HANDBOOK INDEX

MEDICAL RADIOGRAPHY PROGRAM CODE OF ETHICS

Ethics is the term applied to a health professional's moral responsibility and appropriate conduct toward others. The work of the medical professional requires strict rules of conduct. The physician, who is responsible for the welfare of the patient, depends on the absolute honesty and integrity of the medical radiographer to carry out orders and report mistakes.

The E.M.C.C. Medical Radiography Program Code of Ethics expects the following conduct and behavior from its students.

- The medical radiography student conducts himself/herself in a professional manner, responds to patient needs, and supports colleagues and associates in providing quality patient care.

- The medical radiography student practices ethical conduct appropriate to the profession.

- The medical radiography student acts in an honest and ethical manner in all academic coursework.

- The medical radiography student completes all exams, reports and assignments without cheating and/or plagiarism.

- The medical radiography student respects his or her fellow classmates, instructors, patients, and other health care professionals.

- The medical radiography student adheres to the American Society of Radiologic Technologists Code of Ethics.

A.S.R.T. CODE OF ETHICS

The work of the medical professional requires strict rules of conduct. Radiographers must maintain absolute integrity in the performance of radiographic procedures. It is the responsibility of the student to familiarize themselves with the American Society of Radiologic Technology Code of Ethics.

1. The radiographer conducts himself/herself in a professional manner, responds to patient needs, and supports colleagues and associates in providing quality patient care.
2. The radiographer acts to advance the principal objective of the profession to provide services to humanity with full respect for the dignity of mankind.
3. The radiographer delivers patient care and service unrestricted by concerns of personal attributes or the nature of the disease or illness, and without discrimination, regardless of gender, race, creed, religion, or socioeconomic status.
4. The radiographer practices technology founded on theoretic knowledge and concepts, utilizes equipment and accessories consistent with the purpose for which they have been designed, and employs procedures and techniques appropriately.
5. The radiographer assesses situations; exercises care, discretion and judgment; assumes responsibility for professional decisions; and acts in the best interest of the patient.
6. The radiographer acts as an agent through observation and communication to obtain pertinent information for the physician to aid in the diagnosis and treatment management of the patient, and recognizes that interpretation and diagnosis are outside the scope of practice for the profession.
7. The radiographer utilizes equipment and accessories, employs techniques and procedures, performs services in accordance with an accepted standard of practice, and demonstrates expertise in minimizing the radiation exposure to the patient, self, and other members of the health care team.
8. The radiographer practices ethical conduct appropriate to the profession and protects the patient's right to quality radiologic technology care.
9. The radiographer respects confidence entrusted in the course of professional practice, respects the patient's right to privacy, and reveals confidential information only as required by law or to protect the welfare of the individual or the community.
10. The radiographer continually strives to improve knowledge and skills by participating in educational and professional activities, sharing knowledge with colleagues, and investigating new and innovative aspects of professional practice.

PROGRAM DESCRIPTION

The Medical Radiography Program is a two-year, five-semester associate degree program of study at Eastern Maine Community College. The program integrates scientific concepts into working skills through classroom study and intensive clinical experience. The Medical Radiography Program concentrates on diagnostic radiology, including angiography and computerized tomography. Specialized topics such as nuclear medicine, radiation therapy, sonography, and magnetic resonance imaging are briefly discussed.

Medical radiographers are health professionals who combine technical skills with radiographic and anatomical knowledge to obtain diagnostic radiographs of all parts of the human body. Successful radiographers must have a good working knowledge of human anatomy, radiographic positioning, radiologic physics, equipment operation, and quality assurance. As members of a health care team, radiographers must also understand and apply principles of good patient care and conduct themselves in accordance with medical ethical standards.

The Medical Radiography Program is fully accredited by the national accreditation agency, the Joint Review Committee on Education in Radiologic Technology [JRCERT 20 N. Wacker Drive, Suite 2850, Chicago, Il.60606-3182; Phone # (312) 704-5300; Fax # (312) 704-5304]. Graduates are eligible to sit for the national certification examination administered by the American Registry of Radiologic Technologists (ARRT), and to apply for Maine licensure in radiography.

MEDICAL RADIOGRAPHY PROGRAM MISSION STATEMENT

The mission of the Medical Radiography Program is to provide students with the knowledge and skills to obtain and hold entry-level radiographic positions; develop interpersonal, communication, critical thinking and problem solving skills which enable the students to be contributing members of their profession.

MEDICAL RADIOGRAPHY PROGRAM GOALS & LEARNING OUTCOMES

GOAL #1 STUDENTS WILL DEMONSTRATE CLINICAL COMPETENCE

Students will demonstrate knowledge of imaging principles – technical selection
Students will demonstrate competence in positioning skills
Students will provide patient care essential to medical imaging procedures
Students will demonstrate radiation protection
Students will demonstrate competence in routine surgical procedures

GOAL #2 STUDENTS WILL DEMONSTRATE PROFESSIONALISM

Students will adhere to all program and clinical affiliate policies
Students will demonstrate the importance of life-long learning
Students will demonstrate good attendance and punctuality practices

GOAL #3 STUDENTS WILL DEMONSTRATE PROBLEM SOLVING AND CRITICAL THINKING SKILLS

Students will demonstrate the ability to adapt for the trauma patient
Students will demonstrate the ability to evaluate radiographic images

GOAL #4 STUDENTS WILL DEMONSTRATE EFFECTIVE COMMUNICATION SKILLS

Students will communicate effectively in the healthcare community
Students will demonstrate the ability to convey their ideas using speech, graphics and writing

JRCERT* STANDARDS
FOR
ACCREDITED RADIOLOGIC SCIENCE EDUCATIONAL PROGRAMS

The medical radiography program is based on these accreditation standards:

Standard One: Integrity
The program demonstrates integrity in the following: representations to communities of interest and the public, pursuit of fair and equitable academic practices, and treatment of and respect for students, faculty, and staff.

Standard Two: Resources
The program has sufficient resources to support the quality and effectiveness of the educational process.

Standard Three: Curriculum and Academic Practices
The program's curriculum and academic practices prepare students for professional practice.

Standard Four: Health and Safety
The program's policies and procedures promote the health, safety, and optimal use of radiation for students, patients, and the general public.

Standard Five: Assessment
The program develops and implements a system of planning and evaluation of student learning and program effectiveness outcomes in support of its mission.

Standard Six: Institutional/Programmatic Data
The program complies with JRCERT policies, procedures, and **STANDARDS** to achieve and maintain specialized accreditation.

EASTERN MAINE COMMUNITY COLLEGE
MEDICAL RADIOGRAPHY PROGRAM

RADIATION SAFETY POLICY AGREEMENT

As a student entering the Medical Radiography Program at EMCC, I understand that the field of radiography poses some risk for radiation exposure, and that risks occur when radiation safety measures are not employed. Radiation safety measures that monitor and reduce radiation exposure to patients, students, and radiography personnel are listed below.

My signature at the end of this document indicates my agreement to follow these policies.

Radiation Safety Policies:	**YES**	**NO**
1) Prior to performing any radiographic procedure, the radiographer/student must verify the order of the licensed practitioner or other health care professional authorized to request such procedures.	____	____
2) The radiographer/student must positively identify the patient by 2 means of verification including the patient's full name, date of birth, **and** wristband (for inpatients and ED patients).	____	____
3) The radiographer/student must ask each female patient of childbearing age the first day of her last menstrual period (LMP) and the possibility of pregnancy. If the LMP date is greater than 10 days prior to the radiographic examination, the radiographer/student will review the patient history to determine whether the patient could be pregnant. If there is any question of pregnancy, the radiographer/student will refer to the clinical site's policy on imaging of the pregnant patient.	____	____
4) The radiographer/student must provide ALL patients with maximum lead shielding of the trunk when it does not interfere with the radiographic image.	____	____
5) The radiographer/student must accurately perform the radiographic procedure as ordered by the physician. Procedures must be done in accordance with clinical affiliate specifications.	____	____
6) The radiographer/student must provide collimation to the part being examined, or to the IR size, if appropriate.	____	____
7) The radiographer/student is expected to select a radiographic technique which minimizes the radiation exposure to the patient (ie. appropriate mA, exposure time, optimum kVp, etc.).	____	____
8) The radiographer/student shall not hold patients or image receptors, or ask another radiographer/student to hold patients or image receptors, during a radiographic exposure.	____	____

Radiation Safety Policies:	**YES**	**NO**
9) The radiographer/student may allow non-imaging personnel to hold an uncooperative/incapacitated patient during radiographic exposures. • Assistants must be provided with maximum lead shielding; • Female assistants of childbearing age must be asked the first day of her last menstrual period, and the possibility of pregnancy; • Pregnant women and minors must not assist holding patients during radiographic exposures.	____	____
10) The radiographer/student performing any portable or fluoroscopic procedures must wear a full lead apron. • During fluoroscopy, the radiographer/student must also wear a thyroid shield, and lead gloves (whenever the hands are exposed to the radiation field).	____	____
11) The radiographer/student must wear a radiation monitoring badge at the collar level at all times when at the clinical site, or when performing lab radiographs at EMCC Each month's exposure reports are reviewed by the Radiation Safety Officer at EMMC to assure that students' exposure is within the NCRP guidelines (0.1rem/1mSv annually). Each quarter, the Radiation Safety Officer notifies, in writing, any student whose cumulative quarterly exposure has exceeded one-quarter of the annual dose equivalent limit. (i.e. 25 mrem/0.25mSv for whole body). • The radiographer/student must exchange their radiation monitors at EMMC on the first day of each month; • The student must inform the Clinical Coordinator of any out-of-the-ordinary circumstances which could affect the monitor reading (ie. left in a radiographic room during a procedure, etc.); • The radiographer/student must contact the radiation safety physicist immediately if the radiation monitoring badge is lost/damaged. • Students who exceed the quarterly dose limits listed above must set up a consultation with the Clinical Coordinator. Students may be referred to the Radiation Safety Officer for additional consultations concerning any monthly or quarterly exposure that is excessive. • Students who exceed the annual dose limits listed above must set up a consultation with the Clinical Coordinator. Students will be referred to the Radiation Safety Officer for additional consultations and may be required to defer the clinical education portion of their program until the beginning of the next year.	____	____
12) The radiographer/student has reviewed and understands the Medical Radiography Program Pregnancy Policy (policy may be found in the Medical Radiography Program Handbook).	____	____

Name (printed): _____

Signature: _____ Date: _____

EASTERN MAINE COMMUNITY COLLEGE
MEDICAL RADIOGRAPHY PROGRAM
MEDICAL RADIOGRAPHY MRI SAFETY SCREENING QUESTIONNAIRE

This questionnaire is designated to assist us in determining if it is safe for you to be present during magnetic resonance imaging procedure(s). It is important that you answer all of the following questions.
If you don't understand any questions, please ask for assistance.

1. Do you have a cardiac pacemaker, implanted cardio defibrillator, cardiac wires or stents? Yes No

2. Do you have cochlear or other implants in your inner ear? Yes No

3. Have you ever had any surgery for aneurysm repair? Yes No

4. Have you ever sought medical attention to have metal removed from your eyes? Yes No

5. Have you ever had any surgeries in your lifetime? Yes No
   If yes, please list _____

6. Do you have any surgically implanted metal of any type in your body? Yes No
   If yes, please list _____

7. Do you have hearing aids? Yes No

8. Do you have dentures? Yes No

9. Do you have any stimulators or pumps implanted in your body? Yes No

10. Do you have any body piercings? Yes No

11. Are you wearing a medicine skin patch? Yes No

12. Have you removed all jewelry? Yes No

13. If you are a woman, are you pregnant, or is it possible that you might be pregnant? Yes No

14. If you are a woman, are you currently breastfeeding? Yes No

I certify that I have read and understood the questions asked in this questionnaire and that the above responses are correct to the best of my knowledge. I understand that it is my responsibility to inform the facility of any metal fragments and/or devices that may be in my body and that by failing to do so may cause serious bodily injury or be life threatening. I agree to release the facility and Eastern Maine Community College from any and all liability for any injury.

_____ _____
Student Signature Date

_____ _____
Witness Date

EASTERN MAINE COMMUNITY COLLEGE
PHYSICAL REQUIREMENTS FOR MEDICAL RADIOGRAPHY

In order to successfully complete the Medical Radiography Program and to function as a radiographer in the health care community, the student must be able to:

1) Communicate clearly in English (hearing & speaking) with patients and other health care professionals in all radiographic situations (ie: darkened radiographic rooms, operating rooms with surgical mask in place, in radiographic rooms with background noise, around lead partition in radiographic rooms).
2) Possess sufficient auditory and visual abilities necessary to hear and observe the patient.
3) Discern information from computers, electronic devices, patient charts, and printed documents.
4) Stand/walk for 95% of an 8-hour time period.
5) Possess body strength and flexibility necessary to frequently stoop and bend.
6) Move/walk/run quickly in emergency situations.
7) Transport patients by wheelchair and/or stretcher independently.
8) Transfer patients from wheelchairs to x-ray tables, stretchers to x-ray tables, and vice versa; reach across a stretcher to a distance of 25 inches.
9) Position/move/adjust patients on the x-ray table.
10) Reach the overhead x-ray tube (1 foot - 1 ½ feet above eye level---varies depending on student height) & move the overhead x-ray tube into all positions.
11) Wear a full lead apron (6 - 15 lbs.) for up to a 4-hour time period.
12) Lift a minimum of 45 lbs. to a 3-foot height above ground level.
13) Lift/move/adjust sandbags (5 - 10 lbs. each); or multiple cassettes (2 - 8 lb. total) to be used as part of radiographic imaging.
14) Push non-motorized and motorized portable x-ray equipment (on wheels – approximately 400 lbs.)
15) Push/pull "crash cart" (on wheels – approximately 50 - 70 lbs.)
16) Manipulate small/large objects and push/turn equipment dials.

Students in the Medical Radiography Program must submit to a physical examination in order to be admitted to any clinical internship site.

I understand the physical requirements essential in the field of radiography and feel I am capable of performing the actions as they are listed above.

_____ _____
Student's Name (printed) Date

_____
Student's Signature

EASTERN MAINE COMMUNITY COLLEGE
MEDICAL RADIOGRAPHY PROGRAM

CONFIDENTIALITY STATEMENT

As a medical radiography student participating in patient procedures at Clinical Affiliates, I acknowledge that one of the most serious responsibilities all health care workers assume is the patient's right to privacy. Clinical Affiliate's rules, personal ethics, and legal considerations require that any information concerning a patient's treatment be kept in complete confidence, even from other employees and students unless they require the information to carry out their own duties.

Clinical Affiliates have general rules, and each department may have specific policies and procedures to implement patient confidentiality. It is my responsibility to become familiar with and to make sure I understand and follow those rules, policies, and procedures.

Breaches of patient confidentiality are grounds for immediate disciplinary action and represent cause for the Clinical Affiliates to prohibit my further participation in clinical education at that site.

_____
Signature

_____
Name (Printed)

_____
Date

EASTERN MAINE COMMUNITY COLLEGE
MEDICAL RADIOGRAPHY PROGRAM
DECLARATION OF PREGNANCY

Student _____ DOB _____

Estimated Conception Date: _____ (mm/yyyy)
I have received/reviewed the following information:

- Fetal dose limits
- Individual radiation exposure history
- Radiation protection guidelines and responsibilities
- NRC Regulatory Guide 8.13 *Instruction Concerning Prenatal Radiation Exposure*
- Risk perspective

I understand that as a declared pregnant student, my occupational radiation dose during my entire pregnancy will not exceed 5.0 mSv, with monthly limits not to exceed 0.5 mSv. If I find out that I am not pregnant, or if my pregnancy is terminated, I will promptly inform the Clinical Coordinator/Program Director. I also understand that I may revoke my declaration of pregnancy at any time. I understand my options below and at this time choose to (circle one):

a) The student may remain in all academic and clinical courses. The student will be expected to participate in all clinical assignments for the clinical semester in which she is currently enrolled. The student will be provided with a fetal monitor to be worn at the waist level (under the lead apron).
b) The student may remain in academic courses, but take a leave of absence from the clinical course in which she is enrolled. After delivery, the student must begin to participate in the clinical course (in which she took the leave of absence) within 3 months. Extended leave will be considered on an individual basis.
c) The student may request a leave of absence from the program. Students selecting this option must return to the program within a one year period. Depending on the length of time the student was on leave from the program, she may be required to retake some courses. Re-entry into the program is based on space availability, and is at the discretion of the admission committee.
d) The student may withdraw from the program. Students selecting this option, must complete an application to be considered for re-entry into the program.
e) The student may voluntarily submit a written withdrawal of the declaration. Should this occur, the student will be treated as "not pregnant".

