowed **once** during the program; after that the time is volunteer time and any applicable assignments will be applied to the next semester. Going to a clinical site without the Clinical Coordinator's (or designee) approval is a supervision violation and will result in a reprimand and no credit for time, assignments or exams completed.
- **Make up time:** Occasionally students will be allowed to make up time missed due to a documented **extended** illness or extenuating circumstance such as a funeral, jury duty, acute illness, etc. An extended illness is defined as one that causes the students to miss three or more consecutive days of program activities – clinical and class. The student must request make up time in writing and provide documentation. Make up time is granted at the discretion of the Clinical Coordinator upon careful review of the documentation provided and the circumstances. This make up time may only be done over semester breaks and/or at the discretion of the clinical coordinator and clinical affiliate. All clinical policies apply. Make up time due to these extenuating circumstances will be applied towards the clinical grade. Going to a clinical site without the Clinical Coordinator's (or designee) approval is a supervision violation and will result in a reprimand and no credit for time, assignments or exams completed.
- **Volunteer clinical time:** Students are allowed to volunteer at clinical sites on their own time to gain more experience or to gain exposure to different modalities. Students must first get approval from the clinical coordinator, who will in turn contact the clinical site for their approval and to ensure proper supervision will be available. Volunteer clinical time will not be approved if it conflicts with other scheduled student rotations or proper supervision is not available. All clinical policies apply. Exams done during volunteer time over the semester breaks will be applied to the semester that follows. Failure to attend the scheduled time without an acceptable excuse will lead to forfeiture of future opportunities. Going to a clinical site without the Clinical Coordinator's (or designee) approval is a supervision violation and will result in a reprimand and no credit for time, assignments or exams completed.
- **Recommended Additional Clinical Time:** In the event that a faculty member or a clinical preceptor feels that a student would benefit from participating in more clinical time, a memo/e-mail will be sent to the program and/or student stating the reason for the additional time. The student may or may not agree with the recommendation; however, students should understand

that the additional time recommendation is done for their own benefit. Choosing not to take advantage of the recommendation may be an indication of the student's desire to be successful. All clinical policies will apply.

- **Religious observances:** The program recognizes that some students may have special needs in the scheduling of clinical duties because of religious beliefs and practices. Therefore, students who anticipate conflicts with regularly scheduled clinical rotations must notify the Clinical Coordinator in writing at least 15 calendar days in advance of the conflicting date. The student will be able to make up the clinical time during the semester break or at the discretion of the Clinical Coordinator. The student and Clinical Coordinator will work together to schedule the make-up time. All policies apply.

SYMPLR

Students will be required to use the “*Symplr*” credentialing system for rotations at Children’s Healthcare of Atlanta (CHOA). Students will receive an e-mail from *Symplr* and will follow their instructions to be cleared to rotate through the CHOA sites. The student will need to upload documentation and must submit to a background check and a drug screen at their own expense. Students may not attend any CHOA rotation until they get a “green light” from *Symplr*.

Failure to pass their requirements will prevent the student from attending the rotation. All attendance policies will apply. **CONTACT NUMBER LIST**

<u>Program Office</u>	<u>Phone #'s</u>	<u>PIC #'s or Cells</u>
Main office:	404-712-1160	N/A
Ted Brzinski	404-712-1229	
Kim Cross	404-712-0294	404-944-2313
Jacki Harmon	404-712-8761	N/A
Lamiis Khalifa	404-712-1228	N/A
Ajeenah Bullock	404-712-1673	N/A
Inclement Weather Line	404-727-1234	

**To Page: Dial 404-686-5500, enter PIC #, enter your number, press #.*

Children's Healthcare of Atlanta at Egleston

Supervisor:	404-785-1286*
2 nd shift supervisor	404-785-1291
Fluoroscopy:	404-785-6168
Routines:	404-785-1255
CT:	404-785-6031
MRI:	404-785-1487
Education Coordinator:	404-785-1480
<i>TO CALL A CODE 5-6161</i>	

Children's Healthcare of Atlanta at Scottish Rite

MRI:	404-785-2485
MRI Supervisor:	404-785-5356
Education Coordinator:	404-785-1480
<i>TO CALL A CODE 5-6161</i>	

Children's Healthcare of Atlanta at Webb Bridge

Main:	404-785-7226
MRI:	404-785-8156
<i>TO CALL A CODE 9-911</i>	

Emory Dunwoody

Radiology	404-251-1555
<i>TO CALL A CODE 9-911</i>	

Emory Johns Creek

General	678-474-8071 (7166, 7167)
Breast Imaging	678-474-5602
CT	678-474-8070 (7169)
IR	678-474-8055
MRI	678-474-8173
Nuclear Medicine	678-474-8172
US	678-474-8069
Manager	678-474-7157
Supervisor	678-474-8045
<i>TO CALL A CODE 4444</i>	

Emory McDonough Imaging Center

MRI:	404-778-7270
<i>TO CALL A CODE 9-911</i>	

Emory University Hospital – Midtown

Control:	404-686-2326
CT:	404-686-8983
Interventional:	404-686-2323
Med Office Tower (MOT)	404-686-3194(3259)
MRI:	404-686-3360
Nuclear Medicine:	404-686-1225
RT Oncology	404-686-7857
Ultrasound:	404-686-8990(1503)
<i>TO CALL A CODE 6-1777</i>	

CT: 404-251-3091 *TO CALL A
CODE 1-3777*

Emory St. Joseph's Hospital

General 678-843-5529 (5530)
CT 678-843-7574 press 3
IR 678-843-7332
MRI 678-843-5149
Supervisor 678-843-4898
OPIC 678-843-6132 (6133)
TO CALL A CODE 3-5555

Emory University Hospital

Diagnostic Front Desk 404-712-7036
Control: 404-712-7832
Fluoroscopy: 404-712-7953
CT Supervisor 404-712-4612
CT Main 404-712-7888
Cardiovascular Lab: 404-712-7034
Interventional: 404-712-0532
MRI: 404-712-1390
Nuclear Medicine: Front Desk 404-712-1075
Main Work Hall: 404-712-5017
Ultrasound: 404-712-7428
TO CALL A CODE 2-1777

Emory University Hospital TOWER

General Diagnostic Control 404-251-6120
CT Control 404-251-6101, 1-5112
MRI Control 404-251-5115
US Rm 1 404-251-6107

Emory University Orthopaedic & Spine Hospital

Technologists 404-251-3094
MRI: 404-251-3092

Emory University Orthopaedic & Spine MOB

Medical Office Building 404-251-3227
TO CALL A CODE 9-911

The Emory Clinics A & C (Winship)

Diagnostic: 404-778-3596(5112)
Mammography: 404-778-3887
Bone Density: 404-778-3441
CT: 404-778-4714
CT Supervisor: 404-778-4810
MRI: 404-778-3176 (5622)
PET: Bldg. A 404-778-4748
Rad. Oncology: 404-778-4078 (5621)
Rad. Oncology: 404-778-3450 (0595)
Rad. Oncology Supervisor 404-778-5315
Ultrasound: 404-778-3522
TO CALL A CODE 8-8888

The Emory Clinic Satellites

Executive Park 12: 404-778-6064
EP Hawks: 404-251-2491
Emory Orthopedics at EMI (Emory Musculoskeletal Institute)
1st floor: 404-778-6278 (7209)
2nd floor ASC: 404-778-6200 (6220)
3rd floor ortho: 404-778-6256
4th floor spine: 404-778-7100 (6261)
Supervisor: 404-778-6298
TO CALL A CODE 9-911

Off Site Clinical Affiliates – General Diagnostic

Emory Johns Creek Hospital (0800-1600)

6325 Hospital Pkwy, Johns Creek, GA
(678) 474-7000

Clinical preceptors: Briana Williams, Aryanna Wilfork, Christian Haney, Thomalyn Constable, Rozel Hossain

Emory Orthopaedics at John's Creek (0800-1600)

6335 Hospital Pkwy Ste 302
John's Creek, Ga 30097
404-778-8437

Clinical preceptors: Donna Denardo

Emory Orthopaedic and Spine Hospital (0730-1530)

1455 Montreal Rd, Tucker, GA
(404) 251-3000

Clinical preceptors: Victor Alvarado, Christopher Collins, Purvi Shah (MRI), Chris Reed (CT)

Emory Sports Medicine Complex (0800-1600)

1968 Hawks Lane
Atlanta, GA 30329

404-251-2491

Clinical preceptors: Vivian Richardson

Emory Orthopedics at The Emory Musculoskeletal Institute (0700-1500)

21 Ortho Lane

Atlanta, GA 30329

Clinical preceptors: Jamila Mahama (2nd Fl/ASC), Ahmed Fadl, Keire Tucker, Yensi Casia, Marleny Rodriguez, Stuart Johnson (MRI)

Emory Dunwoody

4500 N Shallowford Rd, Atlanta, GA 30338

(404) 251

1555

Clinical preceptor: Karen Mosley

Medical Office Building at EUOSH (0800-1600)

1455 Montreal Rd.

Tucker, Ga. 30084

404-251-3227

Clinical preceptor: Letia Underwood

CHOA at Webb Bridge (0730-1530)

3155 North Point Pkwy Suite 150

Alpharetta, Ga 30005

404-785-7226

Clinical preceptor: Valencia Jones, Jeff Hendrix, Lynn McDonald, Courtney Greer

DRESS CODE

The personal appearance and demeanor of Medical Imaging Students at Emory University reflect both the University and Program Standards and are indicative of the student's interest and pride in the profession. The appropriate uniform, as described below, must be worn while on the clinical assignment.

Failure to comply with the dress code may result in the student being dismissed from the clinical setting until proper attire is worn. All clinical time missed due to noncompliance with the dress code will affect the attendance section of the work ethic grade. After one warning, each dress code violation will affect the work ethic grade. Dress code violations are cumulative from semester to semester.

It is also important to give a favorable impression to patients, physicians, and visitors while walking through the clinical sites before or after your shift or when in the department to do assignments, pick up images, etc. Therefore inappropriate attire, such as shorts, blue jeans, midriffs, tank tops, tee shirts with slogans, sandals, etc. should be avoided. Review the hospital and departmental dress code in the back of this section for further clarification.

• **Uniforms**

General Clinical Rotations:

- Black scrub uniform with required embroidery.
- **Short** white lab coat/jacket (sport coat length) with patch.
- Black or white shoes
- Socks can be any color/pattern as long as they are inoffensive
- Students may wear plain, (no logos) white or black undershirts or turtlenecks under their

uniform tops.

- Students will wear EMORY tags on their uniforms – supplied by program.

Uniforms must be kept clean and pressed at all times. Faculty, clinical preceptors and or supervisors reserve the right to deem uniforms inappropriate, send the student home and/or require different uniforms. Time missed will result in demerits and may affect the clinical grade. Scrub tops must be embroidered with the preapproved Emory Medical Imaging logos. Uniforms **must** be purchased through the Emory Bookstore.

It is recommended that lab coats be worn when outside of the radiology department, except at Egleston when doing portables since white lab coats may intimidate the pediatric patient. Lab coats will not be worn in surgery suites. While students are encouraged to wear their lab coat at all times, they may remove it while performing procedures in the department. Personal jackets with the Emory logo are NOT replacements for the short white lab coat and if worn, is considered a violation of the dress code. Students will be supplied with one patch and the student will sew it onto the right sleeve of their lab coat as instructed by the faculty. Students can purchase additional patches at \$5.00 each from the clinical coordinator.

Surgery uniforms will be worn only during the surgery rotations as required by the clinical site. White lab coats or jackets should be worn over the scrubs when the student is not in the surgery suite. Surgical masks, bonnets, and booties are not to be worn outside of the required area. No student may wear or carry hospital purchased scrub attire away from the hospital complex.

If a student is splashed with blood or body fluids, contact the department supervisor so a temporary set of scrubs can be issued. Be sure to inform the program faculty so a dress code violation is not given.

Shoes should be clean and should be flat; white or black uniform shoes or tennis shoes are acceptable. Tennis shoes should be plain; they should not be adorned with colorful stripes etc. Socks or hose are required and should be in good shape. Open toed shoes are not permitted, clogs are permitted. Clothes must be clean and pressed. Students who look unprofessional will be sent home.

- **Name Badge**

Students must identify themselves to patients and wear an identification name badge in **plain view** while on clinical assignment. Name Badges **cannot** be placed on a lanyard; appropriate holders include retractable badge holders or clip on holders. Students will be supplied with a class color Badge ID holder that they must wear at all clinical rotations. The Program provides name badges at the beginning of training but the student must purchase replacement badges. Absence of I.D. badges is considered a dress code violation. Students will also obtain a student badge from the education coordinator when at Egleston and return it upon completion of the rotation.

- **Radiation Badges**

The student must always wear two dosimeters while on clinical assignment. The collar dosimeter should be worn near the neck and outside of the fluoroscopy apron during fluoroscopy procedures. The body dosimeter is to be worn at the waist level along the midline of the body and under the fluoroscopy apron during fluoroscopy procedures. Dosimeters must be changed in the program office prior to the 8th working day of each quarter and must be turned in on time. Late submission will result in the student being assessed a \$40.00 late fee. Students will remit this fee to the program. Students will review and initial their dosimetry reports when the reports are received from the radiation safety office.

- **Markers**

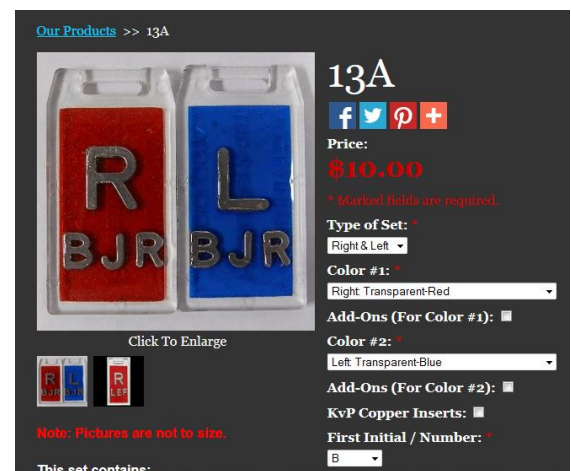
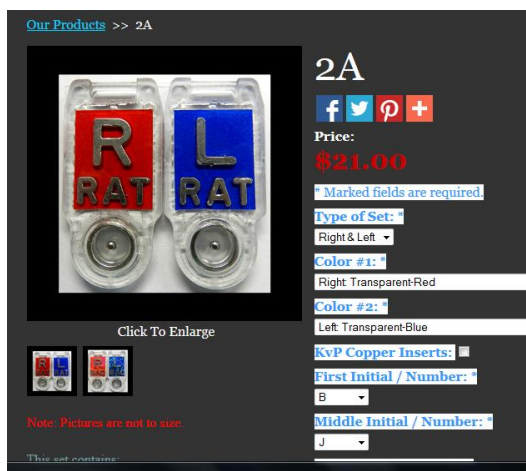
Students will use their own right and left initialed lead markers to properly identify anatomical references on radiographs. Before entering clinical, students will order at least **TWO** sets of R & L markers with their initials (first, middle, last). Students without middle initials should contact the Clinical Coordinator. The right marker must be RED, the left marker must be BLUE. Students should always have a spare set available in case a marker is lost or misplaced. The student must carry their own initialed right and left markers during all diagnostic clinical rotations to avoid a dress code violation. All exams done by the student must be marked correctly with the student's own initialed markers. Failure to correctly mark any competency, prerequisite or interval check image with the student's initialed markers will lead to failure of the exam. Students may purchase markers from any company provided they meet the above criteria – resources will be given. Students may not borrow markers from other students or technologists while in clinical.

In addition, all portable neonate images at EUHM must **ALWAYS** be marked correctly with a lead marker. **Do not** leave the marker off at the neonate staff's insistence; the radiologist requires mandatory marking of all images.

Emory Protocol for marking of images

- All lateral images must be marked anteriorly using the marker of the side down.
- Possible exception is Lateral chest – use department protocol.
- Markers on AP extremities should be placed laterally. (anatomically)
- Markers on PA extremities should be placed medially. (anatomically)
- All other projections should be marked on the correct side.

