

Maine College of Health Professions

Education that Enriches Lives

2020-2021
Medical
Imaging Student
Handbook

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Introduction

Welcome

Welcome to the Medical Imaging Programs at the Maine College of Health Professions! You are now a member of a small group of students who are about to begin an educational program dedicated to educating medical imaging technologists of high professional and technical caliber. The Medical Imaging Programs include the Clark F. Miller Radiologic Technology, Computed Tomography, Diagnostic Medical Sonography, and Mammography Programs.

The college you have entered will provide you with the opportunity to learn, but you must be responsible to use the opportunity to your advantage. The college faculty and staff of the medical imaging departments are always available to help you and facilitate your learning process. We expect you to make the best of all opportunities for learning. We cannot learn for you.

Students are responsible for abiding by the policies and procedures located in the College Student Handbook available to all students of the college on the website. This information provided in this Medical Imaging Student Handbook will complement the information found in the College Student Handbook and provide details specific to students enrolled in the Medical Imaging Programs.

The purpose of this handbook is to provide you with a guide to program policies, procedures, philosophy, organization, and other information. You should be able to find answers to many of your questions. If you need further information, please feel free to speak with the dean, assistant dean, or faculty. It is essential that you read, understand, and abide by the policies presented.

The college reserves the right, with due notice, to change or suspend any portion of the information contained in this student handbook.

Accreditation

The Clark F. Miller Radiologic Technology Program is accredited by the Joint Review Committee on Education of Radiologic Technology (JRCERT). The JRCERT promotes excellence in education and enhances quality and safety of patient care through the accreditation of educational programs. The JRCERT is the only agency recognized by the United States Department of Education to accredit educational programs in radiography and radiation therapy. Programs accredited by the JRCERT must demonstrate that they are in substantial compliance with the relevant JRCERT accreditation standards. These Standards may be found on the JRCERT web site, www.jrcert.org, or by contacting the JRCERT. Any student with concerns about non-compliance of the Standards may contact the JRCERT.

“Accreditation of an educational program provides students, as graduates, assurance that the educational program will provide them with the requisite knowledge, skills, and values to competently perform the range of professional responsibilities expected by potential employers nationwide. It also assures they will be eligible for licensure in each of the 50 states. By requiring programs to teach the entire curriculum developed by the professional society, the American Society of Radiologic Technology, it also assures students they will have the foundation knowledge to continue to develop as professionals in the various fields of the radiation sciences.” (<http://www.jrcert.org>)

The Joint Review Committee on Education in Radiologic Technology
20 North Wacker Drive, Suite 2850, Chicago, IL 60606-3182
312-704-5300, mail@jrcert.org

The Maine College of Health Professions is accredited by the New England Commission of Higher Education.
www.neche.org

Advisory Council Members

The Medical Imaging Advisory Council is comprised of individuals from the medical imaging community: clinical sites, students, and faculty. The Advisory Council will work together in partnership to:

- Strengthen and improve relationships within the medical imaging community.
- Help to inform the direction of the medical imaging programs by identifying trends and innovations in medical imaging and reviewing program outcomes.
- Provide guidance, resources, and support for the operation of the programs and the faculty.
- Communicate relevant information, needs, and concerns to appropriate stakeholders.
- Support the programs through various activities, including assisting in publicizing and promoting Maine College of Health Professions Medical Imaging Programs and efforts.

Bachelor Degree Options

Upon graduation, graduates may pursue opportunities for advanced degrees including on-line and distance learning. Interested individuals should contact the program dean for more information. The following colleges are examples of colleges that may accept transfer credits; there are many others not listed.

Lewiston-Auburn College

Saint Joseph's College, Windham, ME

University of St. Francis, Joliet, IL

Organizational Structure

- Dr. Monika Bissell, President, Maine College of Health Professions
- Dr. Alexander Clifford, Vice President of Academic and Student Affairs
- Judith M. Ripley, MS, RT(R), Dean
- Julie Branagan, MS, RT(R), Assistant Dean
- Sarah Harradon, MS, RT(R), Didactic Faculty
- Adjunct Faculty
- Clinical Instructors at the Clinical Affiliate Sites
- Medical Imaging Technologists at the Clinical Affiliate Sites
- Medical Imaging Students

MCHP Mission and Vision

College Mission

The Maine College of Health Professions enriches lives through offering outstanding education in the health professions, inspiring student success and lifelong learning. We emphasize interpersonal, inter-professional, and community collaboration, and we prioritize excellence in patient care, student learning, and scholarship.

College Vision

MCHP will provide a supportive, engaging, and effective health professions education for every student, every day. The Maine College of Health Professions will be the college of choice in providing exceptional health professions education in the State of Maine and beyond. We will be known for our individualized educational approach that prioritizes student support and success. Our graduates will be recognized as leaders in their profession, improving the health and well-being of our communities.

An MCHP Graduate

- Is a thoroughly competent practitioner
- Communicates effectively and with confidence
- Demonstrates exceptional compassion
- Thinks critically
- Values and seeks collaboration
- Exhibits best practices in patient safety
- Prioritizes respect in all interactions
- Models superior ethical decision making
- Welcomes and appreciates diversity
- Pursues lifelong learning

Program Mission, Goals, and Philosophy

Program Mission

The Mission of the Clark F. Miller Radiologic Technology Program is to:

- Encourage motivated individuals who are dedicated to pursuing excellence in Radiologic Technology;
- Provide a quality education in Radiologic Sciences with emphasis in Diagnostic Radiography and including all modalities of Medical Imaging;
- Offer educational experiences in the classroom, the campus laboratory, and in a variety of clinical settings with emphasis on exceptional patient care;

- Educate individuals to be competent and knowledgeable technologists who demonstrate critical thinking and effective communication skills.

The Radiography Program's Mission will be achieved by fulfillment of the following Program Goals:

1. Execute effective communication in the medical imaging department to provide quality patient care.
 - a. Students will effectively communicate with patients.
 - b. Students will effectively communicate with co-workers.
2. Demonstrate problem solving and critical thinking skills to evaluate and address a variety of situations in radiologic technology.
 - a. Students will adjust routine techniques and positioning according to the needs of the patient.
 - b. Students will evaluate radiographic images
3. Demonstrate competency in performing radiographic procedures.
 - a. Students will demonstrate effective patient care.
 - b. Students will produce quality radiographic images.
4. Devise a plan for professional development and growth.
 - a. Students will explore advanced education or supplemental modalities of medical imaging.
 - b. Students will identify resources for professional development
5. Graduates will achieve national certification in radiography.
 - a. Students will successfully complete the program.
 - b. Graduates will successfully pass the ARRT examination.
6. Graduates will become employed in radiologic technology within six months of program completion.
 - a. Graduates who are actively seeking employment will be employed in medical imaging.
 - b. Graduates will be satisfied with their education.
 - c. Employers will be satisfied with the quality of graduates.

The mission of the Computed Tomography Program is to:

- Encourage motivated individuals who are dedicated to pursuing excellence in Computed Tomography;
- Provide a quality education in Computed Tomography;
- Offer educational experiences in the classroom and in a variety of clinical settings with emphasis on exceptional patient care; and
- Educate individuals to be competent and knowledgeable computed tomography technologists who demonstrate critical thinking and effective communication skills.

The CT Program's Mission will be achieved by fulfillment of the following Program Goals:

1. Execute effective communication in the medical imaging department to provide quality patient care.
2. Demonstrate problem solving and critical thinking skills to evaluate and address a variety of situations in CT.
3. Demonstrate competency in performing CT procedures.
4. Devise a plan for professional development and growth.
5. Graduates will achieve national certification in CT.
6. Graduates will become employed in CT within six months of program completion.

The Mission of the Diagnostic Medical Sonography Program is to:

- Encourage motivated individuals who are dedicated to pursuing excellence in Diagnostic Medical Sonography;
- Provide a quality education in Diagnostic Medical Sonography;
- Offer educational experiences in the classroom, the campus laboratory, and in a variety of clinical settings with emphasis on exceptional patient care; and
- Educate individuals to be competent and knowledgeable sonographers who demonstrate critical thinking and effective communication skills.