Student Signature: _____ Date: _____

Faculty Signature: _____ Date: _____

I hereby and under my own free will **withdraw** my declaration of pregnancy

Student Signature: _____ Date: _____

Faculty Signature: _____ Date: _____

EASTERN MAINE COMMUNITY COLLEGE
MEDICAL RADIOGRAPHY PROGRAM

STUDENT PROGRAM HANDBOOK REVIEW

The EMCC Medical Radiography Program Handbook/Policy Section has been reviewed, in part, by the Medical Radiography faculty. Any corrections and/or revisions from information as stated in the 2018-2019 edition will be brought to the attention of the students and reviewed for thorough understanding.

I, the undersigned, have read the entire program handbook and understand the program policies and expectations of the Medical Radiography Program. I have reviewed the American Society of Radiologic Technologist Code of Ethics, the JRCERT* Standards of Accreditation, and the national requirements for certification as well as continuing education. I am responsible for all information and policies contained in this handbook.

_____

Student Name (printed)

_____

Student Signature

_____

Program Faculty Signature

_____

Date

*****Joint Review Committee on Education in Radiologic Technology [JRCERT 20 N. Wacker Drive, Suite 2850, Chicago, Il.60606-3182; Phone # (312) 704-5300; Fax # (312) 704-5304].

INDEX – PROGRAM POLICIES

Program policies are placed in alphabetic order in this section

Topic

CELL PHONE POLICY – CLINICAL ASSIGNMENTS

All clinical affiliate sites prohibit the use of electronic devices (cell phones, personal pagers, blackberries, PDAs, etc) while students are participating in clinical assignments. Electronic devices should be turned off & stowed in the student locker or mailbox area. If a student must be contacted during their clinical assignment, he/she should notify the reception desk or program faculty and provide the location (& phone extension) of their assigned area. Any student carrying/using their cell phone in clinical will receive a 1 point deduction from the ethical portion of their clinical grade for the first infraction, a 5 point deduction for the second infraction, three infractions of this policy will result with the student being dismissed from the program.

CERTIFICATION/LICENSURE/CONTINUING EDUCATION

Upon completion of all program requirements, graduates are eligible to take the computed national certification examination administered by the American Registry of Radiologic Technologists (ARRT). Graduates have three (3) opportunities to successfully pass the examination, and be nationally and state licensed.

Upon passing the ARRT examination, all radiographers are required to earn continuing education credits to maintain their ARRT license; requirements for continuing education begin on the first day of their birth month. For example, a graduate with an October birth date who passes their ARRT exam in the summer 2019, must *begin* accruing 24 continuing education credits in the 2-year period beginning on October 1, 2019. For further clarification, contact the ARRT office (612) 687-0048.

CLINICAL PROBATION POLICY

Clinical Pre-probation

Students may be placed on clinical pre-probation when there is a deficiency in any of the following areas: communication skills, radiation protection, ethical standards, professional conduct, performance, initiative/attitude, and critical thinking skills. Students placed on clinical pre-probation will be provided with written documentation as to: the reason for pre-probationary status, the terms that must be satisfied prior to removal from pre-probationary status, and evaluation methods that will be used. Students on clinical pre-probation may perform radiographic procedures in which they have successfully demonstrated competency with indirect supervision. The length of the pre-probationary period will vary depending on the extent of deficiencies.

At the completion of the pre-probationary period, the identified terms will be reviewed using the evaluation methods specified. At that time, the student will either be removed from clinical pre-probation or the student will be placed on full probation.

Clinical Probation
Students may be placed on clinical probation when there is a documented deficiency in any of the following areas: communication skills, radiation protection, ethical standards, professional conduct, performance, initiative/attitude, and critical thinking skills. Students on clinical probation must be supervised by ARRT-certified radiographers **at all times** while performing radiographic procedures.

Students placed on probation will be provided with written documentation as to: the reason for probationary status, specific objectives to be completed before probationary status is removed, and evaluation methods that will be used to determine completion of objectives.

The duration of probationary period will be 20 clinical days (160 hours). Clinical probationary time will not count toward clinical course hourly requirements. At the completion of the probationary period, the probationary objectives will be evaluated using the evaluation methods specified. At that time, the student will either be removed from clinical probation and begin the requirements of the next clinical course, or the student will be dismissed from the program.

It should be noted that if student incompetence becomes apparent after completion of the initial probationary period, the student may be dismissed.

Students have the right to appeal the dismissal decision to the Academic Dean at Eastern Maine Community College.

COMMUNICABLE DISEASE & ILLNESS POLICY

In accordance with Maine state law, all students entering post-secondary institutions must submit immunization records or proof of immunity for rubella, rubeola, tetanus, and diphtheria. In addition, radiography students are tested for tuberculosis during the physical examination prior to the students' admittance to the clinical area.

Students who suspect they have a communicable disease are required to be seen by their own physician for testing and treatment, and provide documentation of such to the Clinical Coordinator. The faculty will determine if the student may participate in clinical education and/or attend classes, and determine the appropriate course of treatment.

Students who are exposed to patients with communicable diseases at the clinical affiliates will be notified and treated according to EMMC Employee Health Office/Infection Control policies.

CREDIT HOUR POLICY – DIDACTIC AND CLINICAL COURSES

The Medical Radiography Program uses the following formulas for calculating credit hours for didactic and clinical courses.

Didactic courses:

1) one semester credit hour for fifteen hours of classroom contact plus necessary outside preparation or the equivalent, normally expected to be thirty hours; or
2) one semester credit hour for thirty hours of laboratory work plus necessary outside preparation or the equivalent, normally expected to be fifteen hours.

Clinical courses:

one semester credit hour for 60 hours of clinical contact plus necessary outside preparation or the equivalent, normally expected to be six hours.

DRESS CODE-CLINICAL ASSIGNMENTS

For all clinical education courses, radiography students are required to wear scrub apparel in accordance with the program clinical dress code. Students **MUST** choose scrub colors from the selection list on the next page. Other colors will not be allowed. It is important to remember – clean scrub uniforms should fit comfortably and loosely. Tight uniforms look unprofessional, are inappropriate, and will not be allowed. Scrub apparel must be wrinkle-free. Hospital rooms and corridors are very well ventilated and tend to be rather cool. Students may order lab coats or warm-up jackets to use as a cover-up. Sweaters are not allowed.

Any style scrub top, pant or jacket/lab coat may be worn with the following exceptions: jumpsuits, walking shorts, jogging-style scrub pants with stripes, scrub tops with contrasting piping/stripes, culottes and scrub vests are not allowed. Scrubs must be worn as they are shown in the catalog using the following guidelines:

- If students wear scrub pants along **with** a lab coat/warm-up jacket, they may wear a scrub top in the matching designated colors from the selection list on the next page. Students may also wear a solid-color shirt (white, or matching color); this shirt must be an oxford, turtleneck, polo/golf, or henley-style shirt. If the student chooses to wear scrub pants **without** a jacket, only the matching scrub top may be worn.
- Plain inconspicuous white T-shirts may be worn under the low-cut scrub tops. The T-shirt sleeves should not be visible below the scrub top sleeves. High-collared shirts, turtleneck and long-sleeved shirts may not be worn under scrub-tops.

With the scrub apparel, students must wear all white or all black socks/stockings (which must cover the entire ankle), and all white or all black professional duty shoes or all white or all black sneakers (no high-top or mid-cut sneakers). Clog-style shoes must have a heel strap to secure the foot in place.

Makeup may be worn in moderation. Students who wish to use nail polish must use clear polish only. Fingernails must be clean, and trimmed to a shorter, professional length (not to exceed 1/8" beyond the fingertip). Artificial nails are not permitted at any of the clinical sites. Out of consideration for the physical condition of some of the radiology patients and staff, perfume/ after-shave must not be used. This is in accordance with hospital policy.

For all students, hair must be neat, clean, and dry when attending any of the clinical sites. Hair must be professional in appearance, and may not limit the field of view.

- For female students, hair in excess of shoulder length that may come in contact with patients (when a student leans forward) must be pulled back or pinned up neatly. Messy buns are NOT allowed. Hair clips, barrettes, and hair bands may be worn if they are professional-looking and fairly inconspicuous. Large and/or brightly-colored hair apparel is not professional. Headbands may NOT be worn with ponytails.
- For male students, hair in excess of chin length must be pulled back. Male students may wear neatly-trimmed, short mustaches and beards; otherwise, they must be clean-shaven in the clinical area. "Fad" facial hair such as chin straps, pikes, bushy/long side burns are not professional in appearance and may not be worn when attending any of the clinical sites.

Some jewelry is permitted: watches, wedding or engagement rings, and small earrings. The following is NOT permitted in the clinical area: dangling, large or multiple earrings (per ear), gauges or plugs, visible body jewelry, facial/tongue jewelry, rings on chains around the neck, pendants or large necklaces, friendship bracelets, and beads. Body tattoos must be covered ***at all times*** when at the clinical internship sites.

Gum chewing is **not** allowed in the clinical setting. Your appearance should be neat, clean, and PROFESSIONAL. To verify their identification, students should always have their hospital ID visible and in place on their lab coat or scrub uniform.

Scrub Color Selection List– all Clinical Assignment except ICME
Solid Colors: Ice Blue, Ceil Blue, Navy/Indigo, Caribbean/Bahama Blue, Powder Pink, Dark Raspberry/Wild Plum/Wine/Merlot, Hunter Green/Deep Sea Green, Seaspray/ Misty Green/Sea Mist/Meadow, Olive and Black.
Short Lab Coats – Can be worn in any of the above matching/coordinated colors, including white.

Imaging Center of Maine (ICME)
For all clinical assignments at Imaging Center of Maine, radiography students are required to wear Navy Blue, Burgundy or Black scrub apparel. White lab coats are required if a student chooses to wear one.

DRESS CODE-HOSPITAL CLASSES

For all radiography classes scheduled at the hospital(s) campus (Wednesday afternoons EMMC), students must dress appropriately for a professional setting. Torn pants, short shorts, halter/midriff tops, and facial jewelry are examples of inappropriate attire. Body tattoos must be covered *at all times* when at the hospital.

DRESS CODE OPERATING ROOM EMMC

Students assigned to the operating room at EMMC must wear hospital provided OR scrubs and lab coats. Students must wear a lab coat during all procedures, earrings must be covered or removed, shoes must be covered, as well as all hair including facial hair. Contact lenses are not allowed during certain cases, so it is better to wear your glasses if you need them. Eye protection is required for all cases so if you don't wear glasses, you may want to invest in a pair of safety glasses or you must wear a mask with the eye shield.

ELECTRICAL HAZARD SAFETY POLICY & PROCEDURE

The Medical Radiography Program is committed to providing a safe and healthy environment for radiography students. Radiography students have the remote possibility of coming in direct contact with electrical hazards as part of their clinical and didactic education. The Electrical Hazard Safety Policy has been developed to provide guidelines for the safe handling of electrical hazards. Electrical hazards include, but are not limited to, the following: frayed and/or severed electrical wires, cords or cables; cracked/damaged plugs, damaged outlets or fuse boxes.

POLICY Students must:

- Verify electrical equipment is in proper working order
- Prevent contact with any appliance/machinery while in contact with a wet surface
- Prevent non-authorized use of extension cords and adaptor plug use

PROCEDURE Students who discover an electrical hazard must:

- Remove any patient or other persons from the immediate area, if safety is a concern
- Isolate the area in which the hazard was found
- Remove defective or inoperative equipment from service
- **At clinical education site:** Report hazard/defective equipment to program faculty/ clinical instructor (973-8153)
- **At college:** Report hazard/defective equipment to program faculty (974-4659) or Facilities Management Director (974-4664)

FIRE EMERGENCY POLICY & PROCEDURE

The Medical Radiography Program is committed to providing a safe and healthy environment for radiography students. When participating in didactic courses at the college and/or clinical education courses at the hospital settings, radiography students have the possibility of involvement in a smoke/fire emergency. The Fire Emergency Policy and Procedure has been developed to provide guidelines for handling a fire and/or smoke emergency.

POLICY Students must:

- Locate fire alarm pull stations located throughout classroom buildings and clinical settings
- Locate portable fire extinguishers
- Identify primary and secondary building evacuation routes

PROCEDURE Students who detect smoke and/or fire must:

- Activate the nearest fire alarm pull station. The fire department will be called automatically.
- Remove any patient or other persons from the immediate area.
- Close any open doors to the affected area.
- Clear hallways of any removable items.
- Exit building using the primary building evacuation route. Should the primary route be blocked by heavy smoke/fire, use the secondary route as indicated on the evacuation map.
- To prevent smoke from entering the stairwells, **all doors must be kept closed.**
- **Do not** attempt to fight the fire unless it appears to be containable; and you are trained in the use of a portable fire extinguisher.
- When using a portable fire extinguisher, stand approximately 10 feet away from fire, pull pin, aim fire extinguisher at base of fire, depress level and sweep in back and forth fashion.

GRADUATION

Upon satisfactory completion of the program, the student is awarded an Associate in Science Degree in Medical Radiography. The graduate is eligible to apply for admission to the national registry examination in radiography. This examination is administered by the American Registry of Radiologic Technologists (ARRT); successful grading on the national examination provides opportunity for radiography employment throughout the United States.

HAZARDOUS MATERIALS SAFETY POLICY & PROCEDURE

The Medical Radiography Program is committed to providing a safe and healthy environment for radiography students. Radiography students have the potential for direct contact with hazardous materials as part of their clinical and didactic education. The Hazardous Materials Safety Policy has been developed to provide guidelines for the safe handling of hazardous materials.

Students will receive hazardous materials safety training designed by the program faculty that includes, but is not limited to, the following: methods of detecting hazardous chemicals in clinical/classroom areas, location of MSDS reference book, MSDS safe handling of materials, and notification of proper personnel.

POLICY Students must:

- Verify storage and labeling of chemical containers; Report missing labels
- Follow safety precautions listed on chemical labels
- Identify location of MSDS book
- Demonstrate safe handling and appropriate clean-up of chemicals/materials

PROCEDURE Students who discover a hazardous material spill must:

- Remove any patient or other persons from the immediate area
- Isolate the area in which the hazardous spill was found
- **At clinical education site:** Notify the program faculty (973-8153) or clinical instructor
- **At college:** Notify the program faculty (974-4659) or Facilities Management Director (974-4664)

HEALTH INSURANCE

All students are *required* to maintain health/accident insurance and to provide proof of this coverage.

HEALTH SERVICES

Prior to beginning this program, the student must submit a medical history and immunization record to the EMCC Health Office. Students will have completed a health physical examination by their physician prior to the program orientation.

The "Infectious Disease Policy" passed by the Maine Community College System requires all Medical Radiography students to be immunized against hepatitis B. The hepatitis B vaccination is a series of 3 immunization shots. The first 2 shots must be received **prior** to the start of clinical training.

Students with health concerns may be seen at the Brewer Medical Center. Appointments to the Brewer Medical Center must be made through Nancy Burns in the Dean of Student Enrollment Office @ EMCC (974-4604).

INCIDENT REPORTS

Any incident that occurs in the clinical area must be reported immediately to the Clinical Coordinator or Program Director. An incident report must be completed within 24 hours following the incident. Reported incidents include: situations that result in injury to patients, hospital personnel, or students; situations that result in damage to equipment; the performance of an incorrect/unordered radiograph on patients; or the performance of an examination on the wrong patient.