Marker Examples



- **Technique Guide and Clinical Notebook**

The student must have the program mandated technique/procedure guide with them during ALL clinical rotations to avoid a dress code violation. It is also recommended that the student carry a small booklet in their pocket on which to record exposure factors. The Clinical Notebook is located on-line in the Canvas course. The student may also find it in the Clinical Site Handbook located at each clinical site.

- **Hygiene**

For the health and well-being of all students, employees and patients, students are responsible for maintaining appropriate levels of personal hygiene. Clean clothing and hair, daily bathing, and the

use of deodorants/antiperspirants is strongly recommended to maintain appropriate standards of cleanliness. Body odors will be addressed with individual students quickly and confidentially. Students may be sent home by the Faculty or Clinical preceptor to address the problem. Students may return once the issue is resolved. Time missed will incur demerits and may affect clinical grade (if applicable) unless a medical condition exists.

- **Hairstyles**

Hairstyles must be **simple** and kept out of the eyes. Long hair must be worn in a fashion that will never touch the patient. Hair must be neatly groomed, clean and must be a natural human color. (e.g. black, blonde, brown, red, gray, white.) Extreme hairstyles and unnatural colors are not allowed. If a hair band, hair bow, or head covering must be worn, it must be kept simple and must be black or white. Beards and mustaches must be neatly trimmed.

- **Fingernails**

For sanitary purposes fingernails must be short, no longer than 1/4 inch and must be neatly trimmed and clean. Students may NOT wear any fingernail polish or false fingernails of any kind while in clinical. False fingernails are not acceptable when providing direct patient care, performing invasive procedures, or when preparing compounded or infusion solutions. There have been documented outbreaks of infections due to Pseudomonas, Serratia & Yeast due to artificial nails.

- **Cosmetics and Fragrances**

Cosmetics and fragrances may be used only in moderation. Cosmetics include but are not limited to eye shadow, eyelashes, eyeliner, blush, foundation, and lipstick. Only natural color mascara, eye brow and eyeliner are allowed. Color for eye shadow, blush, foundation and lipstick must be simple and natural. Natural length eyelashes are acceptable. Fragrances are **not allowed** at Children's Healthcare of Atlanta.

- **Jewelry**

For sanitary and safety purposes, jewelry must be kept to a minimum and must be inconspicuous. Earrings must be small and close to the ear lobes. Only two earrings/ear are allowed. Necklaces must be short and should never touch a patient. Only one ring may be worn on each hand. Body piercing that is visible to the customer such as tongue rings, eyebrow rings, nose rings, pierced fingernails etc. may not be worn while on clinical rotations. Ear gauges are not allowed.

- **Watches**

Students are required to wear a watch with a second hand while on their clinical assignment to facilitate vital signs assessment. They may not wear "Smart Watches".

- **Smoking**

Smoking is prohibited inside all medical buildings. Smoking is NOT permitted at many of the campuses. Students that smell of smoke will be sent home by certain facilities. Violation of the smoking policy will incur dress code demerits as well as demerits for any missed time should the student be sent home.

- **Tattoos**

Tattoos that are inoffensive may remain visible. Any tattoos depicting nudity, profanity, or obscene gestures must be covered. Facial and neck tattoos must be covered as well.

- **Code Cards**

Must be carried with the student during all clinical rotations. (Will be provided by program.)

- **CPR**

All students must be current in American Heart Association Healthcare Provider BLS CPR. If a student certification lapses during the program they may not go to clinical until it is updated. All attendance penalties will apply.

ELECTRONIC DEVICE POLICY

- **Mobile phones/Wearable Devices/Portable electronic devices**

Use of cell phones or ANY other mobile electronic device (including but not limited to smart watches, laptops, tablets etc.) is NOT permitted during clinical hours except to clock in and out. The use of mobile devices in the clinical setting is considered disruptive and is strictly prohibited. Once students clock in on Trajecsys, they may not have their mobile devices on their person; all electronic devices must be left in student lockers if available, or another secured location (The Program is not responsible for the security and storage of students' mobile devices). Students may check their device during the lunch break, if necessary. Should the need arise for family/friends etc. to contact a student while in clinical, that party should contact the Program office. A Program official will then contact the student at the clinical site.

Abuse of this policy is considered a violation of professional suitability standards and subject to the actions described on page 24 of the clinical handbook for violation of conduct standards. Students violating the policy may be asked to leave the clinical site for the day. Any lost clinical hours will be counted as an absence. Students violating the policy will receive a verbal counseling and demerit. A second violation will result in a written reprimand and 2nd demerit, a third will result in suspension from clinical. **Demerits incurred for violation of the electronic devices policy are cumulative from semester to semester. However, when students demonstrate personal and professional growth by adhering to the electronic device policy throughout the subsequent semester, one demerit will be forgiven in the next semester. In other words, each semester without any violations will “erase” one demerit earned for violating the EDP in the previous semester.

Inputting of recorded procedures should take place during the lunch break or after clinical when the student has access to his/her device. Students are expected to adhere to HIPAA policies at all times and should limit the protected health information recorded to that required (EMPI & history). Any patient information should be shredded after the information is entered into Trajecsys.

- **Text Messaging, e-mail or social media**

Students may NOT text message, use any social media websites (ex. Twitter, Facebook, Instagram, Snapchat, etc.) or e-mail while in clinical. Including e-mailing program faculty, staff or clinical sites/personnel.

SECTION III: PROFESSIONAL CONDUCT

The Emory University School of Medicine takes great pride in the development and accomplishments of its students and the practitioners it graduates. It is a combination of academic success and professional development that provides the cornerstone of a fine practitioner. To that end, various safeguards are in place to monitor and access the progress, performance and promotion of students. All conduct standards in the *Medical Imaging Program Student Handbook*

(<https://med.emory.edu/departments/radiology/education/medical-imaging/documents/bmsc-mi-handbook-2020-2021-final.pdf>) and the *SOM Student Handbook*

(<https://inside.med.emory.edu/student/handbook/>) apply to all clinical courses.

Professional conduct is expected from students at all times. Professionalism is an essential component of all clinical evaluations and is a primary factor of success considered by the Program Faculty. Also be aware that certain unprofessional behaviors could make the student ineligible to take the National Registry Exam. Students should review registry policies and the Standard of Ethics at www.arrt.org upon admission to the program.

EXPECTATIONS

Emory University is an institution dedicated to providing educational opportunities for its students, transmitting and advancing knowledge, and providing a wide range of services to students and to the general community. To accomplish these objectives and responsibilities requires that the University be free from violence, threats and intimidation; protective of free inquiry and dissent; respectful of the rights of others; open to change; supportive of democratic and lawful procedure; and dedicated to intellectual integrity and a rational approach to the resolution of human problems.

The tradition of the University as a sanctuary of academic freedom and center of informed discussion is an honored one, to be guarded vigilantly. The basic significance of that sanctuary lies in the protection of intellectual freedoms: the rights of professors to teach; of scholars to engage in the advancement of knowledge; of students to learn and express their views.

Health professionals are privileged to serve in important and time-honored roles as caregivers for other humans. These roles include physical and emotional dimensions that demand the highest degree of ethical behavior.

Ethical behavior includes, but is not in any way limited to *honesty, maintaining confidentiality, trustworthiness, professional demeanor, respect for the rights of others, personal accountability, concern for the welfare of patients, and responsibility to duty:*

- **Honesty** – Being truthful in communication with all others, while in the healthcare arena or in the community at large.
- **Maintenance of Patient Confidentiality** – Restricting discussion of patient care to those areas where conversations cannot be overheard by others outside of the care team; refraining from disclosing patient identity to those not connected to the care of the patient; maintaining appropriate security for all paper and electronic patient records, whether in the patient care or research realms.
- **Trustworthiness** – Being dependable; following through on responsibilities in a timely manner.
- **Professional Communication and Demeanor** – Being thoughtful and kind when interacting with patients, their families, other members of the healthcare team, and all others; maintaining civility in all relationships; striving to maintain composure under pressures of fatigue, professional stress or personal problems; maintaining a neat and clean appearance and dress in attire that is reasonable and accepted as professional to the circumstances; refraining from intoxication; abstaining from the illegal use of drugs (both prescription and illicit drugs).
- **Respect for the rights of others** – Dealing with all others, whether in a professional or non-professional setting, in a considerate manner and with a spirit of cooperation; respecting the rights of patients and their families to be informed and share in patient care decisions; respecting patients' modesty and privacy.
- **Personal accountability** – Participating responsibly in patient care to the best of one's ability and with appropriate supervision; undertaking clinical duties and persevering until they are complete; notifying the responsible person if one is unable to perform clinical tasks effectively; complying with University Policies and Procedures in an honest and forthright manner.

- **Concern for the welfare of patients** – Treating patients and their families with respect and dignity both in their presence and in discussions with others; avoiding the use of foul language, offensive gestures or inappropriate remarks; discerning accurately when supervision or advice is needed and seeking these out before acting; recognizing when one’s ability to function effectively is compromised and asking for relief or help; never administering care, in person or over the phone while under the influence of alcohol or other drugs (prescription or illegal); not engaging in romantic, sexual, or other nonprofessional relationships with a patient, even upon the apparent request of a patient; advocating for the best care of the patient, in context of that patient’s beliefs and desires.
- **Responsibility to duty**– Effectively undertaking duties with alacrity [eagerness, enthusiasm and promptness are synonyms] and persevering until complete, or notifying a responsible more senior person of a problem; being punctual for class, small groups, rounds, conferences and other duties; timely notification of supervisory faculty, residents and Deans of absences or an inability to carry out assigned duties; seeing patients regularly and assuming responsibility for their care with appropriate supervision; identifying emergencies and responding appropriately; and being available to faculty or staff personnel when on duty.

STUDENTS AS INTERPRETERS

Medical interpreting is a profession that requires training, experience, skills, knowledge of medical terminology, the Standards of Practice, and the Code of Ethics, as well as language fluency and proficiency in both English and the patient’s language. The Department of Human Health Services states that “an individual that has above average familiarity with speaking or understanding a language other than English does not suffice to make that individual a qualified interpreter for an individual with limited English proficiency.”

A qualified interpreter is required per federal standards and compliance with hospital policies. Students should not interpret for another person (third party), unless they meet the required interpreter qualifications. The same regulations apply to those that are hearing impaired. The only exception is if the medical situation is life threatening and no professional interpreters are available.

Furthermore, when a patient, family member or companion is deaf, non-English speaking or is Limited English Proficient (LEP), for bilingual/multilingual providers to communicate directly with said patient, family member or companion, in a language other than English, the provider must be assessed to determine their ability to communicate effectively in the target language. Students who wish to be assessed need to contact the Office of Medical Education and Student Affairs to understand the responsibility and procedures related to doing this.

EVALUATION OF PROFESSIONAL CONDUCT

The medical school faculty of Emory University has established standards for determining the ethical fitness of medical students to participate in the medical profession. The evaluation of professionalism, separate to and as part of academic performance, is considered for all medical students during every course and clerkship. The Standards of Professionalism are described in the Medical Imaging Program Student Handbook. Some specific examples of professional conduct include:

- i.) Concern for the welfare of patients as evidenced by thoughtful and professional attitude in obtaining history and physical examinations; avoidance of foul language, offensive gestures or inappropriate remarks with sexual overtones; treatment of patients with respect and dignity both in their presence and in discussions with peers; manifestation of concern for the total patient.
- ii.) Concern for the rights of others, as shown by dealing with professional and staff personnel and with

peer members of the health care team in a considerate manner and with a spirit of cooperation; acting with an egalitarian spirit towards all persons regardless of race, color, religion, sex, sexual orientation, national origin, veteran's status, disability, or age; assuming an appropriate and equitable share of duties among peers.

- iii.) Responsibility to duty, which involves: effectively undertaking duties with alacrity [eagerness, enthusiasm and promptness are synonyms] and persevering until complete, or notifying a responsible more senior person of a problem; punctual attendance for class, small groups, rounds, conferences and other clinical duties, or offering appropriate explanation when unable to be present; notifying the Dean's Office, course directors, and/or supervising house officers of absence or inability to carry out duties; seeing patients regularly and assuming responsibility for their care with appropriate supervision; identifying emergencies and responding appropriately; and being available to faculty or staff personnel when on duty.
- iv.) Trustworthiness, exhibited by being truthful and intellectually honest in communications with others; accepting responsibility for meeting multiple demands by establishing proper priorities and by completing work necessary for the optimal care of patients; discerning accurately when supervision or advice is needed before acting; maintaining confidentiality of information concerning patients.
- v.) Professional demeanor, which means a neat and clean appearance in attire, that is reasonably acceptable as appearing professional to the patient population;
- vi.) Maintaining equilibrium under pressures of fatigue, professional stress, or personal problems; avoiding the effects of alcohol or drugs while on duty.

Unprofessional behavior by a student should be reported to the Clinical Coordinator, Program Director, or the Executive Associate Dean, as appropriate. Unprofessional behavior or violations of the code of conduct are addressed as described in the Medical Imaging Program Student Handbook.

MEDICAL IMAGING PROGRAM SPECIFIC STANDARDS

In addition to standards developed by the School of Medicine, the program has developed specific standards for students in the Medical Imaging Program.

- *Professional Ethics*

All people who work in a hospital share the responsibility of observing a code of ethics, which requires truthfulness, honesty and personal integrity in all human activities. In general, the following applies to all hospitals, clinics, and students:

- Doctors alone have the training and legal right to diagnose and treat human illnesses and injuries.
- All information concerning patient or hospital/clinic business must be held in strict confidence. Students are not to discuss outside the hospital or clinic any information concerning any patient with other students or employees. Students are expected to maintain patient confidentiality in a professional manner. When patients ask questions concerning their exams, always tell them to consult their physician.
- Students are not to burden patients or other employees with their own personal problems.

- *Professional Conduct*

The following are some of the rules, which will govern each student's conduct during clinical hours. The purpose of these rules is not to restrict the rights of individuals, but to define and maintain the rights of all individuals.

Discipline for violation of these rules may range from a verbal warning to a written reprimand to dismissal, depending upon the type of violation and the circumstances surrounding the offense.

All Medical Imaging Students will:

1. Report to the clinical assignment in an alert condition and remain that way throughout the assignment.
2. Not be in the possession of drugs or liquor, nor engage in their use while on clinical assignment.
3. Not be in the possession of weapons while on clinical assignment.
4. Conduct themselves with respect to common decency and morality.
5. Be present and prompt to all clinical assignments.
6. Report to the clinical assignment in the proper complete uniform (Reference DRESS CODE, pg. 14).
7. Refrain from chewing gum while on clinical assignment.
8. Smoke only in designated areas. Emory is a tobacco free campus.
9. Eat only in designated areas.
10. Conduct themselves professionally while on clinical assignment.
11. Refrain from arguing with the clinical personnel or faculty. Discussion is appropriate but only away from the patients.
12. Use appropriate language when conversing with patients and personnel.
13. Refuse any type of gratuity or "tip" from a patient or patient's family.
14. Conduct personal conversations away from patients.
15. Respect all property.
16. Remain in the designated clinical assignment at all times.
17. Use the clinical affiliation telephone only for clocking in and out or in the event of an emergency.
18. Accept assignments equal to your abilities and take directions from the Clinical Preceptors and supervisors.
19. Supply and record information honestly.
20. Clock in and out truthfully.
21. Receive personal visitors only in cases of emergency.
22. Not loiter in the Radiology Department of the clinical affiliate at times not specified for clinical assignment.
23. Refrain from using cell phones or other electronic communication devices while in clinical.
24. Only use Sectra to view images of patients who are in their direct care or when using images for class assignments as directed by faculty.
25. SMILE!

USE OF SOCIAL MEDIA

As described above, behavior of students in the academic setting and beyond must be in keeping with the ideals of the institution and the profession of medicine. The following paragraphs indicate the current standards for behavior that relate to the use of social media.

Each student is responsible for his or her postings on the Internet and in all varieties of social media. In all communications, students are expected to be courteous, respectful, and considerate of others. Inappropriate postings on the Internet or social media will be considered lapses in the standards of professionalism expected of Emory School of Medicine students. Students responsible for such postings are subject to the Conduct Code process in the same manner as for any other unprofessional behavior that occurs outside the academic setting. Students who do not follow these expectations may face disciplinary actions including dismissal from the School of Medicine.