The DMS Program's Mission will be achieved by fulfillment of the following Program Goals:

1. Execute effective communication in the medical imaging department to provide quality patient care.
2. Demonstrate problem solving and critical thinking skills to evaluate and address a variety of situations in sonography.
3. Demonstrate competency in performing sonography procedures.
4. Devise a plan for professional development and growth.
5. Graduates will achieve national certification in sonography.
6. Graduates will become employed in sonography within six months of graduation.

The Mission of the Mammography Program is to:

- Encourage motivated individuals who are dedicated to pursuing excellence in Mammography;
- Provide a quality education in Mammography;
- Offer educational experiences in the classroom and in a variety of clinical settings with emphasis on exceptional patient care; and
- Educate individuals to be competent and knowledgeable mammographers who demonstrate critical thinking and effective communication skills.

The Mammography Program's Mission will be achieved by fulfillment of the following Program Goals:

1. Execute effective communication in the medical imaging department to provide quality patient care.
2. Demonstrate problem solving and critical thinking skills to evaluate and address a variety of situations in mammography.
3. Demonstrate competency in performing mammography procedures.
4. Devise a plan for professional development and growth.
5. Graduates will achieve national certification in mammography.
6. Graduates will become employed in mammography within six months of program completion.

Program Philosophy

The art and science of medical imaging is a continually challenging and expanding segment of medicine that requires a medical imaging technologist to have the motivation and education to practice as an active member of the health care community.

The Medical Imaging Programs at the Maine College of Health Professions are dedicated to the principle of providing an educational philosophy that coordinates a broad academic program with well-balanced clinical experiences.

The Medical Imaging Programs are designed to prepare the student to provide services with consideration for human dignity and to apply only those methods of technology founded upon scientific principles.

Students are expected to participate in the educational process by conducting themselves in a manner compatible with the dignity of their profession. They shall exercise and accept responsibility commensurate with their level of training for discretion and judgment in the performance of their activities.

From their inception the Medical Imaging Programs at the Maine College of Health Professions have been dedicated to the goal of educating Medical Imaging Technologists in the art of providing the physician with the information required to diagnose disease and ease the pain and suffering of humanity.

Master Plan

The Master Plan for the Medical Imaging Programs consists of policies and procedures to govern student activity. The Master Plan is available, upon request of the dean, for review by students, faculty, and administrators. The Master Plan includes the following:

- Accreditation
- Program Philosophy/Mission/Program Goals/Student Learning Outcomes
- Organizational Chart
- Curriculum
- Course Descriptions

- Course Objectives
- Course Syllabi
- Required Textbook List
- Class Schedule
- Clinical Competency
- Clinical Schedules
- College Catalog
- College-Wide Student Handbook
- Medical Imaging Student Handbook
- Competencies/Requirements for Graduation
- Learning Assessment and Program Effectiveness Plan
- Confidentiality of Patient Information
- Faculty
 - Job Descriptions
 - Faculty Handbook – available on the L drive MCHP
 - MCHP Policies and Procedures – available on the L drive MCHP
 - CMH Policies and Procedures – CMHC Portal
 - Employee Educational Assistance – CMHC Portal

Academics

Disciplinary Actions

When warranted disciplinary action will be taken. The severity of the infraction, determined at the discretion of the dean, will dictate the action taken.

In general, the student will receive two written warnings, and then be considered for probation or dismissal.

Any student not meeting the terms of the probation will be dismissed from the program. A student may be placed on probation once during the program except in special circumstances.

When warranted, for serious infractions, the dean may, in consultation with the vice president of academic and student affairs, automatically take disciplinary actions including dismissal of the student from the program.

Grievance Procedure

Students have the right to fair treatment by the Faculty and Staff of the College. Any student who feels that he/she has been treated unfairly may follow the student grievance procedure of the college as stated in the College Student Handbook. All students are encouraged to resolve problems informally, if possible, prior to initiating the fair treatment procedure.

Graduation

Upon program completion, graduates are eligible to apply to take the national certification examination for their specialty area of medical imaging. Once nationally certified, graduates may apply for licensure in the state of Maine.

Graduates may work in hospitals, doctors' offices and clinics. They may continue their education in a specialized area of medical imaging or may obtain a bachelor's degree by completing two additional years of college credit.

Professional Organizations

Students are encouraged to join the Maine Society of Radiologic Technologists and the American Society of Radiologic Technologists. Sonography students are encouraged to join the Maine Sonographers Association and the Society of Diagnostic Medical Sonography.

Applications are available upon request from the dean.

Students are encouraged to attend society meetings, participate in student competitions, become involved in society activities, and pursue continuing educational opportunities.

Scholastic Standards

The Scholastic Standards are detailed in the College-Wide Student Handbook. The handbook is available to students on the "Current Students" page on the college website. www.mchp.edu

Clinical

Care of Relatives by Students

No student shall assume responsibility for the care of a relative hospitalized or being cared for as an outpatient in any facility utilized for clinical experience.

Clinical Affiliations

The Medical Imaging Programs have clinical affiliations with the following facilities:

Bangor OB/GYN DMS – More than 1 hour from Lewiston

Bridgton Hospital (BH) all medical imaging programs

Central Maine Medical Center in Lewiston (CMMC) all medical imaging programs

Central Maine Orthopaedics in Auburn (CMO) RAD

Down East Community Hospital (DECH) in Machais RAD - More than 1 hour from Lewiston

Franklin Memorial Hospital in Farmington (FMH) all medical imaging programs

Maine General Health in Augusta and Waterville (MGH) CT, DMS, MAM

Maine Medical Partners Women's Health in Portland (MFM) – DMS

Maine Urgent Care in Topsham (MUC) RAD

Memorial Hospital in North Conway, NH RAD - More than 1 hour from Lewiston

Mid-Coast Hospital in Brunswick (MCH) CT

Northern Light Eastern Maine Medical Center in Bangor including Maternal Fetal Medicine (EMMC) CT, DMS - More than 1 hour from Lewiston

Northern Light Mayo Hospital in Dover-Foxcroft (Mayo) DMS - More than 1 hour from Lewiston

Northern Light Mercy Hospital in Portland, Westbrook, Windham, Gorham, and Yarmouth (Mercy) all medical imaging programs

Portsmouth Regional Hospital in Portsmouth, NH (PRH) CT - More than 1 hour from Lewiston

Rumford Hospital (RH) all medical imaging programs

Southern Maine Health Care in Biddeford (SMHC) CT, DMS

St. Joseph's Hospital in Bangor (St. Joe's) CT, DMS - More than 1 hour from Lewiston

St. Mary's Regional Medical Center in Lewiston (SMRMC) all medical imaging programs

St. Mary's Center of Orthopaedics in Auburn (SMO) RAD

Stephens Memorial Hospital in Norway (SMH) all medical imaging programs

York Hospital in York, ME (York) CT - More than 1 hour from Lewiston

Students will be assigned to clinical rotations throughout these facilities on a rotational basis to be determined by the assistant dean. Student schedules will be posted at least one month prior to the rotations.

Students will abide by all policies and procedures at the assigned clinical facility. The location of these policies will be identified during the orientation to the facility.

Clinical Performance Assessment

Students are evaluated in the clinical practicum component of the curriculum on an ongoing basis. Supervising Technologists complete clinical evaluations on the students' performance on a weekly basis which comprises one-third of the clinical practicum grade. Supervising Technologists complete student clinical competency evaluations each semester as specified by the clinical syllabi. The clinical competency evaluations comprise two-thirds of the clinical practicum grade.

A midterm and final grade report is available to students via the student information system (Sonis). In order to progress in the clinical area, students must complete all competency evaluations and make up clinical time lost each semester as directed by the assistant dean. Students must also maintain a 2.0 GPA in the clinical practicum portion of the curriculum. At midterm and at the end of the semester, a student advisor will meet with any student whose GPA falls below 2.0 or if the faculty is concerned with student progress, to formulate a plan for improvement. Refer to the Academic Warning and Academic Probation Policies in the College-Wide Student Handbook.