INFECTIOUS DISEASE PREVENTION POLICY

The Medical Radiography Program is committed to providing a safe and healthy environment for radiography students. Radiography students have the potential for direct contact with patients with infectious diseases as part of their clinical education. The Infectious Disease Prevention Policy has been developed to foster a safe and healthy environment for all radiography students.

The following immunization and tests are required for radiography students to be allowed in clinical assignments:

- Measles, mumps, rubella (MMR) – after first birthday – unless exempt or serological proof of immunity
- Varicella titer
- Adult type diphtheria/tetanus within the past 10 years
- Purified protein derivative (PPD) – annual testing required
- Hepatitis vaccine with titer and documented immunity

Students' immunization records will be reviewed and recorded by Nancy Burns in the Enrollment Center and Donna McLaughlin, Clinical Coordinator.

Students will receive infectious disease prevention instruction designed by the program faculty. This instruction includes, but is not limited to, the following: information on infectious disease, transmission of infectious disease, disease prevention, use of personal protective equipment, and hand antisepsis. Personal protective equipment refers to gloves, gowns, and eye shields (and the appropriate use thereof). Hand antisepsis refers to hand washing with soap and water or with alcohol-based hand rubs (used only when hands not visibly soiled). Students who suspect they have a communicable disease are required to be seen by their own physician for testing and treatment, and provide documentation of such to the Clinical Coordinator.

Students who are in non-compliance with the required immunizations will not be assigned to clinical education sites. Students are required to use personal protective equipment for identified examinations/situations. Students are required to use hand antisepsis before and after patient contact, after removing gloves, and after contact with a source of microorganisms. Students who come in contact with patients who later test positive for communicable diseases will be notified by the EMMC Employee Health Center and Donna McLaughlin, Clinical Coordinator; appropriate testing and treatment will be scheduled.

JRCERT* STANDARDS – NON-COMPLIANCE POLICY

The Medical Radiography Program at Eastern Maine Community College is accredited by the Joint Review Committee on Education in Radiologic Technology, and uses the above standards as a basis of program development and review. Non-compliance with the JRCERT Standards should be brought to the immediate attention of the Program Director, Room 170/Maine Hall; 974-4659. If the complaint is not satisfactorily resolved in a timely manner, the complainant should contact the accreditation agency directly – Joint Review Committee on Education in Radiologic Technology*.

*****Joint Review Committee on Education in Radiologic Technology [JRCERT 20 N. Wacker Drive, Suite 2850, Chicago, Il.60606-3182; Phone # (312) 704-5300; Fax # (312) 704-5304]. JRCERT.org

LIABILITY INSURANCE

All students are required to purchase liability insurance through EMCC's group plan. This insurance covers students during all clinical assignments for all procedures which have been presented in the classroom.

MRI SCREENING POLICY

Students are required to complete the MRI screening form prior to any MRI rotation. This form will be reviewed with the Clinical Coordinator and the MRI Tech and will be retained in the student record.

PARKING POLICY – CLINICAL ASSIGNMENTS

Students are required to park their vehicles in designated areas when participating in their clinical assignments. Students should park in the Employee Parking Lot for the following assignments: Eastern Maine Medical Center (Wing Parking Lot), St. Joseph Hospital (Parking Lot B), Maine Coast Memorial Hospital, Helen Hunt Health Center and Imaging Center of Maine (employee parking lot).

Students scheduled for **evening assignments** at Eastern Maine Medical Center may park in the West parking Garage (closest to Hancock Street) floors 4 and up.

POCKET PROCEDURE NOTEBOOKS

Students are expected to purchase or make and maintain an up-to-date pocket procedure notebook. These notebooks **must** be in the students' rotational area whenever they are present in the clinical area. Students may purchase a commercial-type procedure notebook, OR keep their notes in a small pocket-size, loose-leaf binder to allow for rearrangement of the notes as the program progresses.
The pocket procedure books may be used as a reference before performing radiographic procedures. This reference guide may not be utilized by the student during the patient exam.

PREGNANCY POLICY

Female students enrolled in the Medical Radiography Program who become aware of their pregnancy may follow several courses of action. This policy is compliant with federal and state regulations and is made known to all female students.

1. The student may voluntarily disclose the pregnancy by completing a declaration form with the Clinical Coordinator or Program Director. At the time the student discloses the pregnancy, additional safety measures are reviewed with the student by the Clinical Coordinator/Program Director, Radiation Physicist, and Radiation Safety Officer.

   The student may then choose one of the following options:

   a) The student may remain in all academic and clinical courses. The student will be expected to participate in all clinical assignments for the clinical semester in which she is currently enrolled. The student will be provided with a fetal monitor to be worn at the waist level (under the lead apron). **
   b) The student may remain in academic courses, but take a leave of absence from the clinical course in which she is enrolled. After delivery, the student must begin to participate in the clinical course (in which she took the leave of absence) within 3 months. Extended leave will be considered on an individual basis.
   c) The student may request a leave of absence from the program. Students selecting this option must return to the program within a one year period. Depending on the length of time the student was on leave from the program, she may be required to retake some courses. Re-entry into the program is based on space availability, and is at the discretion of the admission committee.
   d) The student may withdraw from the program. Students selecting this option, must complete an application to be considered for re-entry into the program.
   e) The student may voluntarily submit a written withdrawal of the declaration. Should this occur, the student will be treated as "not pregnant".

2. The student may choose not to formally disclose the pregnancy. Should this occur, the student will be treated as "not pregnant".

**For the safety of the fetus, the fetal monitor readings and the pregnant students' activities will be regularly reviewed by the program faculty and Radiation Safety Officer. The total dose recorded on the fetal monitor during the gestational period must not exceed 5.0 mSv or 0.5 mSv per 4-week period. The student will be counseled about unsafe practices that may result in exposure to the fetus.

RADIATION SAFETY POLICIES

1. Prior to performing any radiographic procedure, the radiographer/student must verify the order of the licensed practitioner or other health care professional authorized to request such procedures.
2. The radiographer/student must positively identify the patient by 2 means of verification including the patient's full name, date of birth, **and** wristband (for inpatients and ED patients).
3. The radiographer/student must ask each female patient of childbearing age the first day of her last menstrual period (LMP) and the possibility of pregnancy. If the LMP date is greater than 10 days prior to the radiographic examination, the radiographer/student will review the patient history to determine whether the patient could be pregnant. If there is any question of pregnancy, the radiographer/student will refer to the clinical site's policy on imaging of the pregnant patient.
4. The radiographer/student must provide ALL patients with maximum lead shielding of the trunk when it does not interfere with the radiographic image.
5. The radiographer/student must accurately perform the radiographic procedure as ordered by the physician. Procedures must be done in accordance with clinical affiliate Specifications.
6. The radiographer/student must provide collimation to the part being examined, or to the IR size, if appropriate.
7. The radiographer/student is expected to select a radiographic technique which minimizes the radiation exposure to the patient (ie. appropriate mA, exposure time, optimum kVp, etc.).
8. The radiographer/student shall not hold patients or image receptors, or ask another radiographer/student to hold patients or image receptors, during a radiographic exposure.
9. The radiographer/student may allow non-imaging personnel to hold an uncooperative/ incapacitated patient during radiographic exposures.
    - Assistants must be provided with maximum lead shielding;
    - Female assistants of childbearing age must be asked the first day of her last menstrual period, and the possibility of pregnancy;
    - Pregnant women and minors must not assist holding patients during radiographic exposures.
10. The radiographer/student performing any portable or fluoroscopic procedures must wear a full lead apron.
    - During fluoroscopy, the radiographer/student must also wear a thyroid shield, and lead gloves (whenever the hands are exposed to the radiation field).

11. The radiographer/student must wear a radiation monitoring badge at the collar level at all times when at the clinical site, or when performing lab radiographs at E.M.C.C. Each month's exposure reports are reviewed by the Radiation Safety Officer at EMMC to assure that students' exposure is within the NCRP guidelines (0.1rem/1mSv annually). Each quarter, the Radiation Safety Officer notifies, in writing, any student whose cumulative quarterly exposure has exceeded one-quarter of the annual dose equivalent limit. (i.e. 25 mrem/0.25mSv for whole body).

- The radiographer/student must exchange their radiation monitors at EMMC on the first day of each month;
- The student must inform the Clinical Coordinator of any out-of-the-ordinary circumstances which could affect the monitor reading (ie. left in a radiographic room during a procedure, etc.);
- The radiographer/student must contact the radiation safety physicist immediately if the radiation monitoring badge is lost/damaged.
- Students who exceed the quarterly dose limits listed above must set up a consultation with the Clinical Coordinator. Students may be referred to the Radiation Safety Officer for additional consultations concerning any monthly or quarterly exposure that is excessive.
- Students who exceed the annual dose limits listed above must set up a consultation with the Clinical Coordinator. Students will be referred to the Radiation Safety Officer for additional consultations and may be required to defer the clinical education portion of their program until the beginning of the next year.

12. The radiographer/student has reviewed and understands the Medical Radiography Program Pregnancy Policy.

REPEAT POLICY

When retake radiographs are required, an ARRT-licensed radiographer must be **present in the room and must approve the repeat radiograph.** This rule is in effect throughout the students' 2-year program.

SMOKING POLICY – CLINICAL ASSIGNMENTS

All clinical affiliate sites are considered "smoke-free" institutions. Smoking on the clinical site campus is prohibited except in designated "smoking areas". Students who wish to smoke during their clinical assignments must be responsible to learn the smoking policy of the clinical site and adhere to that policy. If a student wishes to smoke during a clinical assignment, he/she may only smoke during their 15-minute break and/or lunch break, must punch out & back in on the student time clock, and may not exceed the overall time of their morning/afternoon break or ½ hour lunch.

SUBSTANCE ABUSE POLICY

The Medical Radiography Program adheres to the Eastern Maine Community College Alcohol and Drug Policy which can be found in the Student Handbook located at: http://www.emcc.edu/wp-content/uploads/2017/12/AJG-EMCC-STUDENT-HANDBOOK-2017-2018-Updated-12-2017.pdf

SUPERVISION OF STUDENTS IN THE CLINICAL AREA

The Program Director and Clinical Coordinator, employed by the College, assume major responsibility for planning, scheduling, directing, supervising and evaluating clinical education. Clinical Instructors, employed by the College and the affiliates, assist the full-time program faculty in clinical instruction. Clinical Competency Raters assist the faculty in evaluating students' clinical competency. ARRT-certified radiographers provide direct/indirect supervision of the students in the clinical setting, as appropriate to the students' level of competency.

Although students may, and are encouraged to, observe any radiographic procedure, they may assist in and perform only procedures that have been presented in the classroom. Until student radiographers have successfully completed the competency tests (procedure and critique), all procedures are directly supervised by staff radiographers (full time, part time, and/or Per Diem radiographers). In addition, all radiographs are approved by a licensed radiographer prior to competency completion.
After successfully completing both the procedure and critique sections of individual competency tests, students may perform those radiographic procedures and evaluate the radiographic images without direct supervision. Radiographer assistance with the procedure and/or image evaluation is always available should the need arise. Students are encouraged to refine skills in all procedures after competency testing, however, they do not take the place of licensed radiographers. Students may perform exams with another student (first or second year) *only* if both students have passed that competency exam.

Direct supervision describes that supervision in which the radiographer is present in the immediate area. **Indirect supervision** describes that supervision in which the radiographer is in an adjacent area and able to assist the student, if needed. During indirect supervision, the proximity of the supervising radiographer is dependent on the critical nature of the procedure.

The JRCERT* Accreditation Committee requires direct/indirect radiographer supervision for students at all times. An ARRT-licensed radiographer must be adjacent to the procedure site when radiographic examinations are performed by a student, even when the student has been deemed competent in the examination. "Adjacent" may be described as an area close enough to assist the student, if necessary.

*****Joint Review Committee on Education in Radiologic Technology [JRCERT 20 N. Wacker Drive, Suite 2850, Chicago, Il.60606-3182; Phone # (312) 704-5300; Fax # (312) 704-5304]. JRCERT.org

WITHDRAWAL FROM THE PROGRAM

Any student planning to withdraw from the program is asked to discuss this decision with the Dean of Students and the Program Director. The student will be asked to complete a form provided by the Dean of Students Office stating the date and the reason for withdrawal.

INDEX – CURRICULUM & GRADING SYSTEM

GRADING SYSTEM

The following grade ranges apply to all courses which begin with an MRT number:

A	93-100	4.0
A-	90-92	3.67
B+	87-89	3.33
B	83-86	3.00
B-	80-82	2.67
C+	78-79	2.33
C	75-77	2.00
C-	72-74	1.67
D+	67-71	1.33
D	63-66	1.00
D-	60-62	0.67
F	0-60	0.00

An academic grade of "C" or better is *required* for all MRT program requirements. An academic grade lower than "C" is considered a failing grade in MRT courses, and will result in the student being dismissed from the program. This policy applies to all MRT courses listed in the program curriculum as stated in the college catalog.

Courses offered by the Math/Science and Humanities departments follow a plus/minus system & may vary by instructor.

A	Highest honors
B	Honors
C	Satisfactory performance
D	Minimal passing grade
F	Failure to meet course objectives

NOTE: An academic grade of "C" or better is *required* for all non-MRT program requirements. An academic grade lower than "C" is considered an unacceptable grade in those courses, and the course must be repeated prior to graduation. This policy applies to all courses listed in the program curriculum as stated in the college catalog.

Requirements for graduation:

- Passed all prescribed courses
- Achieved a minimum *overall* cumulative grade point average of 2.0 (in program courses)
- Achieved a minimum cumulative grade point average of 2.0 in the *program of study* courses
- Payment of all bills

2-YEAR PROGRAM CURRICULUM

First Year

	Fall Semester/21 Credit Total	**Credits**
MRT 111	Radiographic Positioning I	3
MRT 117	Radiologic Procedures I	1
MRT 121	Principles of Rad. Exposure I	2
MRT 131	Medical Terminology	1
MRT 151	Intro. to Health Care	2
MRT 161	Clinical Education I	5
BIO 127	Anatomy & Physiology I	4
MAT 119	College Algebra (can be substituted with MAT 123/College Algebra & Trigonometry)	3
	Spring Semester/21-22 Credit Total	
MRT 112	Radiographic Positioning II **Prereq: MRT 111**	3
MRT 118	Radiologic Procedures II **Prereq: MRT 117**	1
MRT 119	Imaging Modalities **Pre/Coreq: BIO 128**	1
MRT 122	Principles of Rad. Exposure II **Prereq: MRT 121**	2
MRT 162	Clinical Education II **Prereq: MRT 111, MRT 117, MRT 121, MRT 161, MRT 151; Pre/Coreq: MRT 131**	5
MRT 164	Advanced Clinical Education II *optional course **Coreq: MRT 162 or MRT 163**	1
BIO 128	Anatomy & Physiology II	4
ENG 101	College Composition	3
Elective	Restricted Elective (Philosophy/Psychology; 100-level or higher)	3
	First Summer/9-10 Credit Total	
MRT 163	Clinical Education III **Prereq: MRT 112, MRT 118, MRT 122, MRT 162, BIO 127, BIO 128**	5
MRT 164	Advanced Clinical Education II *optional course **Coreq: MRT 162 or MRT 163**	1
PHY 108	Survey of Applied Physics (course requirement waived with prior physics prerequisite)	4