Students within the School of Medicine are urged to consider the following before posting any comments, videos, pictures, or essays to the Internet or a social media site:

1. There is no such thing as an “anonymous” post. Furthermore, any posts or comments submitted for others to read should be posted with full identification of the writer. Where your connection to Emory is apparent, make it clear that you are speaking for yourself and not on behalf of Emory. A disclaimer, such as, "The views expressed on this [blog; website] are my own and do not reflect the views of my University or the School of Medicine" are required.
2. Internet activities may be permanently linked to the author, such that all future employment may be hampered by inappropriate behavior on the Internet.
3. Making postings “private” does not preclude others copying and pasting comments on public websites. “Private” postings that become public are still subject to sanctions described in the School of Medicine Conduct Code.
4. Do not share information in a way that may violate any laws or regulations (i.e. HIPAA or FERPA). Disclosing information about patients without written permission of the patient and the School of Medicine, including photographs or potentially identifiable information is strictly prohibited. This rule also applies to deceased patients.
5. For Emory’s protection as well as your own, it is critical that you show proper respect for the laws governing intellectual property, copyright and fair use of copyrighted material owned by others, including Emory’s own copyrights and brands. Curricular materials developed by Emory faculty and staff or faculty/staff of other medical schools or educational institutions should not be distributed or redistributed. When in doubt, students should seek guidance regarding appropriate use of such materials.
6. Do not share confidential or proprietary information that may compromise Emory’s research efforts, business practices or security.

In addition to these general School of Medicine policies, Medical Imaging students are expected to adhere to the following guidelines:

- Medical Imaging students should apply professional practice and ethical standards equally to live and online activities.
- Medical Imaging students must refrain from posting images or information about clinical sites or clinical staff.
- Medical Imaging students must refrain from posting images or information about clinical experiences/frustrations.
- Medical Imaging students must never post information, including images that could potentially identify a patient.
- Medical Imaging students should avoid engaging with faculty, clinical staff or employees of any clinical setting on their private social media accounts until they have graduated from the program (i.e. “friending” on Facebook, “following” on Twitter, Snapchat, Instagram, TikTok, etc.)

Extreme caution is urged when mixing professional and personal on-line information and communication. Medical Imaging students have chosen a profession which expects more of its members; an obligation to behave professionally both online and off.

VIOLATION OF PROFESSIONAL SUITABILITY

An unsatisfactory suitability evaluation will result in a counseling session and written documentation of events leading to the student’s unsatisfactory evaluation. A serious offense may result in suspension or dismissal while less serious events may result in a warning, probation, and/or grade reduction.

The following scale has been developed by the Medical Imaging Program to inform the students of violations of conduct standards and probationary practices.

Violation

Incident Number

Action Taken

1.	Violation of Supervision Requirements	1	Written Reprimand
		2	Suspension **
		3	
		Dismissal	
2.	Unprofessional Demeanor Suspension **	1	Counseling
		2	Written Reprimand/Probatio3
		4	Dismissal
3.	Falsification of Clinical Records (Depending on Severity)	1	Written Reprimand/Probation
		2	Probation/ Suspension**
		3	Dismissal
4.	Excessive Absences * (> 24 hours/semester)	1	Counseling/Probation/Required make up
		2	Suspension**/ Required make up
		3	Dismissal
5.	Unauthorized Absences * (NCNS – No Call No Show)	1	Written Reprimand
		2	Probation
		3	Suspension**
		4	Dismissal
6.	Excessive Tardiness * Probation Suspension** Dismissal	>3/semester	Counseling
		>3/semester 2x's	
		>3/semester 3x's	
		>3/semester 4x's	
7.	Dress Code Violation *	1	Warning
		2	Counseling
		3	Reprimand
		4	Suspension**
		5	Dismissal
8.	Hygiene Violation	1	Counseling
		2	Reprimand
		3	Suspension**
		4	Dismissal
9	Electronic devices/Texting/ Social Media Violation	1	1 Demerit
		2	Written Reprimand AND 2 nd Demerit
		3	Suspension**
10.	Honor Code Violations	1	Written Reprimand/Probation/Grade penalties
		2	Suspension**
		3	Dismissal
11.	Picture taking	1	Reprimand/Possible dismissal/Probation
		2	Dismissal
12.	PAC's violation	1	Dismissal

Any serious violation of professional ethics may result in *immediate dismissal*.

* Realize also that some violations impact the work ethic grade as discussed in section VII. Dress code violations are cumulative from semester to semester.

**Time missed due to suspensions must be made up over the semester breaks at the discretion of the Clinical Coordinator. A third violation of the Electronic Device policy will result in one full clinical day suspension. Any suspension will lead to an automatic one letter grade deduction in the clinical course it occurs.

Though electronic device and dress code violations are cumulative, students who incur demerits for these violations have the opportunity to demonstrate personal and professional growth by adhering to the named policies in subsequent semesters. When students demonstrate personal and professional growth by adhering to the electronic device policy throughout the subsequent semester, one demerit will be forgiven in the next semester. In other words, each semester without any violations will “erase” one demerit earned for violating the EDP in the previous semester. Each semester without any dress code violations will “erase” 1/2 demerit earned for violating the dress code policy in the previous semester. The first dress code violation will incur a warning and that warning WILL continue to be carried forward. However, it does not affect the clinical grade.

In addition to the previous scale, clinical site supervisors or preceptors may send a student home from a clinical site for violation of professional conduct. The following actions should result in an immediate call from the site to the Clinical Coordinator or Program Director.

- Patient safety issues
- Insubordination
- Altered Mental Status
- Under the influence

The first offense for any of the above listed reasons:

- Student will incur demerits for missed time. The number of demerits earned may affect the clinical grade.
- Clinical Coordinator will place the student at an alternate site.
 - It may not be possible to send the student to a similar type of clinical site.

Second or subsequent offenses for any of the above listed reasons:

- Alternate clinical site will not be provided.
- Student will miss the remainder of the clinical rotation during which the incident occurred.
- Grade penalties will apply.

Clinical sites may refuse to allow a student to attend clinical at their site if they have violated conduct standards. If this happens it may not be possible for a student to complete the required competencies to graduate.

ACADEMIC STANDING AND ACADEMIC DISMISSAL

Students earning a grade of “D” in a clinical course will be required to retake the course in which the “D” was earned. Achievement of a grade of “C” or better will be required when the course is repeated; however, the initial grade of “D” will remain on the student’s official transcript. Repeating a course means the student will have to interrupt the program of full-time study and graduation will be delayed for

one year. During the intervening year, individualized plans of study will be developed jointly by the student and the Program Director.

Achievement of two or more grades of “D” in medical imaging courses will automatically result in exclusion from the program.

Achievement of one grade of “F” or “IF” in any medical imaging course will automatically result in exclusion from the program.

Students experiencing clinical or personal difficulty may withdraw from a course. Withdrawals will only be granted prior to mid-term and a grade of W (withdrawal without penalty) or WF (withdrawal failing) will be assigned as appropriate. Withdrawing from a course means the student will have to interrupt the program of full-time study and graduation will be delayed for one year. During the intervening year, individualized plans of study will be developed jointly by the student and the Program Director.

GRADE POINT AVERAGE REQUIREMENT

A 2.0 average must be maintained in **each semester** to remain in good academic standing and to continue in the program without interruption of full-time status.

A cumulative GPA of at least 2.0 (didactic and clinical) is required for graduation.

CLINICAL PROBATION

Students may be placed on clinical probation for violation of policies, misconduct, absenteeism, or tardiness. Specific requirements for continuation will be looked at on an individual basis and included on the probation form.

HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT (HIPAA)

All students will be required to attend HIPAA privacy training before beginning their clinical education. Students will also be required to satisfactorily complete the University HIPAA competency check by the deadline date. Students will be required to sign confidentiality agreements and are subject to all rules, regulations and laws regarding patient privacy.

Our Compliance Pledge

As a member of the Emory Healthcare team, we each pledge to:

- Follow all laws, regulations and EMORY HEALTHCARE policies. The laws, regulations and ethical principles that govern health care are complicated.
- Ask questions if the rules are unclear. If the rules are unclear, ask your supervisor, other management or call the office of compliance programs at 404-778-2757. Keep asking until you get a satisfactory answer.
- Act when you think something is not right. When you think something is not right, discuss the issue with your supervisor. If you are not comfortable doing that, or you are not satisfied with the response, go to higher management in your area. If you still are not comfortable, call the office of compliance programs at 404-778-2757 or the EMORY HEALTHCARE Trust Line at 1-888-550-8850.
- Report potential violations. Follow this same line of communication when you know a law, regulation, health care policy or rule has been broken or if you are asked to break one of them. It is EMORY HEALTHCARE's policy that no employee is punished for raising an issue or reporting a concern in good faith. Your adherence to the EMORY HEALTHCARE compliance program will be considered in your performance evaluation.

- Be a part of the solution if a problem is found. When a problem is identified, EMORY HEALTHCARE needs you to help solve the problem. Immediate and long-term correction is critical to making sure a problem is not repeated.
- Engage in ethical conduct and expect ethical conduct from others. Participate only in those activities of which you are sure you and EMORY HEALTHCARE can be proud.

The following guidelines will help you do the right thing:

- If you know or think something is wrong, don't do it, even if someone is pressuring you.
- If you are concerned about something you are doing or are worried that it might be discovered, stop to get advice, report the concern and redirect your actions so that you know you are doing the right thing.
- Students may not look up **any patient** images unless they are involved in direct patient care or they have received permission from a course instructor for an assignment.
- Students may not look up their own or any friend or family members images.

SECTION IV: OBJECTIVES

During clinical rotations students are expected to achieve a variety of objectives. This section explains general and attitudinal objectives that relate to all clinical rotations and explains specific objectives for the different areas of the clinical rotations. Students will also find specific objectives for each clinical course in the clinical syllabus. Objectives for specialty areas, such as pediatrics, geriatrics, CT, MRI, and elective rotations, will be supplied to the student during the semester in which the rotation occurs. Prior to all clinical rotations students should review all objectives relevant to the area.

GENERAL

The clinical courses and laboratory experiences are designed to familiarize you with the many aspects of Medical Imaging. Specifically, we desire that students:

1. Acquire expertise and proficiency in a wide variety of diagnostic radiographic procedures by applying classroom theory to the actual practice of technical skills on specified levels of competency.
2. Develop and practice professional work habits and appropriate interpersonal relationships with patients and other members of the health care team.
3. Acquire a broad knowledge of anatomy and physiology.
4. Learn the principles and proper operation of many types of x-ray equipment and accessories.
5. Learn to properly evaluate the requisition, identify the patient, and demonstrate proper patient care in preparing the patient for the exam.
6. Follow proper procedures to maintain the room in a clean, tidy and well-supplied manner.
7. Learn the correct method of radiologic positioning.
8. Learn safety in the use of machine-made radiation.
9. Learn nursing procedures and sterile techniques pertinent to radiology.
10. Acquire a basic background in computer operations, office procedures and department administration.
11. Participate in continuing education activities.
12. Become proficient in digital imaging techniques, including Sectra.
13. Learn the appropriate response to emergencies by familiarizing themselves with emergency techniques, the location of the crash carts, notification systems and phone numbers.
14. Practice universal precautions.
15. Evaluate images.
16. Appreciate the role of the radiologist and physician extenders in medical imaging.
17. Provide proper clinical documentation for all work.

Example Script: Patient Involvement and Site Marking

- *Hello Mr. or Mrs. _____ my name is _____.*
 - *I am an Emory Student technologist and I will be performing your x-ray exam today. (They have a right to refuse you, if so contact the technologist so they can take over the exam.)*
- *I will be performing an x-ray of/on _____ (indicate body part and side, RT/LT/Both).*
- *Ask “Can you tell me a little about your medical history and why you are here today?”*
 - *Include this information in Epic*
 - *Radiologists like to get the patients history.*
- *At start and completion of the exam, ask the patient if they have any questions or concerns.*
- *Position the patient appropriately and while placing the marker say: “I am placing a (Rt or Lt) marker near your (name the body part, e.g. foot) to indicate the correct side that I am x-raying.”*
- *For each position and/or side use the same language as above.*
- *When the x-rays have been completed, thank the patient by name for their cooperation.*
- *Tell them what they may expect to happen next:*
 - *You will make the images available by computer within a few minutes.*
 - *The radiologist, orthopedist, ED physician (whichever is appropriate for the site you are at) will interpret the exam.*
 - *The results will be provided to you by your doctor.*
- *Refer to the patient by name and include the family members as well.*
- *Ask the patient if there is anything else that you can do for them today.*

ATTITUDINAL

These objectives reflect desired behavior patterns, attitudes, beliefs, values and tendencies to act in a prescribed manner. They are relative to any and all assignments.

1. The student will conduct him/herself in a professional manner at all times.
2. The student will be properly groomed, adhering strictly to the dress code as outlined in the student handbook.
3. The student will practice good communication skills in their interactions with patients and department, clinical, and hospital personnel.
4. The student will act and respond to patients and staff in a responsible manner.
5. The students' attitude will be one of concern, cooperation, and interest in their relationship with the patient and the staff with which they are working.
6. The student will organize their work so that the exam is expedited efficiently, with maximum patient care and minimum patient discomfort.
7. The student will be punctual and will notify the appropriate personnel when there is a possibility of being late for clinic, as outlined under General Information Section.
8. It is very important in the field of radiology to be able to anticipate situations that may arise in the department and be able to cope in a professional and responsible manner.
9. The student will accept personal responsibility.
10. The student will follow the proper procedures to register a grievance. Problems in clinic will be addressed to the clinical faculty. Problems related to the school will be submitted to the program director. Remember that the faculty are always available and open to communication with students.

CHEST RADIOGRAPHY

1. Student will demonstrate accurate positioning skills and equipment manipulation for routine chest radiographic studies.
2. Student will be able to describe fleshy and bony landmarks that aid in centering for a designated structure.
3. Student will be able to name and locate thoracic structures.
4. Student will demonstrate the ability to select proper technique, IR, Grid and SID for routine chest radiographic studies.
5. Student will use the proper accessories and technique to demonstrate radiation protection to the patient and themselves.
6. Student will use proper image identification technique.

EMERGENCY ROOM

1. Student will learn to function in the atmosphere of the emergency department.
2. Student will demonstrate the ability to image critically ill patients using appropriate technical factors, positioning skills, and equipment manipulation skills.
3. Student will function efficiently by imaging patients quickly and accurately.
4. Student will work as a team with the emergency room personnel.
5. Student will participate in emergency and patient care procedures under the direct supervision of emergency department personnel.

FLUOROSCOPY ROTATION

1. Student will demonstrate knowledge of the appropriate contrast medium utilized for each fluoroscopic study and its preparation.
2. Student will demonstrate the ability to assist the radiologist during the exam and in administering contrast medium.
3. Student will assist the patient in moving during the exam as needed.
4. Student will demonstrate accurate positioning skills for fluoroscopic studies.
5. Student will be able to identify, locate and describe each organ of the gastrointestinal system.
6. Student will demonstrate the ability to manipulate the equipment and select proper technique for fluoroscopic studies.
7. Student will demonstrate the ability to take proper patient histories for fluoroscopic studies.
8. Student will demonstrate knowledge of the proper sequencing for fluoroscopy.
9. Student will demonstrate the selection, preparation and use of accessory items (such as, grids, BE bags, enema tips, etc.) when appropriate.
10. Student will tip patients for Barium enema exams in order to prove competency.
11. Student will use the proper accessories and technique to demonstrate radiation protection to the patient and to themselves.
12. Student will demonstrate proper fluoroscopy technique for the abdomen and pelvic organs and/or structures.
13. Student will be able to use the fluoroscope and make exposures with the fluoroscope.

GENITOURINARY ROTATION

1. Student will demonstrate the ability to select the appropriate contrast medium and dosage for urinary examinations.
2. Student will demonstrate proper sterile technique for drawing up and administration of contrast medium and emergency drugs.
3. Student will demonstrate the ability to push contrast medium into the patient's vessels under direct supervision.
4. Student will be able to identify the location of the crash cart.
5. Student will demonstrate accurate positioning skills and equipment manipulation for exams of the

urinary tract.