CPR Certification

Each student who participates in clinical practice is responsible for continuous CPR certification while the student is enrolled. CPR certification must be a Basic Life Support Provider Course for the Healthcare Professional through the American Heart Association or the American Red Cross. The student must upload documentation of CPR status to the College document tracker program. If CPR certification expires, the student will not be permitted to attend clinical practice until certification is active again.

Criminal Background Checks

Criminal background checks are required for all students enrolled in the Medical Imaging Programs. Students will pay for the cost of the background checks directly to the company performing the background check.

If the background check reveals a relevant conviction, the student may be disqualified from enrollment.

Electronic Access to HIPAA Protected Patient Information

Students may electronically access patient records on their assigned clinical unit during their normally scheduled clinical hours. An exception to this policy will be made for students assigned to CMMC units only when the student's clinical hours are conducted in simulation or other clinically-related activities on campus within the Maine College of Health Professions building.

At no time may students access patient records on any computer other than a network computer associated with the hospital/clinical site to which the student is assigned. The use of personal computers or other electronic devices for accessing patient records is forbidden.

Students reported to have accessed patient records outside their normally scheduled clinical hours or from a computer other than a clinically-assigned hospital/clinical site network computer will be dismissed from the Maine College of Health Professions.

Exposure to Blood & Body Fluids

Purpose

1. To provide guidelines for students exposed to blood or body fluids.
2. To define the term exposure as it applies to this policy as "a person's contact with any body substances from another human being."

Procedure for the Exposed Student to Follow IMMEDIATELY

If you experience: An exposure to blood or body fluids such as; a needle stick, splash of blood or body fluid onto/into mucous membranes (eyes, mouth, etc.) or open skin, or other blood or body fluid exposure, you must:

1. Wash the affected area with soap and water immediately.
2. Flush mucous membranes with water immediately.
3. Notify your supervisor/instructor immediately after washing and flushing.
4. Have your supervisor/instructor immediately notify the Nursing Supervisor so that the source information can be collected in a timely fashion.
5. Report immediately to your healthcare provider or to the Emergency Department. The student's accident insurance may be used to defray expenses related to this incident.
6. The supervisor/instructor must fill out an Incident Report immediately according to the clinical site policy. Make sure the brand of needle/sharp is identified on that report. OSHA requires it.

By following these steps, you will receive appropriate treatment at the appropriate time.

Early intervention is imperative. For your safety and well-being, do not wait to report an exposure... Interventions will begin as soon as you report it! REPORT IMMEDIATELY!

Medical Imaging Clinical Attendance

The college is founded upon a commitment to learning on the part of both faculty and students. When students accept membership in the educational community of this college, students also accept responsibility and accountability to be present for all required teaching/learning activities.

Clinical experience is defined as time scheduled in a designated patient care area, clinical post conference, interprofessional education, or alternative clinical experience.

The Medical Imaging students will attend clinical experiences as scheduled. Good work habits must be formulated early and practiced. Proper attendance in the Program will allow student technologists the opportunity to learn at the designated level in the program and reinforce good work habits for accountability to patients and future employers. Medical Imaging students demonstrate enthusiasm in their education by being ready and available when scheduled.

Students are scheduled for a specific number of educational hours/semester as part of their clinical practicum. Clinical competencies are assigned during each semester as outlined in the radiology student handbook. Students must complete the clinical competencies during the semester assigned.

Students will clock in and out of their clinical rotations through Trajecsyst (www.trajecsyst.com) using the facility computer. It is the expectation that when the students are clocked in they are in the clinical area and ready for the clinical rotation.

Clinical Absences

Students will be allotted clinical absences as follows:

- 240 hours or less scheduled clinical hours/semester – 8 hours of allotted clinical absence
- Greater than 240 clinical hours/semester – 16 hours
- For Example:
 - RAD 130 requires 240 clinical hours, therefore a student is allotted 8 hours of clinical absence
 - RAD 180 requires 360 clinical hours, therefore a student is allotted 16 hours of clinical absence
 - CT 340 requires 240 clinical hours, therefore a student is allotted 8 hours of clinical absence

Any additional clinical absences must be made up. Scheduled clinical absences may be made up during the semester. Unscheduled clinical absences will result in the student receiving an incomplete in clinical practicum.

Students unable to complete semester requirements (missing more than the allotted time and incomplete clinical competencies) by the end of the semester will be given an incomplete in clinical practicum and will follow the “Student Receiving an Incomplete in a Course” policy.

Scheduled Time Off

Students should strive to schedule appointments outside of program hours. If it is imperative that the student make an appointment during time scheduled in the program, the student should seek approval at least one week in advance from the Assistant Dean or Dean.

Students are scheduled for a specific number of weekend hours each semester. Due to the unique nature and limited frequency of these rotations, students may not use their allotted clinical absences.

The students are responsible for notifying their clinical site in advance of any changes to the schedule.

Unscheduled Absence

An unscheduled absence is defined as an absence from clinical, in excess of the allotted clinical absences per semester, without one week prior notification. Each student is responsible for making their own notification of clinical absence. Notification of clinical absence will be directed to the Assistant Dean (795-2429) and to the clinical site prior to the student's scheduled clinical experience.

Late Absences in Clinical

Students are expected to be on time for clinical experiences. If the student will be more than five minutes late for a clinical assignment, they will call in to the Assistant Dean (795-2429) and to the clinical site prior to the scheduled start time informing personnel that they will be late. Students will clock in through Trajecsyst upon arrival to the clinical site.

Long Term Clinical Absence

Once during the two years, in the case of student illness or family catastrophe resulting in five or more consecutive calendar days missed, the student will be excused from clinical during this five day period. In the case of student illness,

to qualify for this excused absence, the student must present a note from the attending physician to the Dean. In the event of a major family emergency, the student should request the leave from the Dean.

Inclement Weather

Students will abide by the Inclement Weather Policy of the College.

In addition to college closures, Medical Imaging Students will be allotted 16 hours annually to be used in the case of inclement weather. Students may determine that the travel is unsafe and notify both Assistant Dean and their clinical site that they will not be in. This would include missing an entire clinical day, arriving late to the clinical site, or early departure from the clinical site because of inclement weather. Any hours not used will be forfeited.

Unauthorized Absence

Unauthorized absence results when a student fails to notify the Assistant Dean as required in advance of their inability to report as scheduled for a clinical experience. Unauthorized absence will result in disciplinary action. Unauthorized absence for five continuous days may result in the immediate dismissal of the student. Extenuating circumstances will be taken into consideration.

Notes:

- Student attendance and absences will be tracked to identify trends in poor attendance. The Assistant Dean or Dean will speak with any student who begins to develop a pattern of poor attendance to develop a plan for improvement. If the attendance pattern does not improve, disciplinary action will be taken.
- Students will log a time exception in Trajecsys for any scheduled or unscheduled absence from clinical.