Second Year

	Fall Semester/15 Credit Total	**Credits**
MRT 211	Radiographic Positioning III **Prereq: MRT 111**	1
MRT 251	Advanced Health Care **Prereq: MRT 151**	1
MRT 255	Pathology **Prereq: BIO 128, MRT 112**	1
MRT 267	Clinical Education IV **Prereq: MRT 163**	7
BIO 272	Radiation Biology **Prereq: BIO 127, BIO 128**	2
SPE 101	Oral Communications	3
	Spring Semester/16-17 Credit Total	
MRT 212	Radiographic Positioning IV **Prereq: MRT 112, MRT 117**	1
MRT 222	Principles of Imaging Physics **Prereq: MRT 122; Pre/Coreq: PHY 235**	1
MRT 230	Radiology Review & Career Planning *optional course	1
MRT 264	Advanced Clinical Education V *optional course **Coreq: MRT 270**	1
MRT 270	Clinical Education V **Prereq: MRT 211, MRT 219, MRT 251, MRT 255, MRT 267**	7
PHY 235	Radiologic Physics **Prereq: MAT 119, HS Physics or equivalent**	3
Elective	Restricted Elective (Sociology/Psychology; 100-level or higher)	3

3-YEAR PROGRAM CURRICULUM

First Year

	Fall Semester/15 Credits Total	**Credits**
BIO 127	Anatomy and Physiology	4
ENG 101	College Composition	3
MAT 119	College Algebra	3
MRT 101	Basic Concepts of Radiography	1
Elective	Restricted Elective (Sociology/Psychology; 100-level or higher)	3
	Spring Semester/14 Credits Total	
BIO 128	Anatomy & Physiology II **Prereq: BIO 127**	4
MRT 131	Medical Terminology	1
PHY 108	Survey of Applied Physics **Prereq: MAT 119**	4
SPE 101	Oral Communications	3
Elective	Restricted Elective (Philosophy/Psychology; 100-level or higher)	3

Second Year

	Fall Semester/13 Credits Total	
MRT 111	Radiographic Positioning I	3
MRT 117	Radiologic Procedures I	1
MRT 121	Principles of Rad. Exposure I	2
MRT 151	Introduction to Health Care	2
MRT 161	Clinical Education I	5
	Spring Semester/15-16 Credits Total	
MRT 112	Radiographic Positioning II **Prereq: MRT 111**	3
MRT 118	Radiologic Procedures II **Prereq: MRT 117**	1
MRT 119	Imaging Modalities **Pre/Coreq: BIO 128**	1
MRT 122	Principles of Rad. Exposure II **Prereq: MRT 121**	2
MRT 162	Clinical Education II **Prereq: MRT 111, MRT 117, MRT 121, MRT 161, MRT 151; Pre/ Coreq: MRT 131**	5
MRT 164	Advanced Clinical Education II *optional course **Coreq: MRT 162 or MRT 163**	1

	First Summer/5-6 Credits Total	**Credits**
MRT 163	Clinical Education III **Prereq: MRT 112, MRT 118, MRT 122, MRT 162, BIO 127, BIO 128**	5
MRT 164	Advanced Clinical Education II *optional course **Coreq: MRT 162 or MRT 163**	1

Third Year

	Fall Semester/12 Credits Total	**Credits**
MRT 211	Radiographic Positioning III **Prereq: MRT 111**	1
MRT 251	Advanced Health Care **Prereq: MRT 151**	1
MRT 255	Pathology **Prereq: BIO 128, MRT 112**	1
MRT 267	Clinical Education IV **Prereq: MRT 163**	7
BIO 272	Radiation Biology **Prereq: BIO 127, BIO 128**	2

	Spring Semester/13-14 Credit Total	
MRT 212	Radiographic Positioning IV **Prereq: MRT 112, MRT 117**	1
MRT 222	Principles of Imaging Physics **Prereq: MRT 122; Pre/Coreq: PHY 235**	1
MRT 230	Radiology Review & Career Planning	1
MRT 264	Advanced Clinical Education V *optional course **Coreq: MRT 270**	1
MRT 270	Clinical Education V **Prereq: MRT 211, MRT 219, MRT 251, MRT 255, MRT 267**	7
PHY 235	Radiologic Physics **Prereq: MAT 119, HS Physics or equivalent**	3

PROGRESS REVIEW

Academic Progress:
At the mid-point of each academic grading period, students will be provided with a Progress Review Form, indicating their academic status at that point in the semester. Students with unacceptable grades will be scheduled to meet with their advisor to discuss methods for improvement.

Clinical Progress:
At the end of each grading period, the Clinical Coordinator will provide each student with a summary of clinical progress. Students who receive a grade lower than B- must schedule a conference with the Clinical Coordinator to discuss their progress and formulate plans for improvement. Additional conferences may be scheduled with the program faculty, as needed.

ARTICULATION AGREEMENTS

Eastern Maine Community College Medical Radiography Program has articulation agreements in place for those graduates that would like to continue their education at four-year institutions. These institutions include Saint Joseph's College of Maine, University of Southern Maine and Husson University.

INDEX – CLINICAL EVALUATION SYSTEM

CLINICAL EVALUATION SYSTEM

The clinical progress of Medical Radiography students is assessed using six categories:

Clinical Evaluation,
Ethics/Responsibility,
Semester Objectives,
Competency Testing,
Image Evaluation, and
Professional Development.

In each clinical course, the student's grade is determined using the following percentage distribution. As noted, the value of each category changes depending on semester.

PERCENTAGE DISTRIBUTION

	MRT 161	**MRT 162**	**MRT 163**	**MRT 267**	**MRT 270**
Clinical Evaluations	10%	10%	10%	10%	10%
Ethics & Responsibility	10%	10%	10%	10%	10%
Semester Objectives	20%	5%	5%	5%	5%
Competency Testing	20%	40%	50%	40%	40%
Image Evaluation	10%	10%	10%	10%	10%
Professional Development	20%	15%	15%	15%	15%
Mid-Semester Grade	10%	10%	////////	10%	10%
Total Points	100	100	100	100	100

PERCENTAGE DISTRIBUTION – OPTIONAL COURSES

	MRT 164	**MRT 264**
Clinical Evaluations	40%	40%
Ethics & Responsibility	20%	20%
Professional Development	40%	40%
Total Points	100	100

CLINICAL EVALUATIONS

Evaluation Criteria:

a. Students must give their supervising radiographer an evaluation form at the beginning of their rotation. Students who choose to improve their clinical skills by spending additional time in the clinical area must have their supervising radiographer complete an evaluation form.
b. These forms must be dated and signed by the radiographer/supervisor and must be returned/sent by the radiographer to the Clinical Coordinator's office within a **two-week** period.

Grading Procedure:

a. Clinical evaluation grades are worth 10% of the clinical course grade

ETHICS/RESPONSIBILITY

Evaluation Criteria:

The Medical Radiography student must:

a. Maintain a professional standard of behavior.
b. Report to all clinical assignments on time.
c. Record all time spent in the clinical area by clocking in and out, for him/herself, on the time clock. Any time written in (on time card) must be initialed by a radiographer.
d. Contact the Clinical Coordinator's office (973-8153) when the student will be late in arriving at ***any*** **of the clinical sites,** or will not be able to attend clinical education on scheduled days. The student themselves must contact the program faculty ***by phone prior to the beginning*** of the scheduled clinical time.
e. Utilize their own identifier markers when performing radiographic procedures. Exceptions may occur when working with another student or radiographer.
f. Maintain an up-to-date pocket procedure notebook in his/her possession whenever the student is present in the clinical area.
g. Comply with all other policies and procedures regarding clinical education.

Grading Procedure:

a. Students who comply with all clinical education policies & procedures will earn the maximum credit awarded for this portion of the clinical grade (10 points).
b. Each incident involving noncompliance with the category guidelines will result in a point deduction. The number of points deducted will vary depending upon the severity of the incident and will be determined by the Program Director and/or the Clinical Coordinator.
c. One point will be deducted for unprofessional conduct such as:
   --independent performance of objectives prior to completion & documentation
   --non-compliance of program dress code
   --each incident of unauthorized leave of absence from the clinical area including Flex Days
   --non-compliance of marker usage
   --failure to have the students' pocket procedure notebook in the students' rotational area & containing up-to-date information (exception: O.R. rotation - students should maintain their pocket procedure notebook in their mailbox)
   --non-compliance with clinical affiliate parking policy
   --non-compliance with cell phone policy – 1st infraction

d. Five points will be deducted for gross unprofessional conduct such as:
--independent performance of exam (or performance of exam with another student) prior to successful completion of competency evaluation
--incidents involving deceit, lying and/or theft
--incorrect/inappropriate performance of exam views which results in additional radiation exposure to patient (ie. imaging the incorrect body part, performance of additional views not ordered)
--failure to follow the Radiation Safety Policies
--failure to complete patient consent form prior to invasive examination (review form with patient and have patient sign form prior to start of exam)
--performance of radiographic procedures without direct or indirect supervision (based on the level of competency achievement)
--non-compliance with cell phone policy – 2nd infraction
--repeat of a radiograph exposure without an R.T. present
Note: ten points will be deducted if the student violates the repeat policy a second time; a third violation of the repeat policy may result in dismissal from the program.

e. If a student takes personal leave time in excess of allotted PL time, 1 point will be deducted for the first incident; 2 points for the second; 3 points for the third and so on.

f. If the points deducted *exceed* the maximum 10-point allotment for this category, the student may be placed on clinical probation.

SEMESTER OBJECTIVES

Evaluation Criteria:

a. The Medical Radiography student is provided with a list of specific objectives to be mastered in each clinical course. The student is expected to review the list of objectives at the beginning of each clinical semester. **Students may not perform any objective independently prior to documentation of successful completion of that objective.**
b. Students must sign (in blue/red ink) the lower portion of each objective sheet prior to requesting a radiographer to verify completion of an objective.
c. Each objective must be demonstrated to an ARRT-licensed radiographer prior to completion of the clinical course for which it is scheduled. The radiographer who observes successful completion of the objective, signs & records the date the objective is met in the space provided beside each objective. Objectives that are indicated by an asterisk (*) must be signed off by the program faculty.
d. Objectives designated for specific rotation areas (U.S., Rad. Rx., Imaging Library, etc.) *must* be completed during the students' rotation through those areas. Objectives designated as "prerequisite" for competency examinations *must* be completed prior to testing on that procedure.
e. In the fall and spring semesters, the semester objectives must be returned to the Clinical Coordinator **by the last Friday before final examination week** even if incomplete**.** In the summer term, this list must be returned to the Clinical Coordinator **by the Wednesday of the last week of the clinical term.**
f. ½ of all objectives must be completed at mid-semester; ½ of faculty objectives must also be completed at mid-semester. Faculty must confirm and sign off that ½ of objectives are completed.

Grading Procedure:

a. Students who successfully complete all semester objectives on the *first attempt* & prior to the end of the semester, will receive the maximum credit awarded for this portion of the clinical grade (5 – 20% depending on semester).
b. For each objective *not* successfully completed on the *first attempt*, and subsequent attempts, points will be deducted from this portion of the total grade. Objectives *not* completed by the end of the grading period will result in points deducted from this portion of the total grade. Students must complete and submit the semester objectives by the required due date (see e. above). If the student does not return the objective list to the Clinical Coordinator by the required due date, no credit will be given for that portion of the clinical grade.
c. If the student does not complete all the required objectives during the course, the student will initially receive a grade of "I" (incomplete). The student will be given a 1 - 5 (clinical) day period in which to complete the semester objectives. If the objectives are completed within the allotted period of time, the grade of incomplete will be changed to a final course grade. If the student does not complete the objectives during the allotted period of time, the grade will be changed from incomplete "I" to a failing grade "F".

d. The subsequent clinical course *may not* be started until all objectives from the previous course are completed. Successful completion of all objectives must be demonstrated prior to graduation.

COMPETENCY TESTING

Evaluation Criteria of Clinical Competency Examinations:

a. Students are provided with a "Clinical Competency/Image Evaluation Schedule". This schedule provides a list of radiographic procedures in which proficiency must be demonstrated by the end of each clinical education course.
b. The Radiographic Procedure List identifies the entire list of examinations in which the student must demonstrate competence. On this list, those exams indicated by an asterisk must be done on actual patients; all other exams may be demonstrated in a simulation manner.
c. Testing on procedures done during actual patient exams must include all routine views (except where noted on exam list), and may be evaluated by the program faculty or a Clinical Competency Rater. The faculty or competency rater testing the student will perform a preliminary critique on the radiographic images taken for the exam.
d. Students may not attempt competency testing until the procedural information has been covered in a MRT-didactic course, and associated lab assignments completed with a grade received of no lower than 75% accuracy rate.
e. Each competency examination & associated image critique which has been initiated by the student *must* be successfully completed, *and submitted*, within a three-week period. Once competency testing *has begun*, the examination must be completed.
f. Competency testing done using a simulated patient situation must include all routine views or special views noted on exam list, and must be evaluated by the program faculty or adjunct clinical faculty. No image critique is performed with simulated exams.
g. From MRT 162 through MRT 270, each student will be "retested" by program faculty on 1 – 2 competency examinations passed by the student in previous clinical semesters.
h. Students must demonstrate proficiency in **at least 5 of the 18 elective procedures. Electives** may be demonstrated on patients or as simulated procedures, and are scheduled during Clinical Education III - V. **Elective Procedures** in which credit is given in one clinical education course may not be repeated for credit in another course. After all five required elective procedures have been successfully completed, students may perform all listed elective procedures independently.
i. Competency tests scheduled for each course must be completed **by the last Friday before final examination week** (fall and spring semesters) and **by the Wednesday of the last week of the summer clinical term.**
j. ½ of semester competencies must be completed prior to mid-semester (not counting retests).

Grading Procedure of Clinical Competency Examinations:

a. Students must demonstrate proficiency in the required procedures during the semester in which they are due.
b. In Clinical Education I - V, the average of the procedure/critique, and retest exams are worth 20 - 50% of the total clinical grade.
c. Students are provided forms to be used for competency evaluations. **The student must correct any unsatisfactory sections of the procedure and/or image critique and submit documentation within a three-week period from the initial attempt; failure to do so will result in a 10-point deduction from the competency grade.** If the *second* attempt/clean-up is also unsuccessful, the student must repeat the entire examination. If the student is required to repeat the entire examination, the initial grade with a 10-point deduction will be recorded for clinical grading purposes.
d. Students who perform an exam independently (or with another student) prior to successful competency testing of that procedure will receive points deducted from the ethical portion of their grade based on faculty consideration.
e. "Retest exams" (tests conducted to verify the student has maintained competency in specific procedures) are evaluated by the radiography faculty, and will be graded on a pass/fail basis. Students who pass the "retest exam", will receive a grade of "100". Students who fail the "retest exam", will receive a grade of "0". The original grade of "0" **does not** change once competency has been demonstrated.
   Students who are unsuccessful in passing a "retest exam":
   1) may not perform the failed procedure independently until successfully demonstrating competency on another examination.
   2) must practice the full procedure with a competency rater, and provide documentation of such; practice may be done in a simulated situation (simulations may be only performed with program faculty). Documentation should be provided on the standard competency form identified as a *practice* procedure.
   3) must demonstrate competency in that procedure on a patient within a three-week time period from the date of the initial failure. Should the student fail to demonstrate competency in that procedure within a three-week period an additional grade of "0" will be calculated into the competency testing category of the clinical grade. Should the student fail subsequent attempts to demonstrate competency of that procedure, an additional grade of "0" for each failed attempt will be calculated into the competency testing category of the clinical grade. The original grade of "0" **does not** change once competency has been demonstrated.
f. During the semesters in which 2 "retest exams" are scheduled, failure of both retest examinations may result in the student being placed on clinical probation.
g. Students are expected to maintain proficiency in all competency examinations previously passed.
   Should a student demonstrate incompetency in a previously-passed exam:
   1) faculty will document such in the pocket procedure book.
   2) the student will be required to perform the entire competency examination satisfactorily prior to the end of the clinical semester.
h. During MRT 162-MRT 270 images obtained from competency exams performed with the competency raters will be randomly reviewed by the program faculty. Competency examination scores may be revised if necessary.

i. At the end of the clinical course, the grades for all scheduled procedures/image critiques, and "retests" are averaged. Any procedure test, or "retest" not successfully completed by the end of the clinical course will be averaged as a "0".
j. If the student does not complete all the requirements during a clinical course, the student will initially receive a grade of "I" (incomplete). The student will be given a course extension (1 – 5 clinical days) to complete the required competency tests. If these are completed within that time period, the grade of incomplete will be changed to a final course grade. If the student does not complete the requirements during the allotted period of time, the grade will be changed from incomplete "I" to a failing grade "F".