6. Student will be able to describe fleshy and bony landmarks that aid in centering for a designated structure.
7. Student will be able to identify and locate organs of the urinary system.
8. Student will demonstrate general knowledge on indications, contraindications and pathologic conditions of the Urinary system.
9. Student will demonstrate the ability to select proper technique for urinary studies.
10. Student will demonstrate the selection and use of accessory items (such as, compression bands, needle types, blood pressure cuffs, etc.) and will be able to monitor blood pressure, pulse and respiration.
11. Student will use the proper accessories and technique to demonstrate radiation protection to the patient and themselves.
12. Student will use proper image identification technique.

ORTHOPEDIC RADIOGRAPHY

1. Student will demonstrate accurate positioning skills and equipment manipulation for routine and non-routine orthopedic radiographic studies.
2. Student will demonstrate accurate patient care, positioning skills and equipment manipulation for trauma radiographic procedures.
3. Student will be able to identify and locate the bones of the appendicular and axial skeleton.
4. Student will be able to describe fleshy and bony landmarks that aid in centering for a designated structure.
5. Student will demonstrate proper selection and use of accessory items (such as, grids, image receptors, positioning devices, etc.) when appropriate.
6. Student will demonstrate the ability to select proper technique for orthopedic radiographic studies.
7. Student will use the proper accessories and technique to demonstrate radiation protection to the patient and themselves.
8. Student will use proper image identification technique.

PORTABLES

1. The student will demonstrate accurate positioning skills and equipment manipulation for a variety of bedside exams.
2. Student will demonstrate the ability to select the proper techniques for various bedside exams.
3. The student will follow department procedures in processing the clerical work associated with bedside exams.
4. The student will be responsible and sensitive to the nursing personnel on the various units (i.e., CCU, ICU).
5. Student will use the proper accessories and technique to demonstrate radiation protection to the patient and themselves.
6. Student will never hold patients or image receptors during exposure.
7. Student will use proper image identification technique.
8. The student will always have a registered technologist in the adjacent area when performing portable exams under indirect supervision following competency.

SURGERY

1. Student will follow the operating room (O.R.) requirements for dress and equipment maintenance, and will properly demonstrate surgical asepsis technique.
2. Student will demonstrate positioning skills and equipment manipulation for various surgical procedures. Examples include but are not limited to:
 - C-Arm Procedures
 - Spine Procedures
 - Orthopedic Procedures
3. Student will demonstrate the ability to select proper techniques for the above procedures.
4. Student will use the proper accessories and technique to demonstrate radiation protection to the patient and themselves.
5. Student will use the proper image identification technique.
6. Student will identify anatomical structures.
7. Student will employ proper imaging techniques.
8. Student will follow directions from the surgeon and technologist.
9. The student will always have a registered technologist available for immediate assistance in the adjacent surgery area when performing C-arm exams under indirect supervision following competency. (don't students have to be under direct supervision when performing C-arm exams even if they proved competency?)

SECTION V: CLINICAL EDUCATION MASTER PLAN

Students will rotate through all clinical sites and gain experience in the following areas:

Abdomen/GI/Fluoroscopy	Interventional Radiography (IR)
Chest and Thorax	Magnetic Resonance Imaging (MRI)
Computed Tomography (CT)	Mobile Radiography/Portables
Digital Imaging	Orthopedics
Elective Rotations*	Pediatric Radiography
Emergency Room	Surgery/OR
Geriatric Radiography	

TOTAL GENERAL CLINICAL HOURS: Approximately 1684 hours

Students will also rotate through areas of their chosen field of expertise

CT – Computed Tomography	Radiology Education
MRI – Magnetic Resonance Imaging	Healthcare management

**TOTAL MINOR TRACK PRACTICUM CLINICAL HOURS:
Approximately 544 hours CT & MRI
Education and Healthcare Management hours are variable**

The student will be assigned to a clinical site or several clinical sites for a period of time each semester. The student will receive a specific rotation schedule each semester with specific dates.

Students may not rotate through the exact clinical sites or for the exact amount of time as other students; however, all students will rotate through areas where they will receive comparable clinical experiences.

The final two semesters will be used to finish final competency exams. The student will be assigned to areas based on their competency needs. In certain instances, students that finish their competencies early and are deemed competent and proficient in basic exams by the faculty, may work with the Clinical Coordinator to add elective rotations.

In certain semesters and as sites allow, students will be given the opportunity to gain exposure to different modalities by selecting elective rotations. *Elective rotations include but are not limited to:

- Bone Density
- Cardiovascular
- Computed Tomography
- Interventional Radiography
- Magnetic Resonance Imaging
- Mammography
- Nuclear Medicine
- PET
- PET CT
- Radiation Therapy
- Ultrasound

Students cannot be guaranteed their choice of electives due to schedules and clinical site constraints, but every effort will be made to ensure that students will be able to attend the clinical area of their choice.

SECTION VI: STUDENT CLINICAL COMPETENCY EVALUATION

RATIONALE

The main purpose of the clinical education course(s) in any Medical Imaging Program is to affect a transfer of knowledge from theory to the actual acquisition of skills in clinical diagnostic radiography, up to a level of job entry competency at the time of graduation.

This transfer is accomplished by a continuum of clinical assignments in all aspects of diagnostic radiographic procedures, with their correlation as close as possible to classroom and laboratory experiences.

In order to measure the student's ability to perform at satisfactory levels of competency, a method of evaluation has been established by the American Society of Radiologic Technologists, and accepted by the Joint Review Committee on Education in Radiologic Technology. It has been slightly revised to meet the particular needs of this program. Its ultimate goal, however, does not differ from the philosophy of the two agencies listed above. That is, to graduate competent radiographers who perform at levels expected by prospective employers.

CLINICAL COURSES

Beginning with the first semester, the first of eight clinical courses will be taught. Coupled with the first clinical course are such didactic courses as Introduction to Medical Imaging, Patient Care, Radiographic Procedures, and Anatomy and Physiology. During this term the student will engage in laboratory sessions under the supervision of the faculty. The student will demonstrate in role playing activities the ability to simulate correct methods of patient immobilization and transfer, body mechanics, oxygen administration, simple radiographic exams, portable and c-arm equipment manipulation, etc. The faculty will evaluate these activities. In the clinical setting the student will manipulate the equipment, assist the patient, observe the technologist performing exams, and begin to understand and practice basic radiographic procedures and digital imaging techniques. During the first clinical course the student will be under the direct supervision of a registered technologist at all times.

The second clinical course is coupled with Patient Care, Anatomy and Physiology and Radiographic Procedures. Students will again engage in laboratory sessions in Radiographic Procedures and will be required to successfully simulate orthopedic radiographic positioning procedures. This will be done under the supervision of the program faculty. In the clinical setting the student begins to prove competency in basic radiographic procedures such as chest, portable chest, abdomen and orthopedics and becomes more comfortable with digital imaging. The student will not be able to perform any radiographic procedure independently in the clinical affiliate until competency has been achieved on the procedure. In the meantime, the student will assist technologists in the performance of their duties. Once competency has been achieved, indirect supervision on these exams is appropriate, though any repeated image must be done under direct supervision. ***The technologist must be in the room with the student during all repeats.*** At some clinical facilities direct supervision is required on all exams.

The majority of the time spent in the first and second clinical courses will consist of a transition from an observation, or passive role, to an active participating role, assisting the R.T.(R) in radiographic examinations. The student's rate of progress will depend on the ability to understand and perform the various assigned tasks.

The third through eighth clinical courses are primarily concerned with the student gaining experience in the various diagnostic procedures. During these courses, the student will gradually move into a performance stage in which he or she will actually be performing most all basic radiographic procedures under the indirect supervision of a registered radiologic technologist. R.T.(R) The student will also become proficient in the use of digital imaging.

COMPETENCY EVALUATION

When the student has performed a procedure at an acceptable level of performance the required number of times and have simulated on the procedure in the lab or clinical site and/or covered it in procedures class, they may request a competency evaluation. During this evaluation the student will demonstrate their skill and competency in that particular examination. If a student fails the competency evaluation, continuation in the clinical participation stage for additional experience on that exam is required.

A total of forty-four* competency exams on live subjects are required in Semesters II – VIII. Certain competencies are mandatory. Additional final competency exams are performed in the last two semesters. Exact requirements on the number of competencies required each semester are outlined in each clinical course syllabus. Upon the successful completion {score of 80} of a regular competency evaluation, the student will be allowed to perform that examination under indirect supervision, with the exception of surgical and all mobile procedures, including mobile fluoroscopy, where the student must be directly supervised regardless of their level of competency. . The student will continue to perform these examinations after competency has been achieved.

The steps for performing competencies are

1. Student engages in theory and laboratory classes and begins clinical observation in the clinical education courses.
2. Student assists the technologist in exams and gains knowledge.
3. The student successfully simulates the exam in the laboratory and in some cases in clinical. (i.e. scoliosis).
4. Student performs and appropriately documents the required number of prerequisites under direct supervision. Documentation includes date, identification number, exposure factors, and technologist. Some exams require the patient's age and/or history.
5. The student requests a Competency Evaluation under direct supervision by a designated clinical preceptor **prior** to the start of the exam. Students are expected to perform the exam in accordance with site protocols. ***Emory Healthcare P. CXR and MSK protocols are included for reference.***
6. The student will complete all aspects of the exam from start to finish including all applicable computer work.
7. Students may not review notes once the competency has been announced. Sophomore and Junior students may refer to their technique chart.
8. The student will document the date, identification number, exposure factors and exposure indicator as appropriate (“S”#, EI, DEI etc.). The required data must be completed in its entirety that day.
9. The clinical preceptor will complete the evaluation form on Trajecsys. Upon completion, the form is reviewed by the Clinical Coordinator and student. The Faculty reserves the right to negate any competency. A score of at least 80 is considered successful; any unsatisfactory in a category negates the competency. Students will review the evaluation once it is completed.
10. Once successfully completed, the student engages in performance of that exam under indirect supervision with the exception of surgical and all mobile procedures, including mobile fluoroscopy, where the student must be directly supervised regardless of their level of competency., Any repeated image must be done under direct supervision and be recorded in Trajecsys. If the student is unsuccessful in completing the competency exam they gain additional experience in the exam and then request to repeat the competency evaluation.
11. The student is evaluated on retaining competency in subsequent semesters through the performance of interval checks and final competencies.
12. Final competency exams will be performed during the last two clinical courses. If a student fails one or more of the requirements of the exam, they will return to that area of weakness to be re-evaluated. A successful completion (score of 90) of the final competency evaluation completes the requirements for clinical performance. Student passing of the Final Competency Evaluation is an indication of job entry-level competency.

13. Once a student has completed all of their regular and final competency exams they may request to change the remainder of their orthopedic and fluoroscopy rotations in the final semester to electives of their choice. This will only occur if the chosen rotation area is acceptable to the clinical affiliate, the rotation does not interfere with other students scheduled rotations, and the faculty feels the student is adequately prepared for basic radiographic procedures.

COMPETENCY EXAMS AND PREREQUISITE NUMBERS

**Subject to change based on ARRT clinical competency requirements*

MANDATORY COMPETENCY EXAMS (M)

After performing the specified number of prerequisite exams, students must prove competency on at least 32 of the 36 exams below (designated by M). ALL students must complete mandatory procedures indicated by (M) & highlighted in yellow. Students must also prove competency in at least 8 additional mandatory procedures indicated by (M) & highlighted in green. The projections or number of projections required for each competency/prerequisite exam are included. **Subject to change based on ARRT clinical competency requirements*

ELECTIVE COMPETENCY EXAMS (E)

In addition to the mandatory (M) competency exams, students must perform competency on a minimum of 10 of the 29 elective (E) exams; 2 must be fluoroscopic studies. Each requires **two** prerequisite exams unless otherwise noted. *(Projections based on department protocol unless otherwise specified)*

Radiographic Imaging Procedures M – Mandatory E – Elective	Prerequisite Exams Required	Eligible for Simulation	Final Competency Shaded Grey = Required
Chest and Thorax			
1. Chest Routine (M)	10		
2. Chest AP (Wheelchair or Stretcher) (M) <i>**Patient is imaged in the wheelchair or on the stretcher with the IR behind them.(See Appendix A).</i>	2		
3. Ribs (M) (according to site protocol)	3	Y	
4. Chest Lateral Decubitus (E)	2	Y	
5. Sternum (E)	2	Y	
6. Upper Airway (Soft-Tissue Neck) (E)	2	Y	
7. Sternoclavicular Joints (E)	2	Y	
Upper Extremity			
8. Thumb or Finger (M)	2	Y	
9. Hand (M)	2		
10. Wrist (M)	2		
11. Forearm (M)	2		
12. Elbow (M)	2		
13. Humerus (M)	2	Y	
14. Shoulder (M)	2		
15. Trauma: Shoulder or Humerus (Scapular Y, Transthoracic or Axial)* (M) *Trauma is considered a serious injury or shock to the body and requires modifications in positioning and monitoring of the patient's condition	2		

Radiographic Imaging Procedures M – Mandatory E – Elective	Prerequisite Exams Required	Eligible for Simulation	Final Competency Shaded Grey = Required
16. Clavicle (M)	2	Y	
17. Scapula (E)	2	Y	
18. AC Joints (E)	2	Y	
19. Trauma: Upper Extremity (Non Shoulder)* (M) * <i>Trauma is considered a serious injury or shock to the body and requires modifications in positioning and monitoring of the patient's condition</i>	2		
Lower Extremity			
20. Toes (E)	2	Y	
21. Foot (M)	3		
22. Ankle (M)	3		
23. Knee (M)	3		
24. Tibia-Fibula (M)	3	Y	
25. Femur (M)	3	Y	
26. Patella (E)	2	Y	
27. Calcaneus (E)	2	Y	
28. Trauma: Lower Extremity* (M) * <i>Trauma is considered a serious injury or shock to the body and requires modifications in positioning and monitoring of the patient's condition</i>	2		
Head –must have at least 1 from this section.			
29. Skull (E)	2	Y	
30. Paranasal Sinuses (E)	2	Y	
31. Facial Bones (E)	2	Y	
32. Orbits (E)	2	Y	
33. Nasal Bones (E)	2	Y	
34. Mandible (E)	2	Y	
35. Temporomandibular Joints (E)	2	Y	
Spine and Pelvis			
36. Cervical Spine (M) (Comp must include at least 4 views)	5		
37. Thoracic Spine (M) (AP & Lat)	2	Y	
38. Lumbar Spine (M) (AP, Lat & Spot)	3		
39. Cross-Table (Horizontal Beam) Lateral Spine (Patient Recumbent) (M)	2	Y	
40. Pelvis (M) (1view, AP)	3		
41. Hip (M) (AP Hip or Pelvis + Frog Lateral)	3		
42. Cross-Table (Horizontal Beam) Lateral Hip (Patient Recumbent) (M) (AP Hip +XTL)	3	Y	
43. Sacrum &/or Coccyx (E)	2	Y	
44. Scoliosis Series (E)	2	Y	
45. Sacroiliac Joints (E)	2	Y	
Abdomen			
46. Abdomen Supine (KUB) (M)	5		
47. Abdomen Upright (M)	3	Y	

Radiographic Imaging Procedures M – Mandatory E – Elective	Prerequisite Exams Required	Eligible for Simulation	Final Competency Shaded Grey = Required
48. Abdomen Decubitus (E)	2	Y	
49. Intravenous Urography (E)	2		
Fluoroscopy Studies –must have 2 from this section & perform per site protocol			
50. Upper GI Series, Single or Double Contrast (E)	2		
51. Contrast Enema, Single or Double Contrast (E)	1		
52. Small Bowel Series (E)	2		
53. Esophagus (NOT Swallowing Dysfunction Study) (E)	2		
Mobile C-Arm Studies			
54. **C-Arm Procedure (Requiring Manipulation to Obtain More Than One Projection) (M)	3	Y	
55. **Surgical C-Arm Procedure (Requiring Manipulation Around a Sterile Field) (M)	2	Y	
56. **Either for Final Comp			
Mobile Radiographic Studies			
57. Chest (M)	10		
58. Abdomen (M)	3		
59. Upper or Lower Extremity (M)	3		
Pediatric Patient (Age 6 or Younger)			
60. Chest Routine (M)	3	Y	
61. Upper Extremity or Lower Extremity (E)	2	Y	
62. Abdomen (E)	2	Y	
63. Mobile Study (E)	2	Y	
Geriatric Patient (At Least 65 y/o & Physically or Cognitively Impaired as a Result of Aging)			
64. Chest Routine (M)	2		
65. Upper Extremity or Lower Extremity (M)	2		
66. Hip or Spine (E)	2		

ADDITIONAL COMPETENCY REQUIREMENTS

Students must demonstrate competence in the remaining nine patient care activities listed below. The activities should be performed on patients whenever possible, but simulation is acceptable. These competencies may be verified in patient care courses and will be tracked by the Clinical Coordinator and course faculty.