Medical Imaging Student Clinical Dress Code

All Maine College of Health Professions imaging students must adhere to the following dress code during all assigned clinical experiences:

- All Medical Imaging students will present a neat, clean, and professional appearance with respect for the comfort and safety of the patients and themselves at all times.
- The complete official uniform is required and must be clean, wrinkle-free and fit appropriately, which includes:
 - Black uniform pants and a white scrub top with the MCHP patch on the left chest;
 - White or black uniform shoes or sneakers;
 - Appropriate undergarments or under layers that are either white or not visible;
 - A solid white or black shirt may be worn under white scrub top;
 - Socks or hose are required and must match the shoe color and be free of runs and holes.
- A white lab coat or scrub jacket with the MCHP patch on the left chest may be worn over the College uniform.
- Shoes must be clean and in good repair. In clinical areas, appropriate footwear consists of a closed toe, fully covered top, and secure heel to provide some protection against injury and exposure to chemicals and fluids. Footwear that presents safety or infection control concerns or loose-fitting shoes of any style are not permitted.
- An appropriate identification name badge is required to be worn above the waist at all times.
- When entering a clinical area to complete research, homework, or lab assignments, a white lab coat or lab jacket with the MCHP patch and appropriate identification name badge must be worn over business casual clothing.
- Small jewelry may be worn, such as wedding bands, plain, smooth, and easily removable rings, small earrings, or necklaces.
- Pierced ears are acceptable and are limited to one or two piercings in each lobe only. No other visible body piercing is allowed.
- Tattoos must be covered whenever possible.
- Light, moderate, and professional make-up may be worn.
- No perfumes, nail polish, artificial nails, nail jewelry, or nail extenders are to be worn.
- Hair, if shoulder length or longer, must be worn up and away from the face.
- Facial hair must be kept clean, neat, and trimmed.
- Medical Imaging Students who work with ionizing radiation must wear their radiation dosimeter at the collar level at all times.

Professional Ethics and Conduct

Medical Imaging Students share the responsibility of observing professional ethics.

Doctors alone have the professional and legal right to diagnose and treat illnesses and injuries.

All information concerning patients or clinical education setting business shall be held in strict confidence and shall not be discussed with persons not involved in a patient's care.

Students are to call patients from the waiting room or public area by their first name and last initial. Should two patients respond, the student will ask the patient their last name in a private area. Students are to ensure they have the right patient for the right exam. Once in the x-ray room, student must use at least two identifiers to confirm a patient's identity, IE. Ask the patient to repeat their full name and state their date of birth. Students must ensure that the patient's clinical symptoms coincide with the physician's order. If there is any question, the student will inform the radiologic technologist and contact the physician to confirm the order.

Students are to address patients (except children) by their title and last name in the patient area, IE. Mr. Smith.

Students are to address physicians by their titles and last names in all work areas, IE. Dr. Jones.

Any student who is guilty of making a disreputable or derogatory comment concerning the clinical education setting practices, physicians, or other personnel, or breaching patient confidentiality, will be dismissed from the program at the discretion of the dean in consultation with the assistant dean and vice president of academic and student affairs.

Student Clinical hours

The majority of the student clinical hours are scheduled during the day, for example 7:30 am to 3:30 pm or 8:30 am to 4:30 pm. All radiology students are required to rotate for evening and weekend clinical rotations. Failure to report on time will be brought to the attention of the assistant dean. Students are expected to record their attendance on a daily basis through the online time and document tracking (Trajecsys).

One half hour is allowed for lunch; the time is determined by the patient workload and will vary. Students are expected to take a lunch break every day.

All students will usually have two 15-minute break periods as the schedule permits. One break is to be taken in the morning and one to be taken in the afternoon. It must be realized, however, that there may be times when the clinical experience will not permit this.

Absence for any reason other than illness requires the approval of the assistant dean or dean. Unexcused absence from a clinical or classroom assignment will result in administrative action.

Off-Hour Clinical Rotations

Students are expected to follow the guidelines listed below for evening and weekend clinical rotations.

- Evenings - A professional atmosphere must be maintained 24 hours a day. When in the clinical setting no social visits or social phone calls are permitted. Students are expected to adhere to the dress code while on evening duty.
- Weekends - The schedule for evenings and weekend coverage will be closely adhered to. Since the scheduling is done for weeks in advance, plans must be made around scheduled clinical assignments. Due to the limited number of weekend assignments, students may not use their personal time to take a weekend shift off. However, under extenuating circumstances students desiring to change weekend assignments must obtain permission from the assistant dean or dean. Any requests for a change in schedule must be made at least 5 days prior to the scheduled shift.

Compensatory Time

Compensatory time is designed to reimburse the radiologic technology student for additional hours spent in the clinical area on weekends. Students using compensatory time are responsible for attending scheduled classes. Requests for specific days off other than those scheduled must be directed to the Assistant Dean or Dean at least 5 days in advance. The compensatory time schedule is as follows:

Saturday	7:30am-3:30pm or noon-8pm
	Preceding Scheduled Clinical Day off
Sunday	7:30am-3:30pm or noon – 8pm

Student Employment

Because of Maine State law, radiologic technology students may not be employed to administer ionizing radiation until successful completion of the program, certification, and licensure.

Students may hold jobs during their education if desired, but the jobs must not interfere with the students' classes or clinical education at the college.

It is recommended that the students are not employed during the first six months of the program. Once the student has adjusted to the program schedule and studying they may better work in outside employment.

Student Injuries in the Clinical Setting

Any student injury occurring in the clinical setting requires the student and faculty/supervisor to follow institutional policy regarding incident reporting.

All student injuries are to be reported to the dean immediately or assistant dean in her absence. Students may complete the incident report with the assistance of the supervising technologist.

Students are not covered by Worker's Compensation. Students may utilize the Emergency Department or their Private Physician and the students are responsible for costs incurred. Expenses incurred due to injury are covered by the accident insurance as specified by the accident insurance policy.

Student Introductions

According to the patient's bill of rights, patients have the right to know who is providing their care. Students will introduce themselves to patients in the clinical area with their name and stating that they are a medical imaging student.

Patients have the right to request that a registered medical imaging technologist perform his/her exam. In that event, the student must notify his/her medical imaging technologist or the supervisor who will find a registered medical imaging technologist to perform the examination.

Use of Phones and Personal Electronic Devices in the Clinical Setting

Students shall not use personal electronic devices in the clinical setting.

Absolutely no patient information, including photos, shall be accessed by or stored in a personal electronic device.

For example:

- Students must not carry their cell phones with them in the clinical setting. They may check their phones when they are on break or at lunch outside of the clinical setting.
- Students may not use their laptop, iPad, or cell phone in the clinical setting to complete homework, check email, or for personal use.
- Students will not take photos in the clinical setting unless approved by the medical imaging supervisor of the facility.

Radiation Protection

Radiation Safety

Purpose: To ensure Radiation Safety for patients, students, and the general public.

1. The Radiation Safety Officer (RSO) shall be appointed by the Dean of the Medical Imaging Programs. The RSO will work in cooperation with the Medical Imaging Administrators and Faculty to ensure adherence to regulations pertaining to radiation safety.
2. Medical Imaging Students will be educated in methods used to keep radiation exposure to patients, self, and the general public As Low As Reasonably Achievable (ALARA). Students are responsible for practicing radiation safety to foster the ALARA concepts.
3. Medical Imaging Students shall abide by the radiation safety policies of their assigned clinical site.
4. Medical Imaging Students will adhere to the radiation safety protocols listed in the Medical Imaging Student Handbook:
 - a. Declaration of Pregnancy
 - b. Dosimetry
 - c. General Policy Statements
 - d. Pregnant Students

Radiation Monitoring and Safety

Purpose: To ensure Radiation Safety for patients, students, and the general public and to promote the appropriateness of Imaging Services.

Gonadal shielding shall be performed on all patients within or below childbearing age unless the shield compromises the diagnostic image.

The radiation field shall be restricted to the area of interest and shall not exceed the dimensions of the image receptor.

Medical Imaging students shall not hold patients during radiographic procedures. Mechanical immobilization devices, a family member, or a non-radiation worker shall be used to immobilize patients.

No persons, other than those required for the radiographic procedure, shall be permitted in the x-ray room during the production of x-rays.

Students shall abide by the radiation safety policies of their assigned clinical site.

Dosimetry

Medical Imaging students who work with ionization radiation shall be required to wear a personnel monitoring device (PMD) during clinical hours.

Some students who may receive significant radiation exposure to the hands or fingers may be required to wear a ring badge.

PMD's must be worn at the collar level, outside any lead apron.

PMD's must be stored in designated areas and not left in x-ray rooms where they could be accidentally exposed.

PMD's shall be exchanged monthly. It is the student's responsibility to exchange the PMD in a timely manner.