IMAGE EVALUATIONS

Evaluation Criteria of Image Evaluations:

a. The program faculty will formally assess the student on "Image Evaluation Examination". Each semester, the students' clinical course syllabi will include a list of radiographic procedural images in which the student must demonstrate mastery. Because of the difficulty of scheduling image evaluation examinations during clinical assignments, the "Image Evaluation Examination" will be scheduled on an academic class day.

Grading Procedure of Image Evaluations:

a. Students must correct any unsatisfactory sections of the **image evaluation test** prior to the end of the semester. Students must return **all** image evaluation tests to the clinical coordinator by the Friday before final examinations.
b. For additional grading information, refer to **Grading Procedure of Clinical Competency Examinations** (j. & k.)
c. In Clinical Education I - V, the average of the image evaluations, are worth 10% of the total clinical grade.
d. At the end of the clinical course, the grades for all Image Evaluations not successfully completed and passed in by the end of the clinical course will be averaged as a "0".

PROFESSIONAL DEVELOPMENT

Evaluation Criteria:

a. Each semester, the Medical Radiography student will be evaluated on their professional development.
b. A committee made up of radiography faculty, clinical instructors and selected radiographers will evaluate each student on the following:
   --professional conduct & communication skills
   --radiation protection & ethical standards
   --performance & skills
   --initiative & attitude
   --problem solving & critical thinking

Grading Procedure:

a. The Professional Development portion of the clinical grade is worth 20% of the total clinical course grade in MRT 161 and 15% in MRT 162 - MRT 270; 40% of the total clinical course grade in MRT 164 & MRT 264.
b. The intent of the Professional Development category of the clinical grade is to recognize professional conduct and to alert the student and faculty to concerns which must be addressed.
c. The Medical Radiography student must receive a minimum grade of 80 for the Professional Development portion of the clinical grade, with a minimum grade of 75 in each category (a minimum grade of 80 for each category is required for probationary students). Students earning grades of less than 80 have demonstrated a deficiency in one or more of the above areas (see evaluation criteria, b) and may be placed on probation. Students on probation **must** correct areas of weakness during the probationary period, or that student will be dismissed from the program. (See Clinical Probation)

MID-SEMESTER GRADE

Evaluation Criteria:

a. At the mid-point of the semester (except the summer clinical semester), the Medical Radiography student will be evaluated on their clinical achievement at that point in the semester.

Grading Procedure:

a. The mid-semester grade is worth 10% of the total clinical grade.
b. On or before the due date documented on the course syllabus, half of the clinical objectives must be completed and passed in and half of the faculty objectives must be completed and passed in.
c. On or before the due date documented on the course syllabus, half of the competency examinations must be completed and passed in.
d. On or before the due date documented on the course syllabus, all of the image evaluations scheduled by the mid-semester due date must be completed and "cleaned up" for the following semesters: MRT 162, MRT 267 & MRT 270.
e. Objectives, competency examinations and image evaluations not successfully completed & passed in by the mid-semester due date will be averaged in as a "0".

MEDICAL RADIOGRAPHY PROGRAM
Professional Development in Clinical Education
MRT 161 & MRT 162

Student Name _____ Grade _____

Medical Radiography students must receive a grade of **80 or greater** in this portion of the clinical grade with a minimum of **75% or better in each section.** A student with a grade of less than 80 has demonstrated a lack of professional growth & development for his/her level in the program, and may be placed on probation. Students on probation **must** correct areas of deficiency during the probationary period or that student will be dismissed from the program.

Semester: ☐ MRT 161 ☐ MRT 162

Evaluators: _____

PROFESSIONAL CONDUCT & COMMUNICATION SKILLS

1. Identifies patient correctly & introduces self to patient
2. Explains procedure to patient; communicates with patients in a professional manner
3. Communicates with radiographers and staff in a professional manner
4. Listens & follows directions
5. Consistently reports to clinical affiliate site on time
6. Reports to assigned rotation site on time; takes appropriate breaks after conferring with supervisor; remains in assigned clinical area
7. Accurately completes all departmental paperwork
8. Displays professional appearance; follows dress code
9. Adheres to all program & clinical affiliate policies
10. Recognizes and respects authority of both hospital and program personnel

Grade earned _____/20 points = _____ section grade (10% of total grade)
Comments:

RADIATION PROTECTION & ETHICAL STANDARDS

1. Provides all patients with maximum lead shielding & asks female patients the LMP date to verify the patient is not pregnant
2. Minimizes patient radiation exposure by collimating accurately & selecting appropriate technical factors
3. Minimizes exposure to self by remaining in the control booth or wearing a lead apron during exposure and not holding patients during exposures
4. Delivers care without prejudice; maintains confidentiality with patient information
5. Practices ethical behavior/ honesty/ integrity

Grade earned _____/20 points = _____ section grade (10% of total grade)
Comments:

PERFORMANCE & SKILLS

1. Demonstrates knowledge of imaging principles - technical selection (based on educational level)
2. Demonstrates appropriate positioning skills (based on educational level)
3. Follows through on assigned tasks/objectives/competency exams
4. Performs procedures in a logical sequence & in a timely manner
5. Demonstrates equipment familiarity & the ability to operate equipment (based on educational level)
6. Demonstrates self-confidence (based on educational level)
7. Understands work flow; anticipates needs without being asked (based on educational level)

Grade earned _____/40 points = _____ section grade (55% of total grade)
Comments:

INITIATIVE & ATTITUDE

1. Actively participates in procedures
2. Volunteers for additional assignments/ tasks when not busy in assigned area
3. Accepts instruction and/or constructive comments as a means of self-improvement
4. Displays a positive attitude

Grade earned _____/20 points = _____ section grade (25% of total grade)
Comments:

GRADE CALCULATION

CATEGORY	CALCULATION	POINT VALUE TOWARD FINAL GRADE
Professional Conduct & Communication Skills	Section grade _____x 0.10	
Radiation Protection & Ethical Standards	Section grade _____x 0.10	
Performance & Skills	Section grade _____x 0.55	
Initiative & Attitude	Section grade _____x 0.25	
		Final Grade: _____

MEDICAL RADIOGRAPHY PROGRAM
Professional Development in Clinical Education
MRT 163 - MRT 270

Student Name _____ Grade _____

Medical Radiography students must receive a grade of **80 or greater** in this portion of the clinical grade with a minimum of **75% or better in each section.** A student with a grade of less than 80 has demonstrated a lack of professional growth & development for his/her level in the program, and may be placed on probation. Students on probation **must** correct areas of deficiency during the probationary period or that student will be dismissed from the program.

Semester ☐ MRT 163 ☐ MRT 267 ☐ MRT 270

Evaluators: _____

PROFESSIONAL CONDUCT & COMMUNICATION SKILLS

1. Identifies patient correctly & introduces self to patient
2. Explains procedure to patient; communicates with patients in a professional manner
3. Communicates with radiographers and staff in a professional manner
4. Listens & follows directions
5. Consistently reports to clinical affiliate site on time
6. Reports to assigned rotation site on time; takes appropriate breaks after conferring with supervisor; remains in assigned clinical area
7. Accurately completes all departmental paperwork
8. Displays professional appearance; follows dress code
9. Adheres to all program & clinical affiliate policies
10. Recognizes and respects authority of both hospital and program personnel

Grade earned _____/20 points = _____ section grade (10% of total grade)
Comments:

RADIATION PROTECTION & ETHICAL STANDARDS

1. Provides all patients with maximum lead shielding & asks female patients the LMP date to verify the patient is not pregnant
2. Minimizes patient radiation exposure by collimating accurately & selecting appropriate technical factors
3. Minimizes exposure to self by remaining in the control booth or wearing a lead apron during exposure and not holding patients during exposures
4. Delivers care without prejudice; maintains confidentiality with patient information
5. Practices ethical behavior/ honesty/ integrity

Grade earned _____/20 points = _____ section grade (10% of total grade)
Comments:

PERFORMANCE & SKILLS

1. Demonstrates knowledge of imaging principles - technical selection (based on educational level)
2. Demonstrates appropriate positioning skills (based on educational level)
3. Follows through on assigned tasks/objectives/competency exams
4. Performs procedures in a logical sequence & in a timely manner
5. Demonstrates equipment familiarity & the ability to operate equipment (based on educational level)
6. Demonstrates self-confidence (based on educational level)
7. Understands work flow; anticipates needs without being asked (based on educational level)

Grade earned _____/40 points = _____ section grade (40% of total grade)
Comments:

INITIATIVE & ATTITUDE

1. Actively participates in procedures
2. Volunteers for additional assignments/ tasks when not busy in assigned area
3. Accepts instruction and/or constructive comments as a means of self-improvement
4. Displays a positive attitude

Grade earned _____/20 points = _____ section grade (20% of total grade)
Comments:

PROBLEM SOLVING & CRITICAL THINKING SKILLS

1. Exhibits the ability to adjust to the atypical or trauma patient situation (based on educational level)
2. Exhibits the ability to adjust to the pediatric, geriatric or bariatric patient situation (based on educational level)
3. Demonstrates the ability to evaluate radiographic images (based on educational level)

Grade earned _____/20 points = _____ section grade (20% of total grade)
Comments:

GRADE CALCULATION

CATEGORY	CALCULATION	POINT VALUE TOWARD FINAL GRADE
Professional Conduct & Communication Skills	Section grade _____x 0.10	
Radiation Protection & Ethical Standards	Section grade _____x 0.10	
Performance & Skills	Section grade _____x 0.40	
Initiative & Attitude	Section grade _____x 0.20	
Problem Solving & Critical Thinking Skills	Section grade _____x 0.20	
		Final Grade: _____

MEDICAL RADIOGRAPHY PROGRAM
Evaluation in Clinical Education

Student Name _____ Grade _____

Evaluators: _____

Rotation: _____ Date: _____

Radiographer(s): Individually or as a team, please **honestly** evaluate the student's capability (0 being the lowest and 5 being the highest) based on the student's current level of education. Positive observations and/or areas in which the student should grow may be added below. **Please return directly to faculty. E-mail: dmclaughlin@emhs.org or Fax: 973-8146**

1. PROFESSIONAL CONDUCT 0 1 2 3 4 5
- Reports to assigned rotation site on time
- Displays professional appearance; follows dress code
- Recognizes and respects authority of both hospital and program personnel

2. COMMUNICATION SKILLS 0 1 2 3 4 5
- Identifies patient correctly & introduces self to patient
- Explains procedure to patient; communicates with patients in a professional manner
- Communicates with Radiographers in a professional manner

3. ETHICAL STANDARDS 0 1 2 3 4 5
- Delivers care without prejudice
- Maintains confidentiality with patient information
- Practices ethical behavior/ honesty/ integrity

4. RADIATION PROTECTION 0 1 2 3 4 5
- Provides all patients with maximum lead shielding & asks female patients the LMP date
- Collimates accurately & selects appropriate technical factors
- Minimizes exposure to self & others

5. PERFORMANCE & SKILLS 0 1 2 3 4 5
- Demonstrates knowledge of techniques
- Demonstrates appropriate positioning skills
- Performs procedures in a logical sequence & in a timely manner

6. INITIATIVE & ATTITUDE 0 1 2 3 4 5
- Actively participates in procedures
- Accepts instruction and/or constructive comments as a means of self-improvement
- Displays a positive attitude

Comments:

MEDICAL RADIOGRAPHY PROGRAM
Specialty Area Evaluation Form*

Student Name _____ Grade _____

Evaluators: _____

Rotation: _____ Date: _____

Radiographer(s): Individually or as a team, please **honestly** evaluate the student's capability (0 being the lowest and 5 being the highest) based on the student's current level of education. Positive observations and/or areas in which the student should grow may be added below.
Please return directly to faculty. E-mail: dmclaughlin@emhs.org or Fax: 973-8146

1.	**PROFESSIONAL CONDUCT**	**0**	**1**	**2**	**3**	**4**	**5**

- Reports to assigned rotation site on time
- Displays professional appearance; follows dress code
- Recognizes and respects authority of both hospital and program personnel

2.	**COMMUNICATION SKILLS**	**0**	**1**	**2**	**3**	**4**	**5**

- Identifies patient correctly & introduces self to patient
- Communicates with patients in a professional manner
- Communicates with Radiographers in a professional manner

3.	**ETHICAL STANDARDS**	**0**	**1**	**2**	**3**	**4**	**5**

- Delivers care without prejudice
- Maintains confidentiality with patient information
- Practices ethical behavior/ honesty/ integrity

4.	**RADIATION PROTECTION**	**0**	**1**	**2**	**3**	**4**	**5**

- Provides all patients with maximum lead shielding & asks female patients the LMP date
- Minimizes exposure to self & others

5.	**INITIATIVE & ATTITUDE**	**0**	**1**	**2**	**3**	**4**	**5**

- Actively participates in procedures
- Accepts instruction and/or constructive comments as a means of self-improvement
- Displays a positive attitude

Comments:

INDEX – CLINICAL COMPETENCY SCHEDULE

CLINICAL COMPETENCY & IMAGE EVALUATION SCHEDULE

Following is the semester schedule of mandatory clinical competency procedures. **Procedures indicated with an asterisk (*) must be performed on actual patients;** those not designated with an asterisk may be simulated, if demonstration on patients is not feasible. In addition, students must demonstrate proficiency in **at least 5 of the 18 elective procedures** (see pp 6).