General Patient Care Competencies (M) (ALL Mandatory) *Competency Verified in Patient Care Classes	Date Completed	Course in Which Completed	Competence Verified By
CPR Certified		N/A	
*Vital Signs – Blood Pressure			
*Vital Signs – Temperature			
*Vital Signs – Pulse			
*Vital Signs – Respiration			
*Vital Signs – Pulse Oximetry			

*Sterile and Medical Aseptic Technique			
*Venipuncture			
*Transfer of Patient			
*Care of Patient Medical Equipment (e.g., Oxygen Tank, IV Tubing)			

TECHNOLOGISTS WHO MAY PERFORM COMPETENCIES

Faculty members, RT-BMsc Education students, and the following technologists may evaluate the students on the above competency exams. (This list is subject to change, students will be provided with updates.)

CHILDREN'S HEALTHCARE OF ATLANTA AT EGLESTON (CHOA): Teresa Spiesel, Rushaun Sparkman, Shanda Fulton

EMORY ORTHOPEDICS AT DUNWOODY: Karen Moseley

EMORY JOHNS CREEK HOSPITAL (EJCH): Brianna Williams, Christian Haney, Tammy Constable, Ary Wilfork, Rozel Hossain

EMORY ORTHOPEDICS AT JOHNS CREEK MOB (JC MOB): Donna Selz

EMORY ST. JOSEPHS HOSPITAL (ESJH): Gavin Parr, Deidra Lewis, April Smith

EMORY ST. JOSEPHS OUTPATIENT IMAGING CENTER (ESJ-OPIC) Susan Taylor

EMORY UNIVERSITY ORTHOPAEDIC AND SPINE HOSPITAL (EUOSH): Victor Alvarado, Chris Collins, Purvi Shah

EMORY UNIVERSITY HOSPITAL (EUH): John Mathew, Dwania McGhee, Chinkook Lee

EMORY UNIVERSITY HOSPITAL TOWER (EUH TOWER): Leslie Sims

EMORY UNIVERSITY HOSPITAL – MIDTOWN (EUHM) & THE MEDICAL OFFICE TOWER (MOT): Sabine Alexis, Mathew Whitworth, Zach Allen., Selena Banks

EUOSH MEDICAL OFFICE BUILDING (MOB): Letia Underwood

WINSHIP CANCER INSTITUTE – GENERAL DIAGNOSTIC (WCI): Alexandria Simmons, Rachel Blanding, Marcus Evans

EMORY ORTHOPEDICS AND SPINE CENTER AT THE EMORY MUSCULOSKELETAL INSTITUTE: Ahmed Fadl, Keire Tucker, Yensi Casia, Marleny Rodriguez, ***Ambulatory Surgery Center:***, Jamila Mahama

EMORY SPORTS MEDICINE COMPLEX (EP Hawks): Vivian Richardson

Subject to change: Revised 8/25

CRITERIA FOR COMPETENCY EVALUATION

Criteria for Performance Evaluation:

- A. Student will evaluate the requisition, complete the required paper/computer work and
 1. Identify procedures to be performed.
 2. Identify the patient's age and name.
 3. Identify patient location and mode of transportation.
 4. Acknowledge any pathological conditions.
 5. Acquire appropriate clinical history.

- B. Student will prepare the radiographic room and
 1. Provide clean and orderly work area.
 2. Verify that equipment is operational.
 3. Obtain appropriate supplies for examination.
 4. Have appropriate supplies and markers available.

- C. Professionalism and proper patient history will be demonstrated by
 1. Selecting the correct patient using two patient identifiers.
 2. Introducing himself/herself to patient and briefly explaining the procedure.
 3. Obtain appropriate patient history by employing the “What/Why, When, Where, What Else?” approach.
 4. Verifying chance of pregnancy per site protocol.
 5. Transporting patient to appropriate imaging area.
 6. Verifying if patient is properly prepared for the examination.
 7. Identifying, when appropriate, that there are no contraindications for performing procedure.
 8. Providing safe storage for patient's belongings.
 9. Providing appropriate assistance to the radiographic device based on patient's condition.
 10. Maintaining patient dignity and modesty through proper gowning and covering for the patient.
 11. Talking to the patient in a concerned, professional manner.
 12. Applying universal precautions as established by the Centers for Disease Control.
 13. Providing proper instructions for moving and breathing.
 14. Checking patient's condition at regular intervals.
 15. Providing for patient security if the patient is left alone in the radiographic room.
 16. Wearing the proper attire and identification badge.

- D. The student will demonstrate appropriate equipment operation by
 1. Maneuvering the x-ray tube and bucky utilizing appropriate controls and locks.
 2. Selecting the proper FOV, IR, IR holder, grid, etc.
 3. Selecting the appropriate field size and collimating to the anatomy of interest.
 4. Selecting appropriate SID.
 5. Manipulating image receptor as appropriate for accurate imaging.
 6. Measuring the patient per protocol at clinical site.
 7. Using immobilization devices as needed.
 8. Referring to a technique chart.
 9. Selecting exposure factors.
 10. Using equipment so as not to exceed recommended safety guidelines.

- E. The student will demonstrate positioning/centering skills by
 1. Positioning the patient correctly.
 2. Positioning the part correctly.

- F. The student will demonstrate centering skills by
1. Aligning the center of part to be demonstrated to center of the image receptor.
 2. Aligning the tube and image receptor.
 3. Setting the correct tube angle.
- G. The student will select exposure factors
1. Adequate to penetrate the part.
 2. Adequate to provide the correct IR exposure/brightness.
 3. To deliver the least amount of radiation possible to the patient.
 4. That result in images with appropriate exposure indicators.
- H. Evidence of Radiation Protection will be demonstrated by
1. Collimating to part. ****NO** electronic masking of anatomy post-exposure.
 2. Using gonadal shields, if patient requests.
 3. Demonstrating use of lead apron, blockers and gloves, if appropriate.
 4. Selecting proper exposure factors.
 5. Adjusting exposure factors for motion, pathology or patient size when appropriate.
 6. Verifying that no repeats were performed. Any repeats negate the competency.
- I. The student will solve problems
1. Using critical thinking skills.
 2. By evaluating the patient condition.
 3. Using clear thought processes.
- J. The student will perform the projections
1. Required by the facility.
 2. In a manner consistent with radiologic positioning manuals except in special circumstances.
- K. The student will perform the exam in a reasonable amount of time
1. Considering the students skill level.
 2. Considering the patient condition and comfort.
- L. The student will demonstrate appropriate imaging processing technique by
1. Preparing the detector for exposure.
 2. Placing the IR in the image reader correctly (if applicable).
 3. Using digital radiography, teleradiology, PACS to transmit images to the correct locations.
- M. The student will demonstrate appropriate patient identification technique by
1. Selecting the correct patient from the worklist.
 2. Using the correct identification with digital imaging.
- N. The identification of the image is assessed by
1. The proper and correct display of their "R," "L," initialed markers. (non computer generated) per Emory protocol where applicable.
 2. The proper display of accessory markers visible, if required.

Criteria for Image Evaluation:

- O. The student will identify if the appropriate structures are visible by
1. Verifying that the part is shown in proper perspective.
 2. Verifying that adequate detail exists and motion is absent.
- P. The student will demonstrate knowledge of anatomy by
1. Identifying anatomical structures on the image.
 2. Identifying related anatomical structures.
- Q. The student will evaluate positioning by
1. Comparing patient and part position to positioning criteria.
- R. The student will evaluate proper alignment and centering by verifying that the
1. Image is centered.
 2. Part is centered.
 3. Tube is centered.
 4. Patient is aligned correctly.
 5. Correct central ray angulation was used.
- S. The technical factors are assessed by
1. Evaluating contrast and brightness.
 2. Evaluating the student's ability to compensate for pathology.
 3. Using the correct exposure factors to produce a diagnostic image.
 4. Using the correct IR, grid, SID and OID.
 5. Stating correct exposure indicator values and comparing their EI outcome to those indicators.
- T. The student will identify artifacts
1. By classification.
 2. By type.

Faculty members will intermittently pull student images for review. Faculty members reserve the right to disallow any competency exam based on failure of any of the above categories.

MINIMUM PERTINENT ANATOMY*CHEST**PA/AP Projection

1. Apices
2. Bases
3. Costophrenic angles
4. Trachea
5. Carina
6. Bronchus
7. Lung markings
8. Number of lobes in each lung
9. Heart

10. Hilum
11. Mediastinum
12. Diaphragm
13. Air in stomach
14. Aortic knob
15. Scapula
16. SC joints
17. Clavicle
18. No. of ribs visible

Lateral Projection

1. Heart
2. Sternum
3. Diaphragm
4. Spine
5. Costophrenic Angles
6. Apices

ABDOMEN – SUPINE, PRONE, ERECT, DECUB, PORTABLE

1. Diaphragm
2. Liver
3. Ribs
4. Kidneys
5. Spleen
7. Psoas muscles
8. Pelvis (iliac crest, symphysis pubis)
9. Spine
10. Bladder
11. Stomach

6. Small intestine

12. Large intestine

RIBS (& all chest anatomy)

1. Number of ribs visible
2. Anterior ribs
3. Posterior ribs
4. Axillary portion
5. Head of rib

6. Neck of rib
7. Body of rib
8. Costotransverse joint
9. Costovertebral joint

FOOT

1. Phalanges
2. Metatarsals
3. Tarsals
4. Navicular
5. Calcaneus
6. Talus

7. Cuboid
8. Cuneiforms
9. Sesamoids
10. Sinus tarsi
11. Interphalangeal joints
12. Metatarsophalangeal joints
13. Tarsometatarsal joints

ANKLE

1. Tibia
2. Fibula
3. Talus
4. Lateral malleolus
5. Medial malleolus

6. Mortise
7. Distal tibiofibular joint
8. Talofibular joint
9. Calcaneus

LOWER LEG (TIB/FIB)

1. Mortise
2. Talus
3. Talofibular joint
4. Distal tibiofibular joint
5. Lateral malleolus
6. Medial malleolus
7. Shaft of Tibia
8. Shaft of Fibula

9. Lateral condyle of tibia
10. Medial condyle of tibia
11. Intercondyloid eminence (tibial spine)
12. Tibial plateau
13. Tibial tuberosity
14. Head of fibula
15. Styloid process of fibula
16. Patella (apex, base)

KNEE

1. Femur
2. Tibia
3. Fibula
4. Patella (apex, base)
5. Lateral epicondyle of femur
6. Lateral condyle of femur
7. Medial epicondyle of femur
8. Medial condyle of femur

9. Intercondyloid fossa
10. Lateral condyle of tibia
11. Medial condyle of tibia
12. Intercondyloid eminence (tibial spine)
13. Tibial plateau
14. Head of fibula
15. Styloid process of fibula
16. Tibial tuberosity

FEMUR

1. Acetabulum
2. Head of femur
3. Neck of femur
4. Greater trochanter
5. Lesser trochanter
6. Shaft of femur

7. Intercondyloid fossa
8. Lateral epicondyle of femur
9. Lateral condyle of femur
10. Medial epicondyle of femur
11. Medial condyle of femur
12. Patella (apex, base)

PELVIS

- | | |
|--------------------|------------------------|
| 1. Innominate bone | 8. Obturator foramen |
| 2. Ischium | 9. Ala |
| 3. Ilium | 10. Ischial tuberosity |
| 4. Pubis | 11. Pubic symphysis |
| 5. Crest | 12. Acetabulum |
| 6. ASIS | 13. Head of femur |
| 7. SI joints | |

HIP (AP HIP or PELVIS & Frog lateral)

- | | |
|-----------------------|------------------------|
| 1. Head of femur | 9. Ala |
| 2. Neck of femur | 10. Ilium |
| 3. Greater trochanter | 11. Ischium |
| 4. Lesser trochanter | 12. Pubis |
| 5. Crest | 13. Obturator foramen |
| 6. ASIS | 14. Innominate bone |
| 7. SI joints | 15. Pubic symphysis |
| 8. Acetabulum | 16. Ischial tuberosity |

TRAUMA HIP (includes AP and XTL)

- | | |
|-----------------------|------------------------|
| 1. Head of femur | 9. Ala |
| 2. Neck of femur | 10. Ilium |
| 3. Greater trochanter | 11. Ischium |
| 4. Lesser trochanter | 12. Pubis |
| 5. Crest | 13. Obturator foramen |
| 6. ASIS | 14. Innominate bone |
| 7. SI joints | 15. Pubic symphysis |
| 8. Acetabulum | 16. Ischial tuberosity |

FINGER OR THUMB

- | | |
|--------------------------|--|
| 1. Phalanges | 9. Sesamoids (if applicable) |
| 2. Number of phalanges | 10. Interphalangeal joint |
| 3. Metacarpals | 11. Proximal Interphalangeal joint |
| 4. Number of metacarpals | 12. Distal Interphalangeal joint |
| 5. Proximal phalanx | 13. Metacarpophalangeal joints |
| 6. Middle phalanx | 14. Metacarpals and phalanges are numbered in which direction? |
| 7. Distal phalanx | |
| 8. Head of metacarpal | |

HAND

- | | |
|--------------------------|--|
| 1. Phalanges | 9. Distal phalanx |
| 2. Number of phalanges | 10. Head of metacarpal |
| 3. Metacarpals | 11. Sesamoids |
| 4. Number of metacarpals | 12. Interphalangeal joints |
| 5. Carpals | 13. Metacarpophalangeal joints |
| 6. Number of carpals | 14. Metacarpals and phalanges are numbered in which direction? |
| 7. Proximal phalanx | |
| 8. Middle phalanx | |

WRIST

1. Carpals and number of
2. Scaphoid (navicular)
3. Lunate (semilunar)
4. Triquetrum (cuneiform, triangular)
5. Pisiform
6. Trapezium (greater multangular)
7. Trapezoid (lesser multangular)
8. Capitate (os magnum)
9. Hamate (unciform)
10. Ulna
11. Radius
12. Styloid processes
13. Base of metacarpals
14. Distinguishing characteristic of the hamate is what?