The student dosimetry report is reviewed monthly by the Radiation Safety Officer and the Dean. If the student's dosimetry reading exceeds 50 mRem in any month or 125 mRem in any quarter, the dean will schedule a meeting with the student to discuss radiation safety and means to reduce radiation exposure. Any student reading exceeding ALARA action levels will be referred to the Central Maine Medical Center Radiation Safety Committee for follow up and will conference with the program dean to discuss means to reduce radiation exposure.

The student shall review their PMD reading monthly. The PMD reports are circulated to students by the dean and housed in the dean's office.

The student shall notify the dean or assistant dean immediately if the student loses a PMD or if the student is accidentally exposed to primary radiation.

Pregnancy and Maternity Policies

The student is reminded of the fact that radiation is potentially harmful to the fetus and that the maximum permissible dose to the fetus during the entire gestational period is 0.5 rem. This therefore necessitates additional caution when performing certain aspects of clinical practice, such as fluoroscopy, portable radiography, and surgical radiographic procedures in order to ensure protection of the fetus.

Because the fetus is most sensitive to radiation during the first trimester, early confirmation of pregnancy through appropriate laboratory tests is important. If the student does decide to "declare her pregnancy", she will be advised of radiation safety measures in a conference with the radiation safety officer and dean. It is the student's responsibility to inform the dean of the pregnancy or possibility of pregnancy as soon as possible to discuss options available to her.

The student who chooses to "declare her pregnancy" is permitted to attend classes and participate in clinical practice during the pregnancy. The student will be issued a second dosimeter, upon request, to be worn at waist level beneath the lead apron. Clinical assignments will not be changed during the pregnancy as long as the total fetal dose remains below 0.5 rem. However, the student should exercise additional preventative measures when participating in clinical areas that contribute a higher radiation risk or exposure to infectious disease.

If the student's fetal dose exceeds 0.5 rem she will be advised to start her maternity leave immediately. Transfer to a non-radiation area would not be in the best interest of the student's educational requirements.

Maternity leave is usually granted for six weeks. The actual dates of maternity leave will be determined on the advice of the student's attending physician.

The student has several options available to her for re-entry into the program. She may:

1. Attend classes throughout the maternity leave and make up clinical time after graduation provided the length of the leave is not excessive.
2. Take a leave of absence and return to the program the following year at the beginning of the semester in which she leaves, providing there is space in the class.
3. Make up classes with the assistance of the faculty and make up clinical time missed after graduation provided the length of the leave is not excessive.

All options available to the student will be discussed between the dean and the student before the student makes her decision. The student must make up all classes, clinical time, and pass all clinical competencies before she will be eligible to take the national certification exam.

Radiation Protection for Students During Pregnancy

Purpose: To ensure radiation exposure to pregnant students is kept to a minimum, consistent with their tasks in the imaging department.

A student may elect to "declare" her pregnancy. See "Declaration of Pregnancy" Policy. If a student elects to declare her pregnancy, she is advised to inform the dean as soon as possible.

An additional personnel monitor shall be issued for a pregnant individual as soon as possible following notification of pregnancy. The additional dosimeter will monitor the dose to the fetus and shall be worn on the hip area underneath any lead apron or other shield.

The Radiation Safety Officer (RSO) is responsible for monitoring exposure to a pregnant student during the gestational period, and to make suitable recommendations should the exposure level approach 500 mRem.

The maximum permissible dose (MPD) shall not exceed 500 mRem to the embryo or fetus during the entire gestational period.

If the fetal dose exceeds 500 mRem, the student will be advised to start her maternity leave immediately. Transfer to a non-radiation area would not be in the best interest of the student's educational requirements. The student has several options available to her for re-entry into the program after the maternity leave which will be discussed between the dean and the student prior to the maternity leave.

If the fetal dose exceeds 50 mRem in any month during the pregnancy, the dean will schedule a meeting with the student to discuss radiation safety and means to reduce radiation exposure.

The student may revoke the declaration of pregnancy at any time and the revoking of the declaration must be in writing.

Declaration of Pregnancy

The student may make a voluntary declaration of pregnancy. By filling out the Declaration of Pregnancy form, available from the dean, and submitting it to the radiation safety officer.

Maine College of Health Professions must take measures to ensure that the total dose to the embryo/fetus during the entire pregnancy from occupational exposure does not exceed 500 mRem. If, as of the date of declaration of pregnancy, the total dose to the embryo/fetus is 450 mRem or greater, the total dose to the embryo/fetus during the remainder of the pregnancy shall not exceed 50 mRem.

If the fetal dose exceeds 500 mRem, the student will be advised to start her maternity leave immediately. Transfer to a non-radiation area would not be in the best interest of the student's educational requirements. The student has several options available for re-entry into the program after the maternity leave. These will be discussed with the student prior to the maternity leave.

The student may revoke the declaration of pregnancy at any time and that the revoking of the declaration must be in writing.

Radiologic Technology Section

Clinical Competency

In order to measure the student's ability to perform at satisfactory levels of competency, the following clinical competency process has been developed.

1. Students participate in classes and position simulated patients in the lab.
2. Students pass positioning tests; both written and on simulated patients in the lab.
3. Students observe and perform the specific body part under direct supervision in the clinical area.
4. Students request a competency evaluation in the clinical area.
5. Students pass the competency evaluation with a grade of 80 or higher and engage in performance of these radiographic procedures under indirect supervision or go back to step 3 and remedial instruction while obtaining additional experience in the clinical area, and then retake the competency evaluation.
6. Instructors may recommend a challenge competency examination for any student on radiographic procedures in which he or she feels the student has demonstrated a weakness. The student will pass the challenge competency evaluation with a grade of 80 or better. In the event that the student does not pass the challenge competency evaluation with a grade of 80 or better, the student would participate in remedial instruction and student performance would be evaluated on an individual basis. Appropriate action would be taken including possible dismissal from the program as deemed necessary by the dean in consultation with the assistant dean.
7. After passing all competency evaluations, students will take the final competency evaluations in the last semester as directed by the assistant dean.
8. Students pass the final competency evaluations. This is indicative of job entry-level competency. If a student fails the final competency evaluation, he/she takes part in additional instruction and then retakes only the competency or competencies failed.

In order to perform radiographic examinations in the clinical setting, students must first pass both the written test in the classroom and practical test in the simulation lab. Once the student has passed these tests, they may perform the examination under the direct supervision of the radiologic technologist. Once the student has passed a competency test in the clinical setting, they may perform the examination under indirect supervision. (Refer to the Clinical Supervision section in this handbook.)

Students must demonstrate competence in all 37 of the American Registry of Radiologic Technologists (ARRT) mandated procedures. Procedures should be performed on patients; however, up to eight mandatory procedures may be simulated if demonstration on patients is not feasible. Students must receive a grade of "80" or better on each competency evaluation.

Students must demonstrate competence in 15 of the 34 ARRT identified elective procedures. Students must select at least 1 of the 15 elective procedures from the head section. Students must select either upper GI or contrast enema plus one other elective from the fluoroscopy section as part of the 15 electives. Elective procedures should be performed on patients whenever possible; however, if demonstration on patients is not feasible, electives may be simulated. Students must receive a grade of "80" or better on each competency evaluation.

The following chart is a guideline for completion of all required clinical competencies.