MRT 161 - Clinical Education I/ Fall Semester (approx. 248 hours)
Students must demonstrate competency in 4 procedures

Mandatory Procedures	*Comments*
***Abdomen**	Supine/Routine KUB; adult
***Chest**	Routine PT 2-view chest exam must be successfully completed prior to attempting stretcher chest
~*Finger/Thumb or Wrist	
***Hand**	

~When 2 exams are designated with this symbol, only one exam must be performed during this semester
***Exams designated with this symbol must be performed on patients**

Image Evaluations	*Comments*
Chest	PA, Lateral
KUB	
Hand	PA, Fan lateral, both obliques

MRT 162 - Clinical Education II/ Spring Semester (approx. 264 hours)
Students must demonstrate competency in 9 procedures & 1 retest

Mandatory Procedures	*Comments*
***Ankle**	
***Chest (stretcher)**	AP/PA and lateral projections; patient remains on stretcher for exam
~*Elbow or Forearm	
~*Finger/Thumb or Wrist	
***Foot**	After this test, the student may also perform "toes"
***Knee**	
~*L-Spine, *C-spine or *T-spine	**L-Spine:** RPO & LPO may be simulated **C-spine:** Non-trauma views; Lateral "Swimmer's" position (erect) may be simulated **T-spine:** Lateral "Swimmer's" position (recumbent) may be simulated
~*Pediatric Chest or Decub Abdomen (Adult)	**Pediatric Chest:** 2 Views/Age 6 yrs & younger; adult chest exam must be successfully completed prior to attempting pediatric chest; 1st semester prerequisite objective must be done prior to competency testing; **Decub Abdomen:** LT Lateral Decub; Clinical Ed. II or III
***Pelvis**	
Retest Procedure	Thorax or Abdomen

~When 2 exams are designated with this symbol, only one exam must be performed during this semester
***Exams designated with this symbol must be performed on patients**

Image Evaluations	*Comments*
Foot	AP Axial, Mortise view & lateral
Knee	AP (Axial), AP (Axial) obliques & lateral
Elbow	AP, lateral, both obliques
Thoracic Spine	AP, lateral, Swimmer's view
Shoulder	Internal, External, Grashey
Hip & Pelvis	AP Pelvis; AP Hip, Frog Lateral Hip, Axiolateral Hip
Lumbar Spine	AP, lateral, L5/S1 spot view, both obliques

MRT 163 - Clinical Education III/ First Summer Semester (approx. 280 hours)
Students must demonstrate competency in 13-16 procedures & 2 retests

Mandatory Procedures	*Comments*
***Abdomen**	Erect; adult
~*L-Spine, *C-spine or *T-spine	**L-Spine:** RPO & LPO may be simulated **C-spine:** Non-trauma views; Lateral "Swimmer's" position (erect) may be simulated **T-spine:** Lateral "Swimmer's" position (recumbent) may be simulated
***Clavicle**	AP/AP Axial; Adult
~*Elbow or Forearm	
***Geriatric Chest Routine**	At least 65 years old and physically or cognitively impaired as a result of aging; Clinical Ed. III or IV
***Geriatric Lower Extremity**	At least 65 years old and physically or cognitively impaired as a result of aging; Clinical Ed. III or IV
***Geriatric Upper Extremity**	At least 65 years old and physically or cognitively impaired as a result of aging; Clinical Ed. III or IV
***Hip**	AP & frog leg lateral position; student may simulate AP projection if not done on patient
***Lower Leg**	
~*Pediatric Chest or Decub Abdomen (Adult)	**Pediatric Chest:** 2 Views/Age 6 yrs & younger; adult chest exam must be successfully completed prior to attempting pediatric chest; 1st semester prerequisite objective must be done prior to competency testing; **Decub Abdomen:** LT Lateral Decub; Clinical Ed. II or III
***Portable Chest**	Adult
***Shoulder**	Non-trauma views: Internal & External Rotation, Grashey View
***Upper GI Series**	
Elective Procedures	3 exams from Elective Procedure List
Retest Procedure	Thorax or Abdomen
Retest Procedure	Extremity

~When 2 exams are designated with this symbol, only one exam must be performed during this semester
***Exams designated with this symbol must be performed on patients**

Image Evaluations	*Comments*
Upper GI	Includes information on GI Series, Esophogram, & Small Bowel

MRT 267 - Clinical Education IV/ Fall Semester (approx. 416 hours)
Students must demonstrate competency in 14-17 procedures & 2 retests

Mandatory Procedures	*Comments*
~*L-Spine, *C-spine or *T-spine	**L-Spine:** RPO & LPO may be simulated **C-spine:** Non-trauma views; Lateral "Swimmer's" position (erect) may be simulated **T-spine:** Lateral "Swimmer's" position (recumbent) may be simulated
***Geriatric Chest Routine**	At least 65 years old and physically or cognitively impaired as a result of aging; Clinical Ed. III or IV
***Geriatric Lower Extremity**	At least 65 years old and physically or cognitively impaired as a result of aging; Clinical Ed. III or IV
***Geriatric Upper Extremity**	At least 65 years old and physically or cognitively impaired as a result of aging; Clinical Ed. III or IV
Facial Bones	Exaggerated Caldwell, Waters, Lateral, SMV
***Humerus**	
Mandible	Panorex
Patella/Special Knee Views	Axial projection of patella & PA Axial (intercondylar fossa) proj.
***Pediatric Extremity**	Age 6 yrs & younger; adult extremity exam must be successfully completed prior to attempting pediatric extremity
~Portable Abdomen or Trauma C-spine	**Trauma C-spine:** Cross-table lateral, Swimmers & AP open mouth view
***Portable Orthopedic Exam**	
***Portable Pediatric Chest**	Single view in NICU
***Small Bowel Exam**	
~*Trauma Lower Extremity or *Trauma Upper Extremity	**Trauma Lower Extremity:** Non-hip exam **Trauma Upper Extremity:** Non-shoulder exam
Trauma Hip	Shoot-through lateral
***Trauma Shoulder**	PA oblique/Scapular Y view, transthoracic lat.& Lawrence Method (min. one view must be performed on a patient)
Retest Procedure	Extremity
Retest Procedure	Spine
Elective Procedure	1 exam from Elective Procedure List

~When 2 exams are designated with this symbol, only one exam must be performed during this semester

***Exams designated with this symbol must be performed on patients**

Image Evaluations	*Comments*
Barium Enema	Includes information on single & double contrast studies
C-Spine	AP Open Mouth, AP Axial, LPO/RPO, lateral, Swimmer's View
Knee /Panorex Mandible	Intercondular Fossa, Tangential; Mandible – Panorex
Sacrum/Coccyx/ SI Joints	AP Axial Sacrum, Lateral – Sacrum/Coccyx; RPO/LPO S-I Jts
Shoulder	Scapular Y, Lawrence Method
Facial Bones	Ex. Caldwell, Waters, Lateral, SMV
Comprehensive Image Evaluation Exam	Evaluation of 10 images for positioning accuracy

MRT 270 - Clinical Education V/ Spring Semester (approx. 416 hours)
Students must demonstrate competency in 13 procedures & 2 retests

Mandatory Procedures	*Comments*
Femur	AP (upper/lower), trauma OR non-trauma lateral projections
Mandible	PA, AP Axial, axiolateral
~Portable Abdomen or Trauma C-spine	**Trauma C-spine:** Cross-table lateral, Swimmers & AP open mouth view
***Ribs**	
Skull	PA, AP Axial/Towne, Lateral, Brow-up Lateral
***C-arm Procedure (Requiring Manipulation to Obtain more than one Projection)**	Requires manipulation to obtain more than one projection; 3rd semester prerequisite objectives must be done prior to competency testing
***Surgical C-arm Procedure (Requiring Manipulation around a Sterile Field)**	Requires manipulation around a sterile field; 3rd semester prerequisite objectives must be done prior to competency testing
***Surgical extremity**	Surgical suite or recovery room 3rd semester prerequisite objectives must be done prior to competency testing
***Surgical Sterile Procedure (Portable)**	Portable in surgical suite 3rd semester prerequisite objectives must be done prior to competency testing
~*Trauma Lower Extremity or *Trauma Upper Extremity	**Trauma Lower Extremity:** Non-hip exam **Trauma Upper Extremity:** Non-shoulder exam
Venipuncture	
Vital Signs	Monitor patient's blood pressure, pulse, respiration, temperature & pulse oximetry
Retest Procedure	Portable Procedure
Retest Procedure	Any Radiographic Procedure
Elective Procedure	1 exam from Elective Procedure List

~When 2 exams are designated with this symbol, only one exam must be performed during this semester
***Exams designated with this symbol must be performed on patients**

Image Evaluations	*Comments*
Ribs	AP/PA, 45 degree oblique
Scapula	AP, Lateral
Sternum/Clavicle	RAO, Lateral, AP, AP Axial
Skull	PA, AP Axial/Towne, Lateral
Mandible	PA, AP Axial, Axiolateral
Comprehensive Image Evaluation Exam	Evaluation of 10 images for positioning accuracy

Elective Procedure List

Students must demonstrate proficiency in **at least 5 of the 18 elective procedures. Electives** indicated with an asterisk (*) must be performed on patients. Those procedures not designated with an asterisk (*) may be simulated if demonstration on patients is not feasible. Elective procedures are scheduled during Clinical Education III through VI. Electives in which credit is given in one clinical education course may not be repeated for credit in another course. After completion of all 5 required elective procedures, students may perform the all listed elective procedures independently.

Acromioclavicular Joints
*Arthrogram
*Barium Enema
Calcaneus/Heel
Chest, Lateral Decubitus
*ERCP
*IVU
*Myelogram
Nasal Bones
Paranasal Sinuses
*Pre-MRI Orbits
Sacroiliac Joints
Sacrum/Coccyx
Scapula
*Scoliosis Series
Soft Tissue Neck
Sternum
Zygomatic Arches

RADIOGRAPHIC PROCEDURE LIST

Students must demonstrate proficiency in **all 51** ***Mandatory Procedures***, and at least **5 of the 18** ***Elective Procedures***.

EXTREMITY

Mandatory Procedures	*Comments*
***Ankle**	
***Clavicle**	
***Elbow**	
Femur	AP (upper/lower), trauma & non-trauma lateral projections
***Finger or Thumb**	
***Foot**	After this test, the student may also perform "toes"
Forearm	
***Geriatric Lower Extremity**	At least 65 years old and physically or cognitively impaired as a result of aging; Clinical Ed. III or IV
***Geriatric Upper Extremity**	At least 65 years old and physically or cognitively impaired as a result of aging; Clinical Ed. III or IV
***Hand**	
***Hip**	AP & frog lateral; student may simulate AP if not done on pt
***Humerus**	
***Lower Leg**	
***Knee**	
Patella/Special Knee Views	Axial projection - patella & Intercondyloid Fossa view
***Pediatric Extremity**	Age 6 yrs & younger; adult extremity exam must be successfully completed prior to attempting pediatric extremity
***Shoulder/non-Trauma**	Internal, External, Grashey
Wrist	
Elective Procedures	
Acromioclavicular Joints	
Calcaneus/Heel	
Scapula	

THORAX

Mandatory Procedures	*Comments*
***Chest**	Routine PT 2-view chest exam must be successfully completed prior to attempting stretcher chest
***Chest - stretcher**	AP/PA and lateral projections; patient remains on stretcher for exam
***Geriatric Chest, Routine**	At least 65 years old and physically or cognitively impaired as a result of aging; Clinical Ed. III or IV; Routine PT 2-view chest exam
***Pediatric Chest**	2 Views/Age 6 yrs & younger; adult chest exam must be successfully completed prior to attempting pediatric chest; 1st semester prerequisite objective must be done prior to competency testing; Clinical Ed. II or III
***Ribs**	
Elective Procedures	
Decubitus Chest	
Sternum	

***Exams designated with this symbol must be performed on patients**

HEADWORK & NECK

Mandatory Procedures	*Comments*
Facial Bones	Exaggerated Caldwell, Waters, lateral, SMV
Mandible	Panorex
Mandible	PA, AP Axial, axiolateral
Skull	PA, AP Axial/Towne, Lateral, Brow-up Lateral
Elective Procedures	
Nasal Bones	
Paranasal Sinuses	
Pre-MRI Orbits	
Soft Tissue Neck	
Zygomatic Arches	AP Axial, lateral, Waters, May Method

SPINE & PELVIS

Mandatory Procedures	*Comments*
***Cervical Spine**	Non-trauma views; Lateral "Swimmer's" position (erect) may be simulated
***Lumbar Spine**	RPO & LPO may be simulated
***Thoracic Spine**	Lateral "Swimmer's" position (recumbent) may be simulated
***Pelvis**	
Elective Procedures	
Sacroiliac Joints	
Sacrum/Coccyx	
***Scoliosis Series**	

ABDOMEN AND GI TRACT

Mandatory Procedures	*Comments*
Abdomen	Decubitus Projection; adult
***Abdomen**	Erect; adult
***Abdomen**	Supine/Routine KUB; adult
***Small Bowel Series**	
***Upper GI Series**	
Elective Procedures	
***Barium Enema Series**	
***E.R.C.P.**	

***Exams designated with this symbol must be performed on patients**

PORTABLE & SURGICAL PROCEDURES

Mandatory Procedures	*Comments*
***Portable Abdomen**	
***Portable Chest**	Adult
***Portable Extremity**	
***Portable Pediatric Chest**	Single view in NICU
***C-arm Procedure** (Requiring Manipulation to Obtain more than one Projection)	Requires manipulation to obtain more than one projection
* **Surgical C-arm Procedure** (Requiring Manipulation around a Sterile Field)	Requires manipulation around a Sterile Field
***Surgical Extremity**	Surgical suite or recovery room
***Surgical Sterile Procedure**	Portable in surgical suite

*TRAUMA PROCEDURES***

Mandatory Procedures	*Comments*
Trauma Cervical Spine	Cross-table lateral, Swimmers & AP open mouth view
***Trauma Extremity - Lower**	Non-hip exam
***Trauma Extremity - Upper**	Non-shoulder exam
Trauma Hip	shoot-through lateral
***Trauma Shoulder**	PA oblique/Scapular Y view, transthoracic lateral proj. & inferosuperior axial proj/Lawrence Method (min. one view must be performed on a patient)

****Trauma is considered a serious injury or shock to the body. Modifications may include variations in positioning, minimal patient movement, etc.**

OTHER

Mandatory Procedures	*Comments*
Venipuncture	4th semester prerequisite objectives must be done prior to competency testing
Vital Signs	Monitor patient's blood pressure, pulse, respiration, temperature & pulse oximetry
Elective Procedures	
Arthrogram	4th semester prerequisite objectives must be done prior to competency testing
Myelogram	4th semester prerequisite objectives must be done prior to competency testing
Intravenous Urography	Includes information on ureteral compression and renal, ureteral & bladder obliques

***Exams designated with this symbol must be performed on patients**

MISCELLANEOUS EXAMINATIONS

WITH DIRECT SUPERVISION, STUDENTS MAY PERFORM:**

1. **Portable procedures** after completing all prerequisite portable objectives, and the portable competency in the appropriate anatomical part (ie. portable chest, portable pediatric chest, portable abdomen, and portable extremity).
2. **Surgical procedures** after completing surgical and c-arm objectives (Semester I & II) and completing didactic coursework in the appropriate anatomy.

**Direct supervision describes that supervision in which the radiographer is present in the immediate location.

WITH INDIRECT SUPERVISION*, SENIOR STUDENTS MAY PERFORM:**

1. **Myelogram Procedures** after myelography competency completion or successful completion of **5 of the 18 elective** competency exams; competency completion of the appropriate section of the spine; and completion of prerequisite objectives.
2. **Arthrogram Procedures** after arthrography competency completion or successful completion of **5 of the 18** elective competency exams; competency completion of the appropriate anatomical part; and completion of prerequisite objectives.
3. **Intravenous Urogram Procedures, Barium Enema** and/or **ERCP Procedures** after competency completion or successful completion of **5 of the 18** elective competency exams; and completion of prerequisite objectives.
4. **Trauma examinations (other than those listed on Trauma Competency List)** after successful completion of prerequisite objectives, and successful competency completion of the appropriate anatomical part. (ie. routine knee examination prior to trauma knee examination, etc.)
5. **Fluoroscopic examinations (other than those listed on Competency List)** after completion of prerequisite fluoroscopy and aseptic technique objectives. Examples of such procedures are (but not exclusive to): Modified Barium Swallow, VCUG, Hysterosalpingography and Cystography.

***Indirect supervision describes that supervision in which the radiographer is in an adjacent area and able to assist the student, if needed.