FOREARM

1. Radius
2. Radial styloid
3. Radial head
4. Radial neck
5. Radial tuberosity
6. Shaft of radius
7. Ulna
8. Shaft of ulna
9. Ulnar styloid
10. Head of ulna
11. Wrist joint
12. Elbow joint
13. Coronoid process
14. Olecranon process
15. Trochlear notch (semilunar notch)
16. Humerus
17. Trochlea
18. Capitulum
19. Medial epicondyle
20. Lateral epicondyle

ELBOW

1. Radius
2. Radial head
3. Radial neck
4. Radial tuberosity
5. Shaft of radius
6. Ulna
7. Shaft of ulna
8. Elbow joint
9. Coronoid process
10. Olecranon process
11. Trochlear notch (semilunar notch)
12. Humerus
13. Trochlea
14. Capitulum
15. Medial epicondyle
16. Lateral epicondyle

HUMERUS

1. Glenoid fossa
2. Head of humerus
3. Anatomical neck
4. Greater tubercle
5. Lesser tubercle
6. Surgical neck
7. Shaft of humerus
8. Trochlea
9. Capitulum
10. Medial epicondyle
11. Lateral epicondyle

SHOULDER/CLAVICLE

1. Humerus
2. Head of humerus
3. Anatomical neck
4. Greater tubercle
5. Lesser tubercle
6. Surgical neck
7. Scapula
8. Glenoid fossa
9. Acromion process
10. Coracoid process
11. Acromioclavicular joint
12. Clavicle

TRAUMA UPPER EXTREMITY – NON SHOULDER

As previously described

TRAUMA SHOULDER (Y, TRANSTHORACIC or AXILLARY)

- | | |
|---------------------|-----------------------------|
| 1. Humerus | 7. Scapula |
| 2. Head of humerus | 8. Glenoid fossa |
| 3. Anatomical neck | 9. Acromion process |
| 4. Greater tubercle | 10. Coracoid process |
| 5. Lesser tubercle | 11. Acromioclavicular joint |
| 6. Surgical neck | 12. Clavicle |

CERVICAL SPINE (Competency must include a minimum of 4 projections)

- | | |
|--------------------------------|--|
| 1. Number of cervical vertebra | 9. Atlas - lateral masses |
| 2. Body | 10. Axis - dens, body, articular processes |
| 3. Transverse processes | 11. Zygapophyseal Joints |
| 4. Laminae | 12. Inferior/Superior Articular Processes |
| 5. Pedicles | 13. Intervertebral foramina |
| 6. Spinous Processes | 14. Ribs |
| 7. Vertebral Prominens | 15. Occipital bone |
| 8. Intervertebral disc space | 16. Occlusal surface |

THORACIC SPINE (AP & Lateral)

- | | |
|---------------------------------|---------------------------|
| 1. Number of thoracic vertebrae | 6. Spinous processes |
| 2. Body of vertebrae | 7. Intervertebral spaces |
| 3. Ribs | 8. Intervertebral disc |
| 4. Transverse process | 9. Intervertebral foramen |
| 5. Laminae | |

LUMBAR SPINE (AP, Lat, & Lateral spot)

- | | |
|---------------------------|-------------------------------|
| 1. Body of vertebrae | 8. Pedicle |
| 2. Transverse process | 9. Laminae |
| 3. Sacrum and SI joints | 10. Number of lumbar vertebra |
| 4. Spinous processes | 11. L-5 |
| 5. Zygoapophyseal joints | 12. S-1 |
| 6. Intervertebral disc | 13. Sacral promontory |
| 7. Intervertebral foramen | 14. Iliac crests |

CONTRAST ENEMA

- | | |
|---------------------|-----------------|
| 1. Cecum | 7. Sigmoid |
| 2. Ascending colon | 8. Rectum |
| 3. Hepatic flexure | 9. Anus |
| 4. Transverse colon | 10. Appendix |
| 5. Splenic flexure | 11. Small bowel |
| 6. Descending colon | 12. Haustra |

EMORY DIAGNOSTIC RADIOLOGY PROTOCOLS**General**

1. Tight Collimation expected on all images
2. No unprocessed images
3. Appropriate Masking

4. Standard display positions
5. Right and Left Separate within studies
6. Remove clothing in field of view to remove artifacts
7. Mandatory Right and Left marking with personal markers (non electronic)

Portable Chest Exam Protocol

1. Patient as upright as possible
2. 72 inch distance if possible – indicate in notes what distance was used.
3. All portable chest exams should be sent to PACS with **both** the standard chest image **and** the line-enhanced image.
 - a. If you are using the Carestream units you will automatically get both images.
 - b. If you are using the Fuji equipment you will have to send the normal chest x-ray and then reprocess the image under the “**Chest Portable PICC**” processing selection and send that image also.

MSK Procedure Protocols **Rev. 3/15**

Left and right extremities to be done separately. All long bone exams to include both joints

Upper Extremities:

Finger:

1. PA hand
2. Oblique of affected finger
3. Lateral of affected finger

Hand: Left and right to be done separately except for **arthritis** studies, “ball-catcher’s” oblique OK for arthritis study

1. PA
2. Oblique
3. Fan lateral

Wrist:

1. PA
2. Oblique
3. Lateral

Forearm:

1. AP
2. Lateral

Elbow:

1. AP
2. Oblique - lateral rotation
3. Lateral

Humerus:

1. AP
2. Lateral

Shoulder:

1. AP internal rotation
2. AP external rotation
3. Axillary (alternate: scapular “Y” if axillary not possible)

Clavicle:

1. AP
2. AP axial with 15⁰ cephalic angulation

Scapula:

1. AP
2. Lateral (Y view)

AC Joints:

1. AP (standing *with* weights)
2. AP (standing *without* weights)

Lower Extremities:

Toes:

1. AP foot
2. Oblique of affected toe
3. Lateral of affected toe

Foot:

1. AP
2. Oblique - internal rotation
3. Lateral

Ankle:

1. AP
2. Oblique (mortise)
3. Lateral

Heel / calcaneus:

1. Axial
2. Lateral

Tibia / Fibula:

1. AP
2. Lateral

Knee:

1. AP
2. Oblique - internal rotation
3. Lateral
 - 10⁰ to 15⁰ flexion
- (4. Include sunrise if ordered)

Femur:

1. AP
2. Lateral

Pelvis and Hips**Pelvis:**

1. AP

Hip:

1. AP Pelvis
2. Lateral / frog leg of affected Hip

ED/Trauma Hip:

1. AP Hip (affected hip only)
2. Lateral Hip (Frog or Cross-Table affected only)

Sacroiliac Joints:

1. AP
2. AP axial with 40⁰ cephalic angulation

Pelvis post-arthroplasty:

Include entire femoral stem

Spine**C-spine (standard order):**

1. AP
2. Odontoid
3. Lateral (swimmers if necessary)
4. Obliques - bilateral
- (5. Flex & ext **if ordered**)

T-spine:

1. AP
2. Lateral
3. Swimmers

L-spine:

1. AP
2. Lateral
3. L5 – S1 spot
- (4. Obliques – bilateral if ordered)

Sacrum / Coccyx:

1. AP sacrum
2. AP coccyx
3. Lateral sacrum/coccyx

Scoliosis:

Per physician orders

Miscellaneous Exams**Bone age study:**

1. PA *left* hand including wrist

Ribs:

1. PA Chest
2. PA upper ribs

3. AP lower ribs
4. Bilateral PA obliques

Arthritis Survey: Right and left extremities to be done separately

1. AP, Lateral, and Oblique hands
2. AP, Lateral, and Oblique feet
3. AP axial Pelvis – Ferguson (15° cephalic angulation)

Bone Length Study / Scanagram

1. Patient supine on table

Metastatic Survey

(See Axial Skeletal Survey)

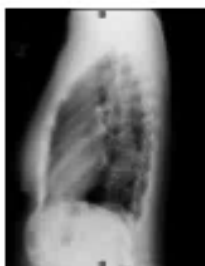
Axial Skeletal Survey with Long Bones:

1. Skull lateral (include C-spine)
2. PA upper ribs
3. AP lower ribs
4. Pelvis
5. Bilateral AP femur
6. Bilateral AP tibia / fibula
7. AP Humerus
8. AP forearm
9. Lateral L-spine
10. Lateral T-spine
11. Swimmers

DX Hanging and Sequence Protocol

Hanging Guidelines:

- Images should be displayed in anatomical position
- Lateral chest and spine images should face the viewer's LEFT

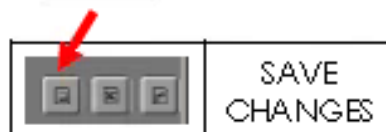


Sequence Guidelines:

- Images should appear in AP, OBL, LAT order regardless of acquisition order
- Bilateral exams should group all RIGHTS together, then all LEFTS together

Need to edit your images in PACS?

	FUP
	ROTATE
	DRAG & DROP



SECTION VII: CLINICAL GRADING SYSTEM

Each semester the clinical grade is comprised of a work ethic grade and the satisfactory completion of assignments. Each student begins each semester with a grade of A.

FIRST SEMESTER:

All clinical orientation sessions, tours, observations, and clinical wrap up are **mandatory** and **must** be made up if students are absent. Failure to do so will result in a one letter grade deduction per session missed and not made up. Absences are considered unexcused unless accompanied by appropriate documentation and turned into the clinical coordinator upon returning to campus. Students must be punctual to these sessions, failure to be on time will also affect the clinical grade.

- **Work Ethic and Attendance grading scale**

- *Perfect Attendance with 0 – 1 tardies = A*
- *Unexcused absences will result in a 1–letter grade deduction per occurrence.*
 - *Students that are more than 10 minutes late to any mandatory clinical orientation session will be considered absent.*
- *Any clinical time or orientation class missed must be made up. Failure to do so will prevent the student from registering for the next clinical course and failure of the current clinical course.*
- *Tardies, Dress code violation*, No call late, failure to follow the schedule*
 - *0 – 1 = no penalty*
 - *2 – 3 = 1 letter grade deduction*
 - *4 – 5 = 2 letter grade deduction*
 - *6 – 7 = 3 letter grade deduction*
 - *Greater than 7 = F*
 - ** Dress code violations are cumulative from semester to semester.***
- *Leaving the clinical site without permission or No Call No Show*
 - *1 letter grade deduction*
- *Electronic Device Policy violation***
 - *1st – 1 demerit*
 - *2nd – written reprimand & 2nd demerit*
 - *3rd – suspension for one full clinical day & 3rd demerit*

Though electronic device and dress code violations are cumulative, students who incur demerits for these violations have the opportunity to demonstrate personal and professional growth by adhering to the named policies in subsequent semesters. When students demonstrate personal and professional growth by adhering to the electronic device policy throughout the subsequent semester, one demerit will be forgiven in the next semester. In other words, each semester without any violations will “erase” one demerit earned for violating the EDP in the previous semester. Each semester without any dress code violations will “erase” 1/2 demerit earned for violating the dress code policy in the previous semester. The first dress code violation will incur a warning and that warning WILL continue to be carried forward. However, it does not affect the clinical grade.

- **Assignment grading scale**

- *88 or better = No letter grade deduction*
- *78 – 87 = 1 letter grade deduction*
- *73 – 77 = Two letter grade deduction*
- *< 73 = Three letter grade deduction*

Grade Examples:**Scenario 1**

Student attended all Mandatory orientation sessions
 Student attended all clinical observations
 Student was tardy **once** to an observation
 Student made up the time missed from being tardy.
 Student had an average grade of **91** on their clinical assignment.

Final Clinical Grade = A

Scenario 2

Student attended all Mandatory orientation sessions
 Student attended all clinical observations
 Student was tardy **twice** to an observation
 Student made up the time missed from being tardy.
 Student had an average grade of **88** on their clinical assignment.

Final Clinical Grade = B

Scenario 3

Student attended all Mandatory orientation sessions
 Student attended all clinical observations
 Student was tardy **twice** to an observation
 Student made up the time missed from being tardy.
 Student had an average grade of **82** on their clinical assignment.

Final Clinical Grade = C

SECOND THROUGH EIGHTH SEMESTERS:

If the student receives 4 or less demerits (5 in the eighth semester), informs the program and clinical site of any absences, completes required competencies and interval checks, satisfactorily (≥ 88) completes all assignments for the semester, and maintains the programs professional and personal conduct standards, the student will maintain an A.

- **Work Ethic Grade:** The work ethic grade encompasses
 - Attendance
 - Dress code – *Dress code violations are cumulative from semester to semester.*
 - Tardiness
 - Missing no more than half of a rotation through an area.
 - Leaving the clinical site without permission
 - Proper notification of clinical absences or tardiness
 - Electronic Device Policy adherence

A student will receive:

- 1/2 demerit for each dress code violation after one warning.
 - *Dress code violations are cumulative from semester to semester. ***
- 1 demerit for the first violation of the Electronic Device Policy
 - *Electronic Device Policy violations are cumulative from semester to semester***
 - 2nd violation – written reprimand & 2nd demerit
 - 3rd violation – suspension for one full clinical day & 3rd demerit
- 1/2 demerit for failing to call prior to the scheduled shift in the event of an absence or tardy over 30 minutes. (No call late.) This is in addition to the demerit for being tardy.
- 1/2 demerit each for their second, third or fourth tardy (The first tardy each semester will be exempt from the demerit schedule, however the **time missed will be included in clinical time missed.**) One demerit for each tardy over four.

- *Students will be considered tardy any time they come in to clinical later than their normal scheduled time unless they have informed both the site and faculty before 3p the previous business day (M-F). All tardies are round up to the nearest ¼ hr.* One demerit for leaving the clinical site without permission. (LWP) Students must inform both the site clinical preceptor/supervisor AND the program.
- One demerit for failing to call both the clinical site and the program office in the event of an absence.
- One demerit for each four hours of clinical time missed. This includes time missed due to absences, tardiness, leaving without permission, dress code violations, violation of the electronic device policy and appointments during clinical, etc. Time will be rounded up to the nearest four hours.
- In addition to the grade penalties, students missing greater than 24 hours/semester will be required to make up that time during the semester break provided they have passed the clinical course. If the student fails to complete the make up time over the semester break, their registration for clinical for the next semester will be cancelled and the student will receive a grade of “F” in clinical. In the event this occurs in the last semester the student will receive an “Incomplete” grade in clinical and will not graduate until the time is made up. Incompletes must be removed from the student’s record within one year or they will convert to an “F”.
- Two demerits for missing more than half of a rotation.
- A letter grade drop each time the student fails to inform either the clinical site or the program office in the event of an absence. A no call no show demerit occurs when a student fails to inform the clinical coordinator, clinical supervisor, or clinical preceptor. The student must inform the appropriate personnel in **advance** of the scheduled shift.
- Demerit Schedule
 - 0 - 4 demerits results in no letter grade drop
 - 4.5 - 6 demerits results in one-letter grade drop
 - 6.5 - 8 demerits results in two-letter grade drop
 - 8.5 - 10 demerits results in three-letter grade drop
 - >10 demerits results in failure of the clinical course

** Though electronic device and dress code violations are cumulative, students who incur demerits for these violations have the opportunity to demonstrate personal and professional growth by adhering to the named policies in subsequent semesters. When students demonstrate personal and professional growth by adhering to the electronic device policy throughout the subsequent semester, one demerit will be forgiven in the next semester. In other words, each semester without any violations will “erase” one demerit earned for violating the EDP in the previous semester. Each semester without any dress code violations will “erase” 1/2 demerit earned for violating the dress code policy in the previous semester. The first dress code violation will incur a warning and that warning WILL continue to be carried forward. However, it does not affect the clinical grade.

Demerits will not be given in the event of serious illness of the student or the death or serious illness of immediate family members. Immediate family members include spouse/significant other, child, parent, sibling or grandparent. Verification of death or illness will be required within one week upon return to clinical. Time missed will be made up over the semester break, observed holiday and/or at the discretion of the program faculty and clinical affiliate. Extraordinary circumstances will be considered on a case-by-case basis. In the event the student does not wish to make up the clinical time missed, the absences will be counted as a regular absence and the demerit schedule will apply.

Since every four hours of missed time equals 1 demerit, and students may earn up to 4 demerits without a letter grade drop, approximately sixteen hours is built into each semester II – VII to account for illness or

emergencies (provided that the student did not earn additional demerits related to the actions listed above) It is recommended the student refrain from missing clinical unless an emergency occurs or the student is ill.

In the final semester students are allowed one additional demerit or an additional 4 hours of missed clinical time in general clinical without a letter grade drop (provided that the student did not earn additional demerits related to the actions listed above). The demerit schedule is

- 0 - 5 demerits results in no letter grade drop
- 5.5 - 7 demerits results in one-letter grade drop
- 7.5 - 9 demerits results in two-letter grade drop
- 9.5 - 11 demerits results in three-letter grade drop
- >11 demerits results in failure of the clinical course

Professional suitability and conduct requirements will also impact the clinical grade as discussed in previous sections.

Assignment Grade: Assignments include

- | | |
|------------------------------------|-------------------------|
| • Competencies - Regular & Final | • Written assignments |
| • Image Critique | • Clinical Organization |
| • Student Clinical Evaluations | • Quizzes |
| • Performance objective checklists | • Continuing Education |
| • Interval checks | • Vital Signs |
| • Cultural Competency | • Other |
| Workshops/Discussions | |

Not all assignments will occur in every semester. They will be outlined in the clinical syllabus.

Regular Competencies:

- Students must obtain at least an 80 on all regular competencies to pass the competency.
- Any Unsatisfactory in any category negates the competency.
- Failure to complete the required number of competencies in a semester as outlined on each clinical syllabus will result in a letter grade reduction per competency short.
 - Students may request additional clinical time during the **program's final exam week or first week of the semester break** to complete required competencies without penalty one time during the program. The student will be scheduled at the discretion of the program faculty and clinical affiliate.
 - This will only be allowed **one time** during the program; after that the time is volunteer time and any applicable assignments will be applied to the next semester.
- Certain competencies are required and must be completed to graduate.

Final Competencies:

- Students must obtain at least a 90 on all final competencies to pass the competency.
- Failure to complete the required number of final competencies in a semester as outlined on each clinical syllabus will result in a letter grade reduction per competency short.
- All final competencies must be completed satisfactorily before the student will be allowed to graduate.