Semester I (September – December) – Students must complete a minimum of 6 competencies		
Chest, adult routine	Abdomen Supine (KUB)	Finger or Thumb
Hand	Wrist	1 Elective
Semester II (January – April) – Students must complete a minimum of 14 additional competencies		
Forearm	Elbow	Humerus
Shoulder	Foot	Ankle
Tibia/Fibula	Knee	Abdomen (Upright)
Clavicle	Transfer of Patient	2 Additional Electives
Care of Medical Equipment		
Semester III (May – August) - Students must complete a minimum of 15 additional competencies		
Femur	Pelvis	Hip
Ribs	Cervical Spine	Thoracic Spine
Chest AP (Wheelchair or Stretcher)	Lumbar Spine	Portable Chest

Geriatric Lower Extremity*	Geriatric Chest, Routine*	Geriatric Upper Extremity*
1 Fluoroscopy Elective or UGI/BE	2 Additional Electives	
Semester IV (September – December) – Students must complete a minimum of 15 additional competencies		
Trauma Shoulder (Scapula Y, Transthoracic, or Axillary)**	Trauma Upper Extremity (Non-shoulder)**	Trauma Lower Extremity**
Cross Table (Horizontal Beam) Lateral Hip	Pediatric Chest (age 6 years or younger)	Portable Abdomen
Cross-Table (Horizontal Beam) Lateral spine	C-Arm Procedure (requiring more than 1 projection)	Surgical C-arm (requiring manipulation around a sterile field)
1 Fluoroscopy Elective (UGI or BE if not already completed)	Sterile and Medical Aseptic Technique	Vital Signs (BP, temp, pulse, resp, and pulse ox)
Venipuncture	2 Additional Electives	
Semester V (January – April) – Students must complete a minimum of 9 additional competencies		
1 Headwork Elective	Portable Extremity	CPR certification
5 Additional Electives	Final Competency	

* Geriatric is considered physically or cognitively impaired as a result of aging.

**Trauma is considered a serious injury or shock to the body and requires modifications in positioning and monitoring of the patient's condition.

Radiologic Technologists at the Clinical Affiliates are responsible for evaluating students for the competency evaluations. The final competency evaluation will be performed in the radiology simulation lab during the final semester.

The student will demonstrate competency in CPR, sterile and medical aseptic technique, venipuncture, transfer of patient, care of medical equipment (e.g., oxygen tank, IV tubing) and vital signs including: blood pressure, temperature, pulse, respiration, pulse oximetry.

In order to progress in the clinical area, students must complete all competency evaluations and make up clinical time lost during each semester. Students must also maintain a 2.0 GPA in the clinical practicum portion of the curriculum. Any student not completing the requirements for the clinical practicum will receive an incomplete. (Refer to the Incomplete Grade Policy in the College-Wide Student Handbook.)

Clinical Supervision

The Medical Imaging Technologists at the clinical affiliates will act as the students' immediate supervisors. Any problems with the clinical schedule or rotation should be discussed with the assistant dean. The assistant dean, clinical instructors, medical imaging supervisors, and dean are available as resources or in the event of a problem in the clinical area. The Medical Imaging Technologist determines the level of supervision required for each student following the guidelines of Direct and Indirect supervision below. Regardless of the level of supervision, all student images must be approved by a technologist before the patient leaves the medical imaging department. The technologist may take over the exam at any point if they think it is in the best interest of the patient.

Direct supervision: A Radiologic Technologist (RT) must be in the same room as the student. The RT must be able to observe the student at all times and assist or intercede immediately in the radiographic examination if, in his/her opinion, the examination is being performed improperly or the continuation of the exam will be potentially harmful to the patient or student.

Students must be under direct supervision when performing the following radiographic exams:

- Exams involving the use of iodinated contrast media.
- Repeat examinations.
- Examinations prior to clinical competency.
- Critical care examinations, IE. ICU, NICU.
- Fluoroscopic examinations prior to the IV semester.

Indirect Supervision: A Radiologic Technologist must be in the adjacent area, within shouting distance, of the student. The RT must be able to free himself/herself from any other responsibilities to offer immediate consultation or direct supervision to a student who after re-evaluation of the tasks involved in the radiographic examination requires additional assistance.

Students are permitted to perform radiographic examinations under indirect supervision if:

- The exam is not restricted by the preceding paragraph dealing with direct supervision.
- The student has passed a clinical competency evaluation on the body part under examination.
- The patient's condition is non-critical.

Students assigned to clinical rotations in the following areas will act primarily as observers and may perform basic tasks assigned by the supervisor of the clinical area. Students shall be under direct supervision when performing all assigned tasks in these clinical areas.

- Computed Tomography
- Mammography
- Interventional Radiography
- Nuclear Medicine
- Radiation Therapy
- Diagnostic Medical Sonography
- Magnetic Resonance Imaging
- Cardiac Catheterizations

Students should not be required to change clinical assignments due to the absence of medical imaging department personnel or other students. However, the student may be required to change clinical assignments to provide proper clinical education. The assistant dean, dean, or clinical instructor in consultation with the medical imaging supervisor will make changes in clinical assignments.

Student Awards

The Clark F. Miller Award for Outstanding Scholastic Achievement is presented by the radiologists to the graduating senior radiography student who has the highest academic grade point average and has during his/her training maintained the highest ethical standards in Radiologic Technology.

The Clark F. Miller Award for Clinical Excellence is presented by the radiologists to the graduating senior radiography student who has the highest cumulative clinical grade point average and has during her/his training maintained the highest ethical standards in Radiologic Technology.

The Joseph Leonardi Student Leadership Award is presented to the graduating senior radiography student who has demonstrated the greatest leadership abilities during the program. The award recipient is determined by secret ballot by the students and faculty of the Radiologic Technology Program.

Computed Tomography Section

Clinical Competency

In order to measure the student's ability to perform at satisfactory levels of competency, the following clinical competency flow chart has been developed.

1. Students must be nationally certified in Radiography, Nuclear Medicine Technology, or Radiation Therapy before program completion.
2. Students must successfully complete Multiplanar Anatomy and Patient Care in CT prior to any clinical rotations.
3. Students must be enrolled in or have previously completed CT Procedures and CT Physics and Instrumentation.
4. Students will observe, assist, and perform CT studies under direct supervision in the clinical area documenting observation and practice.
5. Students request a category competency evaluation.
6. Students pass the category competency evaluation and engage in performance of category examinations under indirect supervision or go back to (c) and remedial instruction while obtaining additional experience in the clinical area, then retake the category competency evaluation.
7. Students must perform at least 3 and a maximum of 5 procedures to verify competency for ARRT examination documentation.

The following are the categories and procedures for the competency evaluations.

- Head, Spine, and Musculoskeletal
 - Head without contrast
 - Head with contrast*
 - Trauma head
 - Vascular head (CTA,CTV)*
 - Brain perfusion*
 - Pituitary fossa*
 - Temporal bones/IACs
 - Orbits
 - Sinuses
 - Facial bones/mandible
 - Cervical spine
 - Thoracic spine
 - Lumbar spine
 - Spinal trauma
 - Upper extremity
 - Lower extremity
 - Shoulder and/or scapula
 - Bony pelvis and/or hips
 - Musculoskeletal trauma
 - Vascular extremity/runoff (CTA/CTV)*
- Neck and Chest
 - Soft tissue neck
 - Vascular neck (CTA/CTV)*
 - Chest without contrast
 - Chest with contrast*
 - HRCT
 - Lung nodule study
 - Low dose lung screening
 - Chest trauma*
 - Vascular chest (e.g., PE, CTA/CTV, aorta)*
 - Heart (e.g., calcium scoring, coronary angiography*)
- Abdomen and Pelvis
 - Abdomen/pelvis without contrast

- Abdomen/pelvis with contrast*
- Liver (multi-phase)*
- Kidneys (multi-phase)*
- Pancreas (multi-phase)*
- Adrenals
- Enterography study
- Appendicitis study
- Renal stone protocol (without IV contrast)
- Abdominal trauma*
- Vascular abdomen (CTA/CTV)*
- Intravenous urogram/IVU*
- Bladder
- Pelvic trauma*
- Vascular pelvis (CTA/CTV)*
- Colorectal studies (rectal contrast)
- Additional Procedures
 - Biopsies
 - Drainages
 - Aspirations
 - Pediatric (12 and under)
 - Arthrography
 - Discography
 - myelography
- Image Display and Post Processing
 - Geometric, distance, or region of interest (ROI) measurements
 - Multiplanar reconstruction (MPR)
 - 3-D rendering (MIP, SSD, VR)
 - Retrospective reconstruction in a new DFOV
- Quality Assurance
 - Calibration checks
 - CT number and standard deviation (water phantoms)

* The use of iodinated IV contrast is mandatory to document this procedure.