THORAX	**Mandatory**	**Elective**	**Completed**	**Patient/Simulated**	**Verified**
Chest (PT)	x				
Chest (stretcher)	x				
Decubitus Chest		x			
Geriatric Chest	x				
Pediatric Chest	x				
Ribs	x				
Sternum		x			
EXTREMITIES	**Mandatory**	**Elective**	**Completed**	**Patient/Simulated**	**Verified**
Acromioclavicular Jts		x			
Ankle	x				
Calcaneus		x			
Clavicle	x				
Elbow	x				
Femur	x				
Finger or Thumb	x				
Foot	x				
Forearm	x				
Geriatric Upper Ext.	x				
Geriatric Lower Ext.	x				
Hand	x				
Hip	x				
Humerus	x				
Knee	x				
Lower Leg	x				
Non-trauma Shoulder	x				
Patella/Special Knee Views	x				
Pediatric Extremity	x				
Scapula		x			
Trauma Hip	x				
Trauma Lower Extremity (non-hip)	x				
Trauma Shoulder	x				
Trauma Upper Extremity	x				
Wrist	x				
HEADWORK & NECK	**Mandatory**	**Elective**	**Completed**	**Patient/Simulated**	**Verified**
Facial Bones	x				
Mandible	x				
Nasal Bones		x			
Panorex Mandible	x				
Paranasal Sinuses		x			
Pre-MRI Orbits		x			
Skull	x				
Soft Tissue Neck		x			
Zygomatic Arches		x			

SPINE & PELVIS	**Mandatory**	**Elective**	**Completed**	**Patient/Simulated**	**Verified**
Cervical Spine	x				
Lumbosacral Spine	x				
Pelvis	x				
Sacroiliac Joints		x			
Sacrum/Coccyx		x			
Scoliosis Series		x			
Thoracic Spine	x				
Trauma Cervical Spine	x				
ABD/ GI TRACK	**Mandatory**	**Elective**	**Completed**	**Patient/Simulated**	**Verified**
Abdomen (decub)	x				
Abdomen (erect)	x				
Abdomen (supine)	x				
Barium Enema		x			
ERCP		x			
Small Bowel Series	x				
Upper GI Series	x				
PORTABLE/SURGICAL	**Mandatory**	**Elective**	**Completed**	**Patient/Simulated**	**Verified**
Portable Abdomen	x				
Portable Chest (adult)	x				
Portable Chest (pediatric)	x				
Portable Extremity	x				
C-arm Procedure (Requiring Manipulation to Obtain more than one Proj.)	x				
Surgical C-arm Procedure (Requiring Manipulation around a Sterile Field)	x				
Surgical Extremity	x				
Surgical Sterile Procedure	x				
OTHER	**Mandatory**	**Elective**	**Completed**	**Patient/Simulated**	**Verified**
Arthrogram		x			
Intravenous Urography		x			
Myelogram		x			
PATIENT CARE	**Mandatory**	**Elective**	**Completed**	**Patient/Simulated**	**Verified**
CPR	x				
Patient Transfer	x				
Medical Equipment Care	x				
Sterile/Aseptic Technique	x				
Venipuncture	x				
Vital Signs	x				

Eastern Maine Community College - Medical Radiography Program

Routine Procedure Evaluation

Student's Name _____ Competency Test _____ Views Performed _____

Evaluator's Signature _____ Date _____ Pt's Last Name_____

Pediatric (6 & under) ___ Trauma ___ Portable ___ Surgical ___ Practice ___ Retest ___ Geriatric ____ Pt's MR # _____

Directions to the Student: Before attempting this procedure carefully review this checklist. You will be graded on the basis of this evaluation. This competency must be successfully completed prior to performing this procedure independently.

CRITERIA	7	5	3	0
1) Lists routine views for procedure				
2) Evaluates requisition for: correct order, procedure, clinical information, assures correct ordering MD***				
3) ID's patient properly; gowns/prepares patient/self using protocol; obtains LMP data				
4) Prepares room prior to procedure				
5) Utilizes accessory devices/utilizes markers within light field				
6) Positions body part correctly				
7) Angles CR appropriately				
8) Direct CR to midpoint of part & midpoint of cassette/image receptor				
9) Adjusts SID correctly				
10) Selects proper cassette size/type & places cassette properly				
11) Collimates to part				
12) Applies protective lead shielding to patient, self, & others				
13) Instructs for proper respiration				
14) Sets optimum kVp on control panel				
15) Sets appropriate mAs, mA/time, phototimed setting, & focal spot				
16) Makes needed technical conversions; adapts procedure to the atypical patient				
17) Communicates with patient; uses professional conduct***				
18) Demonstrates familiarity with procedure				
19) Demonstrates organizational & time management skills				
20) Demonstrates equipment familiarity & operation				
_____ Satisfactorily completed _____ Must repeat portions in which a "0" is earned				

*****Unearned criteria with simulation exams; Maximum point value for simulation exams = 90**

Radiographer's Comments:

IMAGE CRITIQUE Radiographer _____ DATE _____

Directions to the Student: Immediately following the competency testing, you will be asked to perform a preliminary image evaluation on the images taken during the patient procedure. The image evaluation will not be preformed on simulated exams. This evaluation, along with the competency testing, must be satisfactorily completed PRIOR to performing the procedure independently.

CRITERIA	COMMENTS	PASS	REPEAT
1) Identifies each position obtained			
2) Identifies general anatomical parts			
3) Critiques positioning of each view obtained			
4) Critiques technical factors (LGM# or S#) _____			
5) Identifies proper radiation protection measures including shielding, collimation & technical selection			

IMAGE PROCESSING

CRITERIA	COMMENTS	PASS	REPEAT
1) Processes images using correct patient info; rotates images, if needed			
2) Annotates, collimates & archives images correctly			

Student Signature _____ Date _____ Grade _____

Eastern Maine Community College - Medical Radiography Program

Routine Procedure Evaluation

Student's Name _____ Competency Test _____ Views Performed _____

Evaluator's Signature _____ Date _____ Pt's Last Name_____

Pediatric (6 & under) ___ Trauma ___ Portable ___ Surgical ___ Practice _ __ Retest ___ Geriatric ____ Pt's MR # _____

Directions to the Student: Before attempting this procedure carefully review this checklist. You will be graded on the basis of this evaluation. This competency must be successfully completed prior to performing this procedure independently.

CRITERIA	7	5	3	0
1) Lists routine views for procedure				
2) Evaluates requisition for: correct order, procedure, clinical information, assures correct ordering MD***				
3) ID's patient properly; gowns/prepares patient/self using protocol; obtains LMP data				
4) Prepares room prior to procedure				
5) Utilizes accessory devices/utilizes markers within light field				
6) Positions body part correctly				
7) Angles CR appropriately				
8) Direct CR to midpoint of part & midpoint of cassette/image receptor				
9) Adjusts SID correctly				
10) Selects proper cassette size/type & places cassette properly				
11) Collimates to part				
12) Applies protective lead shielding to patient, self, & others				
13) Instructs for proper respiration				
14) Sets optimum kVp on control panel				
15) Sets appropriate mAs, mA/time, phototimed setting, & focal spot				
16) Makes needed technical conversions; adapts procedure to the atypical patient				
17) Communicates with patient; uses professional conduct***				
18) Demonstrates familiarity with procedure				
19) Demonstrates organizational & time management skills				
20) Demonstrates equipment familiarity & operation				
_____ Satisfactorily completed _____ Must repeat portions in which a "0" is earned				

*****Unearned criteria with simulation exams; Maximum point value for simulation exams = 90**

Radiographer's Comments:

IMAGE CRITIQUE Radiographer _____ DATE _____

Directions to the Student: Immediately following the competency testing, you will be asked to perform a preliminary image evaluation on the images taken during the patient procedure. The image evaluation will not be preformed on simulated exams. This evaluation, along with the competency testing, must be satisfactorily completed PRIOR to performing the procedure independently.

CRITERIA	COMMENTS	PASS	REPEAT
1) Identifies each position obtained			
2) Identifies general anatomical parts			
3) Critiques positioning of each view obtained			
4) Critiques technical factors (LGM# or S#) _____			
5) Identifies proper radiation protection measures including shielding, collimation & technical selection			

IMAGE PROCESSING

CRITERIA	COMMENTS	PASS	REPEAT
1) Processes images using correct patient info; rotates images, if needed			
2) Annotates, collimates & archives images correctly			

Student Signature _____ Date _____ Grade _____

INDEX –CLINICAL SCHEDULES

CLINICAL INTERNSHIP SITES

Clinical internship sites routinely used by the Medical Radiography Program are listed below:

1) Eastern Maine Medical Center (EMMC) - Bangor
2) EMMC – Imaging Center of Maine (ICME) - Bangor
3) St. Joseph Hospital (SJH) - Bangor
4) Penobscot Community Health Ctr. – Helen Hunt Health Ctr. (PCHC) – Old Town
5) Maine Coast Memorial Hospital (MCMH) - Ellsworth

Students may request assignments at three externship sites throughout the state. Assignments at externship sites may not exceed 80 hours/annually.

1) Blue Hill Memorial Hospital (BHMH) – Blue Hill
2) Cary Medical Center (CMC) - Caribou
3) Houlton Regional Hospital (HRH) - Houlton

Students are responsible for transportation to all clinical sites.

CLINICAL SCHEDULE INFORMATION

Clinical education is scheduled on Tuesday and Thursday during the first year of the program, Monday thru Friday during the summer semester and on Monday, Wednesday and Friday during the second year of the program. The total student involvement for academic and clinical education courses together is typically 32-38 hours/week. At no time will the students' scheduled commitment exceed 40 hours/week.

Weekly clinical schedules are posted at EMMC in the following areas: in the program office and in the Q.C. Area. Students are generally scheduled for clinical education Monday through Friday, **7:30am to 4:00pm**, with the following exceptions:

portable radiography rotation		6:00am to 2:30pm
evening rotation	(MRT 163)	3:00pm to 11:00pm, Monday - Friday
	(MRT 267 - 270)	3:00pm to 11:00pm, Monday, Wednesday, Friday **OR** Two 7:00pm to 7:00am (12-hour)
Pain Clinic		6:45am to 3:15pm
PCHC		8:00am – 4:30pm
Maine Coast Memorial Hospital		8:00am – 4:30pm
St. Joseph Hospital		8:00am – 4:30pm

*Students selecting the two 12-hour night rotations must inform faculty **PRIOR** to their rotation. Overnight shifts are not allowed prior to class days.

CLINICAL EDUCATION TRACK (MRT 267 & MRT 270) – OPTION 1

8 hour days; Senior students are generally scheduled for clinical education Monday, Wednesday and Friday, **7:30am to 4:00pm**, with the following exceptions:

portable radiography rotation		6:00am to 2:30pm
evening rotation	(MRT 163)	3:00pm to 11:00pm, Monday - Friday
	(MRT 267 - 270)	3:00pm to 11:00pm, Monday, Wednesday, Friday
		OR Two 7:00pm to 7:00am (12-hour)
Pain Clinic		6:45am to 3:15pm
PCHC		8:00am – 4:30pm
Maine Coast Memorial Hospital		8:00am – 4:30pm
St. Joseph Hospital		8:00am – 4:30pm

*Students selecting the two 12-hour night rotations must inform faculty **PRIOR** to their rotation. Overnight shifts are not allowed prior to class days.

Senior students selecting Clinical Education Track - Option 1, will be required to self-select 10 additional Clinical Flex days (8°) **prior to** MRT 267/Clinical Education IV, and 7 additional Clinical Flex days (8°) **prior to or during** MRT 270/Clinical Education V.

During the academic year, students must pre-schedule Clinical Flex days with program faculty using sign-up sheets located outside the Clinical Coordinator's Office. Clinical Flex days cannot be scheduled at the Imaging Center of Maine on weekends.

All clinical education days during the fall semester will be 8° days (except evening/ night rotations).The Flex day schedule must be congruent with the following guidelines:

- Portables/Surgery ≥ 1 day (8°)*
- Emergency Department (EMMC) ≥ 1 day (8°)
- Evenings/Nights ≥ 1 day (8° or 12°)**
- Remainder of Flex Days can be spent in any of the first 3 categories OR in General Radiography including Fluoro***

Students unable to attend scheduled Flex days must call in to the Clinical Coordinators Office (973-8153), **and** notify the clinical site you were scheduled to attend. Failure to do so will result in deduction of ethical points.

CLINICAL EDUCATION TRACK (MRT 267 & MRT 270) – OPTION 2

9 hour days; Senior students are generally scheduled for clinical education Monday, Wednesday, and Friday, **7:30am to 5:00pm**, with the following exceptions:

portable radiography rotation	6:00am to 3:30pm
PCHC	8:00am to 5:30pm
Evening rotation	2:00pm to11:00pm, Monday, Wednesday, Friday
Pain Clinic	6:45am to 4:15pm
Maine Coast Memorial Hospital	8:00am – 5:30pm
St. Joseph Hospital	8:00am – 5:30pm

Senior students selecting Clinical Education Track - Option 2, will be required to self-select 4 additional Clinical Flex day (9°) **prior to or during** MRT 267/Clinical Education IV, and 1 additional Clinical Flex days (9°) **prior to or during** MRT 270/Clinical Education V.

The clinical hours must be pre-scheduled **by the student** prior to the Flex Day using sign-up sheets located outside the Clinical Coordinator's Office. On the weekly time card, students **must** indicate the clinical site/rotation and the Flex Day number (ie. Flex Day #1, etc.). All clinical education days during the fall semester will be 9° days.

Students unable to attend scheduled Flex days must call in to the Clinical Coordinators Office (973-8153), and notify the clinical site you were scheduled to attend. Failure to do so will result in deduction of ethical points.

On the weekly time card, students **must indicate the clinical site/rotation and the Flex Day number (ie. Flex Day #1, etc.).**

Clinical Site/Rotation	**Supervising Radiographer**	**Contact Number**
ICME	Tricia Steiger	973-7214
EMMC- ED	Rotating Radiographers	973-8009
EMMC – Portables & 5/6	Allison Bennett	973-8162
EMMC – Surgery	Michelle Fortier	973-9285
EMMC – Webber	Royce Bailey	973-4745
EMMC – Weekend Hours	Rotating Radiographers	973-8162-QC/ 941-5297 (Beeper)
EMMC – Evening/Nights	Rotating Radiographers	973-8162-QC/ 941-5297 (Beeper)
St. Joseph Hospital	Carol Woodward	907-3265
MCMH	Natalie Stanley	664-5360
Blue Hill Mem. Hospital	Autumn Staples	374-3490
Cary Medical Center	Lori Ouellette	498-1200
Houlton Regional Hospital	Sue McLaughlin	532-2900, ext 193

- Only 2 students can be scheduled **in any one rotation area** at EMMC except the 7:00pm – 7:00am 12-hour night shift (only 1 student)
- Only 2 students can be scheduled @ these sites: St. Joseph Hospital, MCMH, ICME
- Only 1 student can be scheduled @ these sites: Cary Medical Center, Houlton Regional Hospital, Blue Hill Memorial Hospital, and Penobscot Community Health Care

ATTENDANCE

Students are expected to be present for all scheduled clinical education. Time cards are provided for students to use in recording clinical education time. Students must clock in and out, ***for themselves***, on time cards at the beginning and end of each clinical day. If students forget to clock in or out, they must write in the time of arrival/departure, and have the card initialed by the program faculty or (supervising radiographer at clinical sites other than EMMC).

Students who leave their clinical site for ***any*** reason (health appointments, meetings, etc), must obtain permission from a faculty member, clock out, and indicate the reason on their time card. Students who leave their clinical site for lunch must clock out/clock in, and indicate the reason on their time card.

Students are expected to be ON TIME for clinical education. Students must clock in a ***minimum*** of 5 minutes PRIOR to the beginning of their schedule (Example: For the 8-4:30 schedule, students must clock in by 7:55 and are considered late as of 7:56). Students should allow adequate time so that they will be in their assigned area on time. Students who are late ***must*** **inform the program faculty as soon as they arrive in the clinical area.**

Absences from clinical assignments **INCLUDING FLEX DAYS** for ***any*** reason must be brought to the immediate attention of the program faculty by the student. When students will be absent, faculty must be contacted **BY PHONE PRIOR TO THE BEGINNING OF THE STUDENTS' SCHEDULED ROTATION** (973-8153, 973-8162 on weekends/Flex Days). Any clinical absence **INCLUDING FLEX DAYS** not reported to the Program Director or Clinical Coordinator at the beginning of the scheduled time will be considered unauthorized leave of absence (for further explanation, refer to Personal Leave Time Policy).

SCHOOL/CLINICAL CANCELLATION

In cases of hazardous weather conditions, students can call the EMCC school cancellation number 974-4899. It is **required** that students sign up for the RAVE alert system at EMCC. If classes are cancelled due to hazardous weather conditions at EMCC, students will not be allowed in clinical education assignments.

HOLIDAYS/VACATIONS

Students observe all holidays identified in the EMCC Academic Calendar (as listed in the college catalogue). Students may not participate in clinical education on any major holiday observed by the college. The Program Calendar is located in the Medical Radiography Student Handbook.

PERSONAL LEAVE TIME

64 hours of personal leave time is allocated during the clinical education component of the program. A total of 24 hours may be taken during the first three semesters: MRT 161, MRT 162, MRT 163; a total of 40 hours may be taken during MRT 267 and MRT 270. Personal leave time not utilized during the first three clinical semesters may be "carried over" into the subsequent semesters. Personal leave time includes sick leave and authorized leave of absence (LOA). LOA refers to time taken when the student has notified the program faculty that he/she will not be in the clinical area.