Image Critiques:

Faculty members conduct image critiques. Students are asked various questions on certain exams. Image critiques are based on the following scale:

An average of

- 88 or better = No letter grade drop
- 78 – 87 = One-letter grade drop
- 73 – 77 = Two-letter grade drop
- <73 = Three-letter grade drop

(A student will maintain their current clinical grade unless they fall below an 88.)

Student Clinical Evaluations:

Technologists and faculty members complete student Clinical Evaluations. They are done to identify student's strengths and areas in need of improvement. They are based on the following scale:

An average of

- 88 or better = No letter grade drop
- 78 – 87 = One-letter grade drop
- 73 – 77 = Two-letter grade drop
- <73 = Three-letter grade drop

(A student will maintain their current clinical grade unless they fall below an 88.)

Performance objectives, Written assignments, Cultural Competency Workshops, Interval checks, Clinical Organization, Quizzes, Continuing Education, Vital Signs, etc. are assigned each semester.

They are averaged and based on the following scale:

- 88 or better = No letter grade drop
- 78 – 87 = One-letter grade drop
- 73 – 77 = Two-letter grade drop
- <73 = Three-letter grade drop

(A student will maintain their current clinical grade unless they fall below an 88.)

Professional development requirements will be as follows: 200 total points available, Seminars = 100 points for 1 hour, Directed Readings = 25 points each regardless of CE value indicated on source.

If all Interval checks are completed a score of 100 is averaged into the assignment grade. If the required number of interval checks are not completed by the end of the clinical semester a percentage of completed/required is averaged into the assignment grade.

Other

Occasionally other assignments may be deemed necessary. Students will be notified of them in advance. Students will also be notified of the effect of these assignments if they differ from the current assignment scale.

Grade Examples:

Scenario 1

Student missed **16** hours of clinical time = **4 demerits**

Student was always on time to clinical.

Student completed all required Competencies

Student had an Evaluation Average of **93**

Student had an Assignment Average of **90**

Final Clinical Grade = A

Scenario 2

Student earned **2 dress code violations** in the previous semester(s) = **.5 demerits** (1st one is warning)

Student missed **14 hours** of clinical time = **4 demerits**

Student was always on time to clinical.

Total demerits = **4.5**
 Student completed all required Competencies
 Student had an Evaluation Average of **93**
 Student had an Assignment Average of **90**
Final Clinical Grade = B

Scenario 3

Student missed **16.5** hours of clinical time = **5 demerits**
 Student was tardy **twice** = ½ demerit
 Student completed all required Competencies
 Student had an Evaluation Average of **93**
 Student had an Assignment Average of **90**
Final Clinical Grade = B

Scenario 4

Student missed **8** hours of clinical time = **2 demerits**
 Student was tardy **three** = **1 demerit**
 Student completed all required Competencies
 Student had a image critique grade of **82** = **1 grade drop**
 Student had an Evaluation Average of **84** = **1 grade drop**
 Student had an Assignment Average of **95**
Final Clinical Grade = C

SECTION VIII: PROTECTION POLICIES

CLINICAL ORIENTATION

All students will orient themselves to the clinical setting on the first day of their clinical rotation. Students will do this by completing the Clinical Orientation checklist. Students must familiarize themselves with the clinical setting safety policies and procedures including the location of all safety equipment, evacuation routes, and emergency phone numbers. Failure to complete the Clinical Orientation Checklist on the first day of the clinical rotation will result in a reduction of the assignment grade.

ACCIDENTS

All accidents that occur while on Clinical Assignment resulting in patient, hospital personnel, or personal injury and/or damage to equipment must be reported immediately to the Clinical Supervisor and Program Director. An accident (INCIDENT) report must be filed at the site if the incident so warrants.

Students should report to Student Health for minor injuries but should report to an Emergency Room if the injury is serious. The student will be responsible for all fees. For after hours care, call Student Health at 404-727-7551 and follow the instructions given.

1. *For serious injuries call applicable emergency number or go straight to the emergency room.*
2. *For minor injuries call Student Health immediately 404-727-7551 and follow their instructions.*
3. *For exposure to infectious diseases follow the procedure outlined below.*
4. *Some sites may have the student seen by employee health.*
5. *Students will fill out an incident report/STARS report as instructed by supervisor. Students are generally considered visitors, not employees.*
6. *All injuries, accidents, needle sticks etc., must be reported to the Program Director and Clinical Coordinator as soon as possible.*

INFECTION CONTROL POLICY

Students will not be permitted to participate in the care of **any** patient infected with Ebola or similar diseases.

Any needle sticks, contact with blood/body fluids, exposure to TB or other infectious diseases must be reported to the supervisor at the clinical site, the Program Director and Student Health (404-727-7551).

Infection Control Protocols

Needle Sticks and Other Blood/Body Fluid Exposures

1. Learn and always observe Standard Precautions (Universal Precautions).
2. If you have an exposure to blood or other body fluids (e.g., needle stick, cut), immediately clean the wound with soap and water.
3. Exposed oral and nasal mucosa should be decontaminated by vigorously flushing with water. Exposed eyes should be irrigated with clean water or sterile saline. Eyewash facilities can be accessed quickly in the emergency department for each hospital.
4. Follow the protocol of the hospital in which the incident occurred to the fullest including all follow-up (through the hospital's Employee Health Service). It is especially important that you report your exposure to the hospital's Employee Health Service as soon as possible so that a timely evaluation can be performed. Additionally, your exposure may guide future preventive efforts (e.g., education, training, selection of devices). If prophylactic medications are indicated, it is recommended they be initiated as soon as possible after the exposure, ideally within two hours.
5. If you are uncertain of the procedures for reporting and obtaining care at the facility where your exposure occurred, call the Woodruff Health Sciences Center (WHSC) Needle stick Hotline for assistance at 404-727-4736.
6. Acute serology should be drawn to establish one's baseline antibody titers to hepatitis B virus (if you have not previously been determined to be HBsAb positive [immune to Hepatitis B]) and, if indicated, to HIV and/or Hepatitis C Virus [HCV] (if the source patient is HIV-positive or HCV-positive).
7. Depending on the results of one's serology and the baseline serology of the patient (from which the incident occurred), you may need follow-up serologies as per the hospital protocol where the injury occurred.
8. If the source patient is HIV-infected, the administration of post-exposure prophylaxis (PEP or "prophylactic" antiretroviral medications) to decrease the risk of patient-to-healthcare worker transmission should be strongly considered. Medications may be initiated pending results of HIV serology on the source patient. If used, these medications should be taken as soon as possible after the needle stick injury. Each hospital has a protocol and will counsel you and give advice as needed. PEP regimens are complicated; therefore, be sure that the individual who manages your exposure consults with the Hospital Epidemiologist (see list below).
9. Again, call the WHSC Needle Stick Hotline 404-727-4736 if you have any questions about management of the needle stick or other occupational exposure.
10. If you are exposed to blood or other body fluids at another facility follow their guidelines and follow-up instructions. If you are unsure of the reporting procedures or have difficulty obtaining immediate care, call the WHSC Needle Stick Hotline for assistance at 404-727-4736.

The following list of specific areas and/or individuals should be contacted at the facility in which the exposure occurs:

EMORY UNIVERSITY HOSPITAL MIDTOWN:

Daytime hours, Monday thru Friday (7 am to 4 pm)
Occupation Injury Management (OIM) 404-686-2352

After hours, and on weekends: • Healthcare worker calls Occupation Injury Management (PIC 50464) or calls the WHSC Needle Stick Hotline (404- 727-4PEM).

If WHSC Needle Stick Hotline called, the on-call OIM nurse practitioner will be paged (PIC 50464). The Occupational Injury Management (OIM) nurse practitioner will facilitate immediate post- exposure care. Healthcare worker should go to OIM during the next business day to have baseline labs drawn.

Other contacts at Midtown: Hospital epidemiology pager: 51427

If you are unable to reach any of the above individuals, call the WHSC Needle Stick Hotline 404-727-4736.

EMORY UNIVERSITY HOSPITAL

Daytime hours, Monday thru Friday (7 am to 4 pm). Employee Health/ Occupational Injury Management Office 1364 Clifton Road, Room D219

Occupational Injury Management (Worker's Compensation) 404-686-8587

Employee Health Services 404-686-8589

After hours and on weekends: Healthcare worker calls Occupational Injury Management (OIM) (PIC 50464) or calls the WHSC Needle Stick Hotline (404-727-4PEM)

If WHSC Needle Stick Hotline called, the on-call OIM nurse practitioner will be paged (PIC 50464). The OIM nurse practitioner will facilitate immediate postexposure care. Healthcare workers should go to OIM during the next business day to have baseline labs drawn.

Other contacts at EUH:

Hospital epidemiology pager: 51090

If you are unable to reach any of the above individuals, call the WHSC Needle Stick Hotline 404-727-4736.

CHILDREN'S HEALTHCARE OF ATLANTA

Any needle sticks or blood borne pathogen exposure is referred to the 24/7 hotline 404-785-7777. This is staffed by an employee health nurse who will provide guidance to students.

- Employee Health Digital Pager 1-800-682-4549 or Needle Stick Hotline (ext. 4444 at Egleston and ext. 824444 at Scottish Rite)

Other contacts at CHOA (if students cannot reach employee health nurse via hotline or pager)

- Andi Shane, MD – cell: 404-354-7692 or office 404-727-9880
- Infectious Disease Service Team on Call – pager: 404-785-7778 and ask for the ID Service Team on Call

If you are unable to contact any of the above individuals, call the WHSC Needle Stick Hotline 404-727-4736.

Updated 8/24/22

LABORATORY SAFETY POLICY

Students will be required to participate in laboratory procedures throughout the course of study. To insure the safety of all students, the following laboratory rules must be followed. Failure to comply may result in disciplinary action.

1. Laboratory use is restricted to only those students enrolled in the Medical Imaging Program who have completed a laboratory orientation session.
2. Laboratory use is restricted to educational assignments only.
3. The laboratory will be open during regular program business hours. Students can use the laboratory for producing exposures only when a faculty member is present in the program office, lab or classroom.
4. Students will not allow non-medical imaging program individuals in the laboratory.
5. General safety rules (use of electrical equipment, hazardous materials precautions, etc.) must be followed when utilizing the laboratory.
6. The door entering the laboratory must be closed during a radiographic exposure.
7. Warm-up procedures must be completed before any experiment or practice exposures are made.
8. All students must go into the control area during a radiographic exposure.
9. All students must wear radiation-monitoring devices during labs requiring a radiographic exposure.
10. Only phantoms or non-living objects may be used as subjects when actually performing a radiographic exposure. X-raying live subjects for laboratory experiments will result in disciplinary action.
11. Care must be taken in the handling of all laboratory equipment and supplies, especially phantoms. Phantoms are heavy and are very expensive. Students must report any damage to equipment or a phantom during the performance of a laboratory experiment to the program faculty immediately. Failure to do so may result in disciplinary action.
12. Phantoms or other laboratory equipment may only be used in the laboratory unless permission is given by program faculty for use in other clinical areas. If permission is given to use items outside the laboratory, students must check out the phantom/ equipment from the course instructor and return the items at a prearranged date and time.
13. All items must be returned to their designated place in the laboratory after use.

14. The laboratory must be kept neat and clean. Students are responsible for maintaining the laboratory when performing experiments or practicing procedures.
 - a. Trash shall be discarded in an appropriate trash container.
 - b. Lights shall be turned off or unplugged when leaving the lab.
 - c. After use, the table and upright bucky shall be cleaned with antiseptic solution.
15. Any non-functioning equipment must be reported to a faculty member as soon as possible.

*These rules apply to all radiographic rooms that are used for any lab assignments.

MRI SAFETY POLICIES

MRI safety policies were created to ensure safety for students in the Emory University Medical Imaging Program. After reading this form entirely, sign your name at the bottom. All tasks in section (i) must be completed before a student is allowed to enter an MRI suite. When visiting MR clinical sites, always err on the side of caution. Communicate with clinical staff if you feel a situation is unsafe. Don't be afraid to speak up and ask questions. Clinical Instructors are there to answer your safety questions and to address any safety concerns. Remember, the MR magnet is ALWAYS ON and has the potential to cause serious harm to yourself, clinical staff, and/or patients.

MRI Safety Policies for Prospective Students:

i. Before visiting clinical sites, students must complete the following:

1. Fill out an MRI screening form to ensure safety in zones III & IV.
2. Attend MRI Safety lecture taught by Sean Strickler MSRS, RT(R)(MR), MRSO (MRSCTM)
3. Review ACR Guidance Document on MR Safe Practices: 2013 & ACR Manual on MR Safety (2020)
4. Visit MRI safety website (www.mrisafety.com) and familiarize yourself with how to research MR safe, MR conditional, and MR unsafe devices on "the list."

ii. Contrast Reactions:

Students should be able to identify reactions to contrast agents and then notify the supervising MRI technologist, MRI nurse, or radiologist. Review ACR Manual on Contrast Media 2021 (Table 1: Categories of Acute Reactions, pg. 100-101).

iii. Pregnancy-related issues:

Pregnant students are permitted to work in and around the MR environment throughout all stages of their pregnancy. Pregnant students will continue all duties required of their position, with the exception of occupying the magnet room during the acquisition of the image. Acceptable duties include, but are not limited to, screening and positioning patients, scanning, archiving, injecting contrast material, and entering the MR scan room in response to an emergency after the scan has been stopped. There currently are no established regulatory guidelines for occupational utilization of MRI systems by pregnant women.

iv. Dress code:

MR students will be given plastic badge holders at the beginning of the semester. Badge should be worn and visible at all times. Personal belongings like cell phone, keys, analog watch, purse, and wallet should be safely stored before shift begins. Digital watches are preferred over analog watches when working in an MR environment. Remove any hairpins, barrettes, jewelry, piercings or metallic clothing. Avoid using heavy metal ink pens in the MRI department.

v. Upon arrival to MR rotation:

Get orientated to the clinical site's emergency policies. Know where the eye wash station, fire extinguisher, crash cart, quench shut-off button, and evacuation plans are. Know the difference between the computer software system on-off button and the magnet quench button. As a student, you should

NEVER touch either. If there is a power outage in the building, remember the magnetic is ALWAYS ON even when the scanner computer software power is off.

vi. References:

1. ACR Guidance Document on MR Safe Practices: 2013
<https://onlinelibrary.wiley.com/doi/epdf/10.1002/jmri.24011>
2. ACR Manual on Contrast Media https://www.acr.org/-/media/ACR/Files/Clinical-Resources/Contrast_Media.pdf
3. ACR Manual on MR Safety (2020) <https://www.acr.org/-/media/ACR/Files/Radiology-Safety/MR-Safety/Manual-on-MR-Safety.pdf>

Updated August 2022

PREGNANCY POLICY

****Disclosure of pregnancy is voluntary. Students are not required to declare pregnancy.****

The National Council on Radiation Protection (NCRP) recommends a total dose equivalent limit (excluding medical exposure) of 0.5 rem (5 mSv) for the embryo-fetus. Once a pregnancy becomes known, exposure of the embryo-fetus shall be no greater than 0.05 rem (0.5 mSv) in any month (excluding medical exposure).

For purposes of radiation protection, it is **recommended** by the National Council on Radiation Protection (NCRP) that persons involved in the use of ionizing radiation notify program officials immediately if pregnancy is suspected. It is possible to limit occupational exposure to less than 0.5 rem per entire gestation period and prevent exceeding embryo-fetal dose equivalent limits through personnel monitoring, proper radiation safety instruction, and adherence to all radiation safety policies. In accordance with the NRC recommendations, the Medical Imaging Program at Emory University requests any student who suspects a pregnancy to notify the program faculty immediately.

As soon as a student confirms that she is pregnant, it is **recommended** that she notify the program faculty. Should the student choose to declare her pregnancy, she must do so, in writing, to the Environmental Health and Safety Office giving approximate date of conception. The Radiation Safety Officer will review the student's past exposure history, determine if radiation restrictions should be applied and counsel the student. A copy of the document "Guide for Instruction Concerning Prenatal Radiation Exposure" will be given to the individual as required by the State of Georgia, NRC, and OSHA. The student will sign documentation that this information has been received.