Students must document performance of complete, diagnostic quality procedures according to the following requirements:

- A minimum of 25 different procedures out of the 59 procedures.
- Complete a minimum of 3 and a maximum of 5 repetitions on any procedure; less than 3 will not be counted toward the total.
- A minimum total of 125 repetitions is required.
- No more than one procedure may be documented on one patient. For example, if an order requests chest, abdomen, and pelvis scans for one patient, only one of these may be documented for clinical experience documentation.
- Computed Tomography procedures performed in conjunction with a PET or SPECT attenuation correction scan or a Radiation Therapy planning procedure are not eligible for CT Clinical Experience documentation. (www.arrt.org)

CT technologists at the clinical site are responsible for evaluating students for the category competency evaluations.

Any student not completing the requirements during the semester will be given an incomplete. (Refer to the Incomplete Grade Policy in the College-Wide Student Handbook.)

Clinical Performance Assessment

Students are evaluated in the clinical practicum component of the curriculum on an ongoing basis. Supervising Technologists complete clinical evaluations on the students' performance on a weekly basis which comprises one-third of

the clinical practicum grade. Supervising Technologists complete student clinical competency evaluations each semester as outlined above. The clinical competency evaluations comprise two-thirds of the clinical practicum grade.

A midterm and final grade report is available to students via the student information system (Sonis). In order to progress in the clinical area, students must complete all competency evaluations and make up clinical time lost during each semester as directed by the assistant dean. Students must also maintain a 2.0 GPA in the clinical practicum portion of the curriculum. At midterm and at the end of the semester, a student advisor will meet with any student whose GPA falls below 2.0 or if the faculty is concerned with student progress, to formulate a plan for improvement. Refer to the Academic Warning and Academic Probation Policies in the College-Wide Student Handbook.

Clinical Supervision

The CT technologists at the clinical affiliates will act as the students' immediate supervisors. Any problems with the clinical schedule or rotation should be discussed with the dean or assistant dean. The dean, assistant dean, and clinical staff are available as resources or in the event of a problem in the clinical area. The CT Technologist determines the level of supervision required for each student following the guidelines of Direct and Indirect supervision below. Regardless of the level of supervision, all student images must be approved by a technologist before the patient leaves the medical imaging department. The technologist may take over the exam at any point if they think it is in the best interest of the patient.

Direct supervision: A CT technologist must be in the same room as the student. The technologist must be able to observe the student at all times and assist or intercede immediately in the CT examination if, in the opinion of the technologist, the examination is being performed improperly or the continuation of the exam will be potentially harmful to the patient or student.

Students must be under direct supervision when performing the following CT examinations:

- Exams involving the use of iodinated contrast media.
- Repeat examinations.
- Exams being performed for verification of clinical experience.
- Exams prior to successful documentation of clinical competency.
- Critical care examinations, i.e. trauma, ICU, NICU.

Indirect Supervision: A CT technologist must be in the adjacent area, within shouting distance, of the student. The technologist must be able to free himself/herself from any other responsibilities to offer immediate consultation or direct supervision to a student who after re-evaluation of the tasks involved in the CT examination requires additional assistance.

Students are permitted to perform radiographic examinations under indirect supervision if:

- The exam is not restricted by the preceding paragraph dealing with direct supervision.
- The student has passed a clinical competency evaluation on the exam.
- The exam is not being performed for verification of clinical experience.
- The patient's condition is non-critical.

Diagnostic Medical Sonography Section

Clinical Competency

In order to measure the student's ability to perform at satisfactory levels of competency, the following clinical competency flow chart has been developed.

1. Students must be nationally certified in Radiography, Nuclear Medicine Technology, or Radiation Therapy prior to beginning clinical rotations.
2. Students must successfully complete Sonography Lab I prior to any clinical rotations.
3. Students must be enrolled in or have previously completed Sonography Physics & Instrumentation, Sonography of Superficial Structures and Other Procedures, Obstetrical and Gynecological Sonography II, and Sonography Lab II.
4. Students will observe, assist, and perform sonography studies under direct supervision in the clinical area documenting observation and practice.
5. Students request a category competency evaluation.
6. Students pass the category competency evaluation and engage in performance of category examinations under indirect supervision or go back to (c) and remedial instruction while obtaining additional experience in the clinical area, then retake the category competency evaluation.

The following are the categories and procedures for the competency evaluations.

Mandatory Exams	
<ul style="list-style-type: none"> • Aorta • Abdomen Complete • Right Upper Quadrant • Retroperitoneal Complete • Scrotum • Thyroid • Pelvis-Transabdominal • Pelvis-Transvaginal 	<ul style="list-style-type: none"> • First Trimester Pregnancy-Transabdominal • First Trimester Pregnancy-Transvaginal • Second Trimester- Fetal Anatomical Survey • Second Trimester-Fetal Growth • Third Trimester-Fetal Growth • Third Trimester-Biophysical Profile (BPP)
Elective Exams	
<ul style="list-style-type: none"> • Left Upper Quadrant • Prostate • Breast • Cervical Length (transvaginal) • Venous Lower Extremity • Venous Upper Extremity 	<ul style="list-style-type: none"> • Carotid • Paracentesis • Thoracentesis • Pediatric Renal • Appendix • Bladder

Clinical Competency Evaluation Guidelines	
<p style="text-align: center;">DMS 280 Sonography Clinical Practicum I</p> <p>Requirement: Ergonomics Assessment in addition to a minimum of 4 clinical competency evaluations</p>	<ul style="list-style-type: none"> • Ergonomics Assessment • Aorta • Right Upper Quadrant-Basic (i.e. small habitus, “walkie-talkie”, etc.) • Abdomen Complete-Basic (i.e. small habitus, “walkie-talkie”, etc.) • Pelvic-Transabdominal
<p style="text-align: center;">DMS 290 Sonography Clinical Practicum II</p> <p>Requirement: Ergonomics Assessment in addition to a minimum of 6 clinical competency evaluations</p>	<ul style="list-style-type: none"> • Ergonomics Assessment • Retroperitoneal Complete • Scrotum • Thyroid • Pelvic-Transvaginal • Right Upper Quadrant-Advanced (i.e. large habitus, potable, etc.) • Abdomen Complete-Advanced (i.e. large

	habitus, portable, etc.)
DMS 310 Sonography Clinical Practicum III Requirement: Ergonomics Assessment in addition to a minimum of 12 clinical competency evaluations	<ul style="list-style-type: none"> • Ergonomics Assessment • First Trimester-Transabdominal • First Trimester-Transvaginal • Second Trimester-Fetal Anatomical Survey • Second Trimester-Growth • Third Trimester-Growth • Third Trimester-Biophysical Profile (BPP) • 6 – Additional Elective Exams

Supervising Sonographers at the clinical site are responsible for evaluating students for the category competency evaluations.

Any student not completing the requirements during the semester will be given an incomplete. (Refer to the Incomplete Grade Policy in the College-Wide Student Handbook.)

Clinical Performance Assessment

Students are evaluated in the clinical practicum component of the curriculum on an ongoing basis. Supervising Sonographers complete clinical evaluations on the students' performance on a weekly basis which comprises one-third of the clinical practicum grade. Supervising Sonographers complete student clinical competency evaluations each semester as outlined above. The clinical competency evaluations comprise two-thirds of the clinical practicum grade.

A midterm and final grade report is available to students via the student information system (Sonis). In order to progress in the clinical area, students must complete all competency evaluations and make up clinical time lost during each semester. Students must also maintain a 2.0 GPA in the clinical practicum portion of the curriculum. At midterm and at the end of the semester, a student adviser will meet with any student whose GPA falls below 2.0 or if the faculty is concerned with student progress, to formulate a plan for improvement. Refer to the Academic Warning and Academic Probation Policies in the College-Wide Student Handbook.