Following a declaration of pregnancy and counseling by the Radiation Safety Officer, the student must notify the program faculty, in writing, within ten working days of her decision on one of the following options:

1. Termination of enrollment in the program.
2. Withdrawal from the program for a period of one year after completion of the current semester with **routine assignments** in fluoroscopy, portables, surgery, and special procedures. The Radiation Safety Officer will issue a monthly fetal monitor for the individual to wear in addition to her regular dosimeters.*
3. Withdrawal from the program for a period of one year after completion of the current semester with **limited assignments** in fluoroscopy, portables, surgery, and special procedures. The Radiation Safety Officer will issue a monthly fetal monitor for the individual to wear in addition to her regular dosimeters.*
4. Withdrawal from the program for a period of one year without completion of the current semester.*

5. Deceleration to part-time status with withdrawal from clinical course work.*
6. Continuation of full-time status with reassignment of rotations** (as requested by the student) coordinated with the clinical coordinator. The Radiation Safety Officer will issue a monthly fetal monitor for the individual to wear in addition to her regular dosimeters.***
7. Continuation of full-time status without reassignment of rotations. All clinical and didactic duties and assignments must be performed as usual. The Radiation Safety Officer will issue a monthly fetal monitor for the individual to wear in addition to her regular dosimeters.

If a student chooses to withdraw from the program for one year, she must notify the program director of her intention to return to the program. Readmission will be based on space availability and the student's previous academic standing. It is understood that, upon her return, all clinical competencies and clinical rotations missed must be completed.

Withdrawal from the program for greater than one year will require the student to reapply in accordance with standard admissions procedures.

The student may revoke the Declaration of Pregnancy at any time if she believes that it is in her best interest to do so, and the lower dose limit for the embryo/fetus would no longer apply.

This policy is printed in the Clinical Handbook, discussed with all applicants prior to acceptance into the program, and reviewed with the entire class upon enrollment in the program. All prospective students are required to sign a form indicating their knowledge and understanding of this policy. This form is kept on file with the students' applications.

- * Options 2-5 automatically extend the program of study by one full year.
- ** The program will make every effort to reassign the student as requested; however, the student must realize that reassignment may not be possible.
- *** Option 6 may extend the program of study.

RADIATION MONITORING

In order to insure proper precautions against radiation accidents, all staff members and students are provided with dosimeters for radiation monitoring. It is recommended that the body badge be worn at the waist level along the midline of the body. The collar badge should be worn near the neck and outside of the fluoroscopy apron during fluoroscopy procedures.

Students **must** always wear dosimeters while on clinical assignment and when making an exposure in the lab. **Dosimeters will be exchanged quarterly.** Dosimeters should be changed by the 8th day of the **designated months** and should be brought to the program office for exchange.

RADIATION PROTECTION POLICY

The goal of radiation protection is to limit the probability of radiation induced diseases in persons exposed to radiation and in their descendants to a degree that is acceptable in relation to the benefits from the activities that involve such exposure. Each student is required to exercise sound radiation practices at all times to insure safe working conditions for physicians, staff, faculty, other students and patients. Failure to comply with the Radiation Safety Standards may be grounds for disciplinary action or dismissal from the Program.

RADIATION SAFETY STANDARDS

1. Dosimetry

Students in the Medical Imaging Program shall be issued dosimetry in accordance with Emory's "Occupational Exposure and Personnel Monitoring Program." (http://www.ehso.emory.edu/content-guidelines/OccupationalExposure_PersonnelMonitoring.pdf) Accordingly, students will be assigned collar and body dosimeters for administrative purposes, unless screening review shows an ALARA level has been received. The body dosimeter shall be worn on the inside of the lead apron and the collar dosimeter shall be worn on the outside of the lead apron near the head.

Dosimeters are obtained from the Program faculty at the beginning of each quarter. Dosimeters must be returned to the Radiation Safety Officer by the tenth day of each quarter and it is the student's responsibility to exchange the dosimeters in the Program office by the 8th day of the designated month. Failure to turn in both dosimeters by the required date may result in disciplinary action and the assessment of a late fee.

Dosimeters will be processed on a scheduled quarterly basis. The handling and processing of dosimeters is the responsibility of the Radiation Safety Officer. In the event that an overexposure is suspected, it is the responsibility of the student to notify Program faculty and the Radiation Safety Officer.

Permanent records of dosimeter readings will be maintained by the Radiation Safety Officer. The Program will keep exposure records for each student during their tenure in the program. All students will be required to initial dosimeter reports on a quarterly basis. Students may request access to their records at any time. Should any student receive more than 125mR per quarter, the student will be immediately counseled by a Program faculty member regarding radiation protection practices. An annual report of exposure will also be provided to each student by the Radiation Safety Officer.

In order to identify workers or students at most risk of exceeding radiation exposure limits, quarterly investigational levels have been established. These levels are called "ALARA Levels", named after the basic radiation safety principle to always keep your exposure as low as reasonably achievable. There are two levels for each exposure limit; ALARA level 1 and ALARA level 2.

ALARA Investigational Levels

Quarterly ALARA Investigational Levels		
	Level 1	Level 2
Whole Body	>125 millirems	>375 millirems
Lens of Eye	>375 millirems	>1125 millirems
Skin/ Extremities	>1250 millirems	>3750 millirems
Fetal	none	>50 millirems/month

The Radiation Safety Officer will notify any worker who receives an exposure in excess of ALARA 1. If the exposure exceeds ALARA 2, then the Radiation Safety Officer will investigate in order to determine whether or not additional measures can or should be taken to reduce the exposure.

Lost or damaged dosimeters must be reported immediately to the Program faculty. A replacement dosimeter will be obtained from the Radiation Safety Officer as soon as possible. Students who repeatedly lose or damage their dosimeters will be assessed a fee for each dosimeter damaged or lost.

2. Use of Radiation-Producing Equipment

Students shall follow the guidance in the Emory Healthcare "Radiation Safety Policy for Use of X-rays, Computed Radiography (CR), Digital Radiography (DR) and Fluoroscopy on Patients and Human

Subjects.” Accordingly, protective (lead) aprons shall be worn by students within the room during mobile radiography, radiography, and fluoroscopic procedures, both within the laboratory and within the clinical environment.

- The operator must keep exposures as low as reasonably achievable and must use minimum exposure factors necessary for the exam being performed. Fluoroscopic work shall be performed in the minimum time possible using the lowest dose rate and the smallest aperture consistent with clinical requirements.
- The operator must never expose themselves to the direct beam, and must not stand within one meter of the tube or irradiation target while the unit is in operation unless adequately shielded. The operator must make full use of protective barriers, lead aprons, gloves and lead glasses whenever practical.
- The student must not hold image receptors during an exposure.
- The student must not hold patients during an exposure.
- The hand of the operator should never be placed in the useful beam unless the beam is attenuated by the patient and a protective leaded glove is worn.
- During the operation of mobile and dental units, the operator should stand as far as possible from the tube and patient during exposure, and should wear a protective apron, or step behind an adequate shield.
- Rotation of operators or the use of portable shields is recommended for heavy workloads.
- Shutter mechanisms and interlocking devices should not be tampered with and shall be inspected at frequent intervals to insure proper operation.
- The operator should insist that all nonessential personnel leave the exposure area before operating the unit and that all essential personnel be adequately shielded.
- The operator must observe any restrictions in the use of the x ray machine recommended by the Radiation Safety staff.
- The operator must notify their supervisor and the Radiation Safety Officer immediately of any accidental exposure to radiation to staff.
- The useful x-ray beam shall be limited to what is necessary for the examination being performed and shall in no instance exceed the dimensions of the image receptor. Evidence of proper collimation and/or shielding should appear on all radiographs.
- The cumulative radiation timer is to be reset at the beginning of each fluoroscopic procedure. Thereafter, it will be reset only after it has completely run out of time and the audible signal has sounded.
- Students shall not take exposures on another student in the laboratory or clinical site.
- Students must perform all procedures under direct supervision until competency has been achieved.
- Students must perform all repeat images under the direct supervision of a registered radiographer.
- A minimum of indirect supervision is required on all procedures for which the student has proven competency.

3. Pregnancy

- A. Patients: Emory Healthcare Imaging Services Policy: All females of child-bearing age will be questioned regards pregnancy prior to appropriate radiologic exams or procedures. In Interventional Radiology these data will be charted in the Plan of Care document. All other areas will document these data in the RIS and / or the pregnancy questionnaire. Students will notify the supervising technologist and physician of pertinent information and will follow the protocol of the clinical site in documenting the information.
- B. Students: Students will operate in accordance with the Medical Imaging Program Pregnancy Policy.

REPEAT POLICY

Any repeated projection must be performed under the **direct supervision** of a registered technologist. To minimize radiation exposure to the patient, the technologist must observe the student to insure that the projection being repeated is performed correctly.

Students must document in Trajecsys under Case Log any projection that they are responsible for that requires a repeat. The technologist must verify that they watched and assisted the student with the repeated image. Repeat numbers will be checked periodically by the faculty.

Repeat documentation shall include the date, the patient's identification number, the projection(s) repeated, the reason for the repeat, and the technologist's verification. It is expected that while learning and gaining proficiency in performing general diagnostic exams, students will perform repeat images due to errors in positioning, centering, exposure etc. In the event that the student logged zero repeat images over the course of a clinical rotation at a site, the student will provide to the Clinical Coordinator an attestation of such on the required form signed by their supervising technologist (s) at that site. Failure to provide documentation regarding repeats will result in a 10 point deduction from the organization grade.

Failure to comply with the repeat policy is a violation of supervision requirements. The first offense will result in a written reprimand; additional incidents will result in suspension and dismissal from the program of study.

TRANSPORTATION POLICY

Transporting patients is an important task expected of all allied health professionals including radiographers. It requires acquired knowledge and skills. Students may transport patients by all the various means such as wheelchair and stretcher. However, patient transportation should not dominate students' daily clinical activities and should not cause students to miss the performance of radiographic procedures. Students are expected to employ proper body mechanics and standard precautions. Students must be familiar with the emergency procedures and phone numbers of the facility in the event an emergency situation arises during transport.

Until a student demonstrates the proper techniques and skills required to safely transport patients by the various modes of transportation (wheelchair, stretcher, etc.) and general knowledge of the facility, all patient transportation shall be carried out under the direct supervision of qualified registered radiographer (R.T.A.R.R.T), registered nurse (RN), or other qualified healthcare professional. In addition, students **MUST** be directly supervised and assisted in transporting all ICU patients and patients on a respirator.

Once a student has demonstrated the skills and knowledge necessary, they may transport patients without direct supervision provided a technologist, nurse, or other qualified healthcare professional has reviewed the patient's status and mode of transportation with the student and determined such transport is within the student's abilities. Under no circumstances is a student to transport an ICU patient or an intubated patient without supervision and assistance. Students may transport patients on oxygen and with infusion pumps. However, should an infusion pump alarm during transport the student should be able to contact a nurse or other responsible individual for immediate assistance.

SAFETY POLICIES – MISCELLANEOUS

Students are required to adhere to all safety policies of the clinical education settings and the program facility. **Adherence to safety policies includes avoiding the direct beam, therefore, students must never hold patients nor the image receptor during an exposure.** Safety training is discussed and evaluated in didactic classes and during orientation.

In addition, students will be required to know emergency codes, phone numbers, crash cart locations, fire

extinguisher locations, fire alarm locations, and evacuation routes. Students will carry code cards on their person at all times in the clinical setting. Emergency Code cards will be provided by the program. Students must be prepared for emergencies.

Students will also hold current certification in BLS CPR for the duration of the program. Students must provide a copy of their card before they will be allowed to begin clinical. All students are responsible for re-certifying before their expiration date. Students whose certification expires may not attend clinical.

Students will be evaluated on safety policies throughout the program of study.

Risk Reduction Tips:		
Stay alert, trust your instincts, and be aware of your surroundings.		
If something or someone makes you uneasy, move toward a place where there are other people.		
Walk in a group, or at least with one other person, whenever possible.		
Use well-lit and well-traveled areas.		
Use the safety escort services.		
Do not leave valuables (cell phones, laptops, etc.) unattended or exposed to public view.		
Program emergency numbers in your cell phone.		
Report suspicious behavior to the police immediately.		
Call the appropriate number below if you ever feel that your safety or that of others is compromised, to report information about a crime under investigation, or to access resources available for survivors of sexual assault.		
Emergency and Safety Escort Telephone Numbers		
Safety Escort Services	Emory University SafeRide Program	404-727-7555
	Oxford College of Emory University	770-784-8377
	Emory University Hospital Midtown	404-686-2597
	Emory University Orthopedics and Spine Hospital	404-831-4207
	Emory John's Creek Hospital	678-474-8132
	Emory St. Joseph's Hospital	678-843-7568
	Emory Grady Area Campus	404-557-8106
	The Carter Center	404-420-5106
Emergency Contacts	Emory Police Department	404-727-6111
	Emory Police Department at Midtown	404-686-4357
	Emory Police Department at Oxford	770-784-8377
	All Other Police Agencies	9-1-1
To Report Information Related to a Crime Under Investigation		
Emory Police Department	All Locations	404-727-6111
Other Agencies	Atlanta Police Department	404-577-8477
	DeKalb County Police Department	770-724-7850
	Gwinnett County Police	770-513-5390
	Johns Creek Police Department	678-474-1600
	Newton County Sheriff's Department	678-625-1400
	Oxford (City) Police Department	770-788-1390
	Sandy Springs Police Department	678-551-6900
Resources for Survivors of Sexual Assault		
Emory	Counseling and Psychological Services (CAPS)–Atlanta Campus	404-727-7450
	Title IX Coordinator for Students	404-727-7195
	Respect Program, Office of Health Promotion	404-727-1514
	Student Health Services – Atlanta Campus	404-727-7551
	Oxford College Campus Life	770-784-8391
	Student Health and Counseling Services-Oxford Campus	770-784-8394
	Institutional Equity and Inclusion	404-727-2611

	Faculty Staff Assistance Program	404-727-4328
	Help Line (confidential, staffed by students)	404-727-HELP
	http://sexualmisconductresources.emory.edu/	
DeKalb County	Day League (formerly DeKalb Rape Crisis Center)	404-377-1428

SECTION IX: TRAJECSYS

Students are required to keep track of most of their clinical records on Trajecsyst. www.Trajecsyst.com

Records will be tracked via the web.

- **Time Tracking – Semesters I - VIII**
- **Student Clinical Evaluations – Semesters II - VIII**
- **Evaluations of the Clinical Sites– Semesters II - VIII**
- **Checklists– Semesters I - VIII**
- **Patient Prep – Semester I**
- **Patient exams– Semesters I - VIII**
- **Prerequisites– Semesters II - VIII**
- **Competencies– Semesters II - VIII**
- **Interval Checks– Semesters III – VI**
- **Vital Signs – Semesters II – IV**
- **Repeats – Semesters II – VIII**
- **Others may be added**

TIME TRACKING (Clocking in/out)

- Go to www.Trajecsyst.com
- Click on Time Tracking
- Select Proper Clinical location site
- Click Clock in
- If there is no CI available at your site when you are ready to clock in you must call the faculty member that is assigned to your site and leave them a voicemail that you are clocking in. You must still clock in on Trajecsyst after you leave the voicemail.
- Click Clock out at the end of your clinical shift.
 - If the CI you clocked in with in the morning is not available when you are clocking out find another CI to clock out with (enter their name in the comment about the shift section).
 - If no CI is available to clock out with you call the faculty that is assigned to your site for you to clock out with and leave them a voicemail.
 - Must clock out on Trajecsyst as well after you call the faculty.
- The clinical preceptor you clocked in with will verify your time. You should check weekly to make sure your time got verified by a supervisor. If the time tracking calendar has a U on the time records page, that means your time is still requiring approval. If it has an A that means your time got approved by the supervisor.

ORIENTATION CHECKLISTS & STUDENT EVALUATIONS OF CLINICAL

To Initiate Orientation Checklists/Student Evaluations of Clinical

- Go to www.trajecsyst.com
- Click on Evaluations

- Click on Clinical Orientation Checklist
- Select Site
- You may complete the form and submit at that time or save for later. You will find the pending evaluations under Evaluations.
- Click edit Evaluation to re-open it to complete evaluation and to submit it.

APPENDIX A

Wheelchair/Stretcher Chest

Fig. 1



Fig. 2