Clinical Supervision

The sonographers at the clinical affiliates will act as the students' immediate supervisors. Any problems with the clinical schedule or rotation should be discussed with the assistant dean or dean. The dean, assistant dean, and clinical staff are available as resources or in the event of a problem in the clinical area. The sonographer determines the level of supervision required for each student following the guidelines of Direct and Indirect supervision below. Regardless of the level of supervision, all student images must be approved by a sonographer before the patient leaves the medical imaging department. The sonographer may take over the exam at any point if they think it is in the best interest of the patient.

Direct supervision: A Sonographer must be in the same room as the student. The technologist must be able to observe the student at all times and assist or intercede immediately in the Sonographic examination if, in the opinion of the sonographer, the examination is being performed improperly or the continuation of the exam will be potentially harmful to the patient or student.

Student must be under direct supervision when performing the following sonographic examinations:

- Invasive examinations.
- Repeat examinations.
- Exams being performed for verification of clinical experience.
- Exams prior to successful documentation of clinical competency.
- Critical care examinations, i.e. trauma, ICU, NICU.

Indirect Supervision: A Sonographer must be in the adjacent area, within shouting distance, of the student. The sonographer must be able to free himself/herself from any other responsibilities to offer immediate consultation or direct supervision to a student who after re-evaluation of the tasks involved in the sonographic examination requires additional assistance.

Students are permitted to perform sonographic examinations under indirect supervision if:

- The exam is not restricted by the preceding paragraph dealing with direct supervision.
- The student has passed a clinical competency evaluation on the exam.

- The exam is not being performed for verification of clinical experience.
- The patient's condition is non-critical.

Ultrasound Scanning Disclaimer Statement

The clinical and lab components of the sonography program will involve students using ultrasound equipment to scan each other to learn and practice scanning techniques. These ultrasound images are limited and are not intended for diagnostic purposes.

If the student suspects an abnormality is identified, it is the student's responsibility to follow up with their own healthcare provider.

Mammography Section

Clinical Competency

In order to measure the student's ability to perform at satisfactory levels of competency, the following clinical competency flow chart has been developed.

1. Students must be nationally certified in Radiography before program completion.
2. Students must successfully complete Patient Care in Mammography and Image Production in Mammography prior to any clinical rotations.
3. Students must be enrolled in or have previously completed Anatomy, Physiology, & Pathology of the Breast and Mammography Procedures.
4. Students will observe, assist, and perform Mammography studies under direct supervision in the clinical area documenting observation and practice.
5. Students request a category competency evaluation. All mammograms for competency evaluation must be performed on patients (not phantoms or simulation). The first 25 mammograms must be performed under direct supervision.
6. Students pass the category competency evaluation and engage in performance of category examinations under indirect supervision or go back to (c) and remedial instruction while obtaining additional experience in the clinical area, then retake the category competency evaluation.

The following are the categories and procedures for the competency evaluations. This information is taken from the ARRT Mammography Clinical Experience Requirements.

- **Mandatory Procedures**
 - Mammographic Imaging - 25 Supervised Mammograms to meet MQSA requirements
 - Mammographic Imaging - 75 Mammograms (Screening or Diagnostic) addressing the following tasks:
 - Patient Preparation/Education Tasks
 - Mammographic Imaging Tasks
 - Quality Control Procedures – 32 QC procedures - Students will participate* in the performance, evaluation, and recording of the following QC tests according to manufacturer's recommendations and date intervals.
 - 10 Phantom Image Quality
 - 5 Compression Thickness Indicator
 - 5 Visual Checklist
 - 5 Acquisition Workstation Monitor QC
 - 2 Radiologist's Workstation Monitor QC
 - 2 Compression Force
 - 1 Facility QC Review
 - 1 Repeat Analysis
 - 1 Review of Medical Physicist's Annual Survey Report including:
 - Signal-to-Noise Ratio (SNR), Contrast-to-Noise Ratio (CNR), Modulation Transfer Function (MTF), Manufacturer Detector Calibration, Artifact Evaluation, Flat Field, as applicable.
 - Mammographic Image Evaluation – 10 Image Evaluation Cases
 - Students must consult with an MQSA qualified interpreting physician to review at least 10 mammographic cases for breast anatomy, pathology, and image quality, and establish corrective action per EQUIP (Enhancing Quality Using the Inspection Program) regulations.
- **Elective Procedures – 4 Interventional or Special Procedures – Students must observe, assist with, or participate* in at least 4 of the procedures listed below. For any given patient per day, the student may record only one procedure.**
 - Needle Localization (e.g., wire, radioactive seed, magnetic seed, RFID)
 - Localization Imaging (post placement)
 - Surgical Specimen Imaging
 - Breast MRI
 - Breast Ultrasound (e.g., diagnostic ultrasound, biopsy, FNA or cyst aspiration)

- Stereotactic Biopsy with Clip Placement
- Stereotactic Specimen Imaging
- Tissue Marker Clip Placement Imaging
- Breast Implant Imaging
- Diagnostic Mammogram
- Recall from a Screening Mammogram

*Participate means the student will be actively involved in the performance of the procedure even though the student may not have primary responsibility for performing the procedure.

Mammographers at the clinical site are responsible for evaluating students for the category competency evaluations.

Any student not completing the requirements during the semester will be given an incomplete. (Refer to the Incomplete Grade Policy in the College-Wide Student Handbook.)

Clinical Performance Assessment

Students are evaluated in the clinical practicum component of the curriculum on an ongoing basis. Supervising Technologists complete clinical evaluations on the students' performance on a weekly basis which comprises one-third of the clinical practicum grade. Supervising Technologists complete student clinical competency evaluations each semester as outlined above. The clinical competency evaluations comprise two-thirds of the clinical practicum grade.

A midterm and final grade report is available to students via the student information system (Sonis). In order to progress in the clinical area, students must complete all competency evaluations and make up clinical time lost during each semester as directed by the assistant dean. Students must also maintain a 2.0 GPA in the clinical practicum portion of the curriculum. At midterm and at the end of the semester, a student advisor will meet with any student whose GPA falls below 2.0 or if the faculty is concerned with student progress, to formulate a plan for improvement. Refer to the Academic Warning and Academic Probation Policies in the College-Wide Student Handbook.

Clinical Supervision

The mammographers at the clinical affiliates will act as the students' immediate supervisors. Any problems with the clinical schedule or rotation should be discussed with the dean or assistant dean. The dean, assistant dean, and clinical staff are available as resources or in the event of a problem in the clinical area. The mammographer determines the level of supervision required for each student following the guidelines of Direct and Indirect supervision below. Regardless of the level of supervision, all student images must be approved by a technologist before the patient leaves the medical imaging department. The technologist may take over the exam at any point if they think it is in the best interest of the patient.

Direct supervision: A mammographer must be in the same room as the student. The mammographer must be able to observe the student at all times and assist or intercede immediately in the mammography examination if, in the opinion of the mammographer, the examination is being performed improperly or the continuation of the exam will be potentially harmful to the patient or student.

Students must be under direct supervision when performing the following mammography examinations:

- First 25 mammograms performed for competency
- Additional 75 mammograms performed for verification
- Interventional/Special Procedures
- Repeat examinations.
- Exams being performed for verification of clinical experience.
- Exams prior to successful documentation of clinical competency.
- Critical care examinations, i.e. trauma, ICU, NICU.

Indirect Supervision: A mammographer must be in the adjacent area, within shouting distance, of the student. The mammographer must be able to free himself/herself from any other responsibilities to offer immediate consultation or direct supervision to a student who after re-evaluation of the tasks involved in the mammography examination requires additional assistance.

Students are permitted to perform mammography examinations under indirect supervision if:

- The exam is not restricted by the preceding paragraph dealing with direct supervision.
- The student has performed 100 mammograms for verification under direct supervision.

- The exam is not being performed for verification of clinical experience.
- The patient's condition is non-critical and it is a screening mammogram.

Note

All information in this handbook is current at the time of original print / publication.

This college reserves the right, at any time, without notice, to change, modify, cancel / delete any course offerings, requirements governing registration, admission, progression and graduation, tuition fees, calendar, policies and any other regulations related to its student body.