Personal Leave Time may only be used at the beginning of the students' clinical assignment if pre-approved by program faculty (such as for dental/physician appointments, etc.). Each time the student is tardy for his/her clinical assignment, 2 hours will be deducted from the students' accrued Personal Leave Time **and** the student must make-up 2 clinical hours. If the student does not have PL time to use, 4 hours must be made up.

Any time which exceeds the accrued personal leave time **must be made up by the end of the semester in which it was taken.** Each incident of excess personal leave time will result in an increasing point deduction from the Ethics Portion of the students' clinical grade (see clinical evaluation system p.3).

Any clinical absence not reported to the Clinical Coordinator **BY PHONE** prior to the beginning of the scheduled time will be considered **unauthorized leave of absence.** Each incident of unauthorized leave of absence from the clinical area will result in a 1-point deduction from Ethics Portion of the students' clinical grade. Students will be required to make up all ULA clinical time.

Two days of bereavement leave are allowed in the loss of a member of the student's immediate family - parent, sibling, spouse, child, grandparent, spouse's parent.

MAKE-UP CLINICAL TIME

The student must "make up" any scheduled clinical time missed in excess of the accrued Personal Leave Time. "Make-up" time will be scheduled in 2-hour increments prior to the completion of the semester in which the leave was taken. Arrangements for "make-up" time will be made with the cooperation of the student but must be pre-approved by the program faculty. Make-up time will be allowed on vacation days, holidays and on week-ends provided the clinical staff to student ratio is a minimum of 1:1. Make-up time is not allowed on weekends at the Imaging Center of Maine. Total student time involvement (for both academic & clinical education) will not exceed 40 hours/week.

EXTENDED LEAVE OF ABSENCE

Students in good academic standing may request a leave of absence from the Medical Radiography Program. The Academic Dean and the program faculty must approve the leave of absence. The student taking the leave of absence may choose one of the following options

- **Clinical Leave of Absence:**
  The student may remain in academic courses, but take a leave of absence (not to exceed a one-year period) from the clinical component of the program. Re-entry into clinical courses is based on space availability.*
- **Program Leave of Absence:**
  The student may take a leave of absence from the program (both clinical and academic courses) for a period not to exceed one year. Students selecting this option must notify the enrollment center at least 90 days prior to re-entrance into the program. Re-entry into the program is based on space availability, and is at the discretion of the admission committee.

Depending on the length of the leave of absence, the student may be required to retake some academic courses, and will be required to "retest" on some or all radiographic examinations from previous clinical courses. Requirements & clinical time for the subsequent clinical course may not be started until all required "retest" examinations are successfully completed.

INDEX – PROGRAM FACULTY

2018 – 2019 CLINICAL INSTRUCTORS

Royce Bailey (EMMC) Allison Bennett (EMMC) Emily Coffin (PCHC) Mike Corbin (PCHC)
Doris Dall (EMMC) David Gilbert (EMMC) Sue McLaughlin (HRH) Lori Ouellette (CMC)
Jennifer Sewell (EMMC) Camilla Snowman (EMMC) Natalie Stanley (MCMH)
Autumn Staples (BHMH) Tricia Steiger (ICME) Carol Woodward (SJH)

DESCRIPTION - CLINICAL INSTRUCTOR

The Clinical Instructor is a radiographer, who may be employed by the college and/or clinical affiliate. The C.I. assists the full-time radiography program faculty in clinical instruction and evaluation of radiography students.

Qualifications:

(1) Holds active license in *American Registry of Radiologic Technologists,* in radiography.
(2) Graduated from a JRCERT*- approved medical radiography program.
(3) Documents the equivalent of two years of successful experience as a radiographer
(4) Demonstrates strong interest in radiography education and evidence of ability to provide students with the knowledge and skills required of a radiographer.
(5) Possesses proficiency in student supervision, instruction, and evaluation.

Significant Duties:

As needed and requested by the full-time program faculty, the Clinical Instructor:

(1) Reviews requisitions to determine students' level of ability to participate in radiographic procedures.
(2) Assists students with radiography of patients.
(3) Evaluates and discusses the quality of students' radiographs.
(4) Repeats radiographs with students or requests another radiographer to be present for repeats.
(5) Acts as a liaison between students and radiographers and/or radiologists.
(6) Reviews equipment operation with students.
(7) Provides resources to answer students' questions about clinical education.
(8) Contacts full-time faculty with questions about the clinical assignment schedule.
(9) Assists full-time faculty with clinical evaluation.
(10) Evaluates students' procedural proficiency during examinations on actual patients and/or simulated examinations.
(11) Evaluates and discusses the quality of students' radiographic images taken during competency testing.
(12) Reviews areas of needed student improvement after competency testing.
(13) Demonstrates continued competence in imaging, instructional, and evaluative techniques through documented professional development.

*****Joint Review Committee on Education in Radiologic Technology [JRCERT 20 N. Wacker Drive, Suite 2850, Chicago, Il.60606-3182; Phone # (312) 704-5300; Fax # (312) 704-5304]. JRCERT.org

2018 – 2019 CLINICAL COMPETENCY RATERS

EMMC -	Royce Bailey	Allison Bennett	John Cameron	Doris Dall
	Michelle Fortier	David Gilbert	Nikki Gray	Sherry Libby
	Devon McCormick	Amanda Martin	Phil Mattei	Brittany Merrill
	Seth Milton	Jamie Perkins	Jane Reagan	Kimberly Rogers
	Jennifer Sewell	Camilla Snowman	Joel Susen	

ICME - Annette Kinley Tricia Steiger

MCMH - Scott Fisher Peggy Nault Natalie Stanley Jay Sullivan

PCHC - Emily Coffin Michael Corbin

SJH - Kevin Cronin Cera Jamison Jared Madden Carol Woodward

Cary Medical Center - Amanda Kingsbury

DESCRIPTION - CLINICAL COMPETENCY RATER

The Clinical Competency Rater is a radiographer, employed by the clinical affiliate, who assists the full-time radiography program faculty in competency test evaluation of radiography students.

Qualifications:
(1) Holds active license in *American Registry of Radiologic Technologists,* in radiography.
(2) Graduation from a JRCERT*- approved medical radiography program.
(3) Documents the equivalent of one year of successful experience as a radiographer.
(4) Demonstrates strong interest in radiography education and the demonstrated ability to instruct students in the clinical area

Significant Duties:
As needed and requested by the full-time program faculty, the Clinical Competency Rater:
(1) Evaluates students' procedural proficiency during examinations on actual patients.
(2) Evaluates and discusses the quality of students' radiographic images taken during competency testing.
(3) Reviews areas of needed student improvement after competency testing.

*****Joint Review Committee on Education in Radiologic Technology [JRCERT 20 N. Wacker Drive, Suite 2850, Chicago, Il.60606-3182; Phone # (312) 704-5300; Fax # (312) 704-5304]. JRCERT.org

2018 – 2019 MEDICAL RADIOGRAPHY PROGRAM FACULTY

Debbie Atwood, RT(R) (CT) (VI)
Angiography Instructor

John Cameron, RT(R) (CT)
Computerized Tomography Instructor

Kaity Cameron, (N)
Nuclear Medicine Instructor

Ashley Mehuren, RT(R) (T)
Radiation Therapy Instructor

Melanie Landry, BS, RT(R)
Clinical & Didactic Faculty

Donna McLaughlin, BS, RT(R)
Clinical Coordinator

Heather Merrill, MSEd, RT(R)
Program Director

Bill Miles, BS, **RT**, **RDMS**
Ultrasound Instructor

Keith Potter, RT(R) (MR)
MRI Instructor

Camilla Snowman, BS, RT(R)
Adjunct Clinical Faculty

Cindy Spain, BS, RT(R), **(CV) (RCVT)**
Cardiac Angiography Instructor

Gopal Subedi, MS
Medical Dosimetry Instructor

David Warner, M.D.
Medical Advisor

INDEX – ACADEMIC CALENDAR

2018-2019 MEDICAL RADIOGRAPHY ACADEMIC CALENDAR

AUGUST 2018

27	Fall Semester Begins
28, 30	Freshman Orientation

SEPTEMBER 2018

3	Labor Day – NO CLASSES
4 & 6	Freshman Orientation Continues

OCTOBER 2018

8	Columbus Day - NO CLASSES
12	**MID-SEMESTER DUE DATE**

NOVEMBER 2018

12	Veteran's Day (Observed) - NO CLASSES
21-23	Thanksgiving Break - NO CLASSES

DECEMBER 2018

12-14	Final Exams – Day Classes
14	Fall Semester Ends
15	Semester Break Begins

JANUARY 2019

7	MRT 270/Clinical Education V Begins
8	MRT 162/Clinical Education II Begins
14	Academic Classes Begin
21	Martin Luther King Day - NO CLASSES

FEBRUARY 2019

18-22	February Break
25	Classes Resume

MARCH 2019

1	**MID-SEMESTER DUE DATE**

APRIL 2019

1-5	April Break

MAY 2019

2	Senior & Award Banquet
8-10	Final Exams
10	EMCC Commencement
13	MRT 163/Clinical Education III Begins
27	Memorial Day - NO CLINICAL EDUCATION

JUNE 2019

28	MRT 163/Clinical Education III Ends

Eastern Maine Community College

2018-19 ACADEMIC YEAR CALENDAR

Fall Semester 2018

Classes begin	Monday, August 27
Last day of add/drop	Saturday, September 1
Labor Day Holiday with **No** Classes in Session	Monday, September 3
Columbus Day Holiday with **No** Classes in Session	Monday, October 8
Withdrawal ends	Friday, November 2
Veterans' Day with **No** Classes in Session (Observed)	Monday, November 12
Thanksgiving break	W-F, November 21-23
Final exams	R-F, December 13-14
Semester ends	Friday, December 14

Spring Semester 2019

Classes begin	Monday, January 14
Last day of add/drop	Saturday, January 19
Martin Luther King Holiday with **No** Classes in Session	Monday, January 21
President's Day/Winter break with **No** Classes in Session	February 18-22
Withdrawal ends	Friday, March 29
Spring break with **No** Classes in Session	M-F, April 1-5
Patriots Day with Classes in Session	Monday, April 15
Final exams	R-F, May 9-10
Semester ends	Friday, May 10
Commencement	Friday, May 10

Summer Semester 2019

Summer Term 1 (6 weeks)	May 20 – June 28
Summer Term 2 (12 weeks with one week vacation)	May 20 – August 16
Summer Term 3 (6 weeks)	July 8 – August 16

Status: approved 5/8/2017; 5/7/2018
Last update: 5/1/2017; 4/16/18 Pres. Cab; 4/23/18 CS;
4/30/2018 Pres. Cab.;

EASTERN MAINE COMMUNITY COLLEGE

MEDICAL RADIOGRAPHY PROGRAM

MRT 161 - CLINICAL EDUCATION I
COURSE OBJECTIVES

STUDENT NAME _____

CLINICAL OBJECTIVES RECEIVED _____

POINTS _____

Notice to Radiographers: Please do not sign off student objectives without student signature on bottom of page

By the end of Clinical Education I, the Medical Radiography student will be able to:	**1st Unsuccessful Attempt/Date**	**2nd Unsuccessful Attempt/Date**	**Successfully Completed**	**RT Initials/ Date**
1. Identify from the requisition: patient's name, age, status (inpatient/outpatient), exam requested, clinical data, and ordering physician				
2. Locate & verify physician order using CPOE (Powerchart)				
3. Insert & remove cassettes from the bucky tray				
4. Place the lead "L" or "R" appropriately on the cassette				
5. Measure the patient's body part using calipers				
6. Check the patient's identification band				
7. Verify patient identification verbally (name & DOB)				
8. Demonstrate the proper method of transferring a patient from a wheelchair to an x-ray table				
9. Demonstrate the proper method of transferring a patient from a stretcher to an x-ray table				
10. Demonstrate the proper method of transferring a patient from a stretcher to an x-ray table using a smooth mover				
11. Demonstrate the proper locking of a wheelchair and/or stretcher				
12. Safely transport a patient by wheelchair or stretcher				
13. Place a child in the Pigg-o-stat device with minimal assistance				
14. Demonstrate the proper steps to take should a fire occur in an x-ray examination room	*			
15. Demonstrate the proper manner of reporting a fire to the hospital operator	*			
16. Identify the location of the fire pull boxes in the EMMC Radiology Department	*			
17. Demonstrate the proper procedure for calling a "Code Blue"	*			

Student Signature: _____

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By the end of Clinical Education I, the Medical Radiography student will be able to:	**1st Unsuccessful Attempt/Date**	**2nd Unsuccessful Attempt/Date**	**Successfully Completed**	**RT Initials/ Date**
18. Locate and transport the crash cart/Doppler/Monitor(Dash 4000)	*			
19. Identify location of fire extinguishers in Medical Imaging Department	*			
20. Identify location of SDS sheets on EMH computer systems	*			
21. Demonstrate proper usage of full and/or half lead aprons for patient protection				
22. Demonstrate the proper manner of wearing a lead apron & a thyroid shield				
23. Demonstrate the proper method for transferring a call to another extension				
24. Operate the locks correctly on the radiographic tube & bucky tray				
25. Change the x-ray tube position from vertical to the horizontal (& vice versa)				
26. Demonstrate the angulations of the x-ray tube				
27. Manipulate the x-ray tube to the correct SID using the overhead indicator or measuring tape				
28. Wear film badge in proper site for both diagnostic & fluoroscopic procedures				
29. "Tech Complete" the examination in the computer				
30. Change requisition for incorrect order entry				
31. Enter a requisition into the computer				
32. (Imaging Reception Desk) Check patient in				
33. (Imaging Reception Desk) Change patient properly for exam requested				
34. (Imaging Reception Desk) Provide safe-keeping of the patient's personal articles				

Student Signature: _____

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By the end of Clinical Education I, the Medical Radiography student will be able to:	**1st Unsuccessful Attempt/Date**	**2nd Unsuccessful Attempt/Date**	**Successfully Completed**	**RT Initials/ Date**
35. (OR Surgical Rotation) Observe an OR procedure				
36. (OR Surgical Rotation) Properly gown using operating room dress code				
37. Set a phototimed radiographic technique				
38. Set a manual technique and demonstrate off-bucky procedure				
39. In image analysis class, be prepared to review a **set of chest or KUB images**	*			
40. In image analysis class, be prepared to review a **set of upper or lower extremity images**	*			
41. (AGFA) Enter patient information				
42. (AGFA) Identify which view is selected for exposure				
43. (AGFA) Transfer images from one folder to another				
44. (AGFA) Locate exposure information (lgm #)				
45. (AGFA) Demonstrate how to rotate, flip, crop, add markers, and make comments				
46. (AGFA) Identify adequate exposure factors				
47. (AGFA) Demonstrate how to archive images				
48. (AGFA) Demonstrate how to retrieve images from a different date				

Student Signature: _____

EASTERN MAINE COMMUNITY COLLEGE

MEDICAL RADIOGRAPHY PROGRAM

MRT 162 - CLINICAL EDUCATION II
COURSE OBJECTIVES

STUDENT NAME _____

CLINICAL OBJECTIVES RECEIVED _____

POINTS _____

Notice to Radiographers: Please do not sign off student objectives without student signature on bottom of page

By the end of Clinical Education II, the Medical Radiography student will be able to:	**1st Unsuccessful Attempt/Date**	**2nd Unsuccessful Attempt/Date**	**Successfully Completed**	**RT Initials/ Date**
1. Read the pressure gauge on an oxygen tank; note flow rate & tank capacity (on portable tanks)				
2. Identify nasal cannula & O_2 face mask				
3. Demonstrate removal & replacement of suction canister & tubing				
4. Check the patient's order or CPOE for pertinent information regarding the radiographic procedure				
5. Obtain an urgent reading and deliver the information				
6. (ED Rotation) State Vital Sign ranges/ Identify pulse O_2 ranges	*			
7. Convert mA & time to mAs (& vice versa)	*			
8. Select the correct focal spot size for specific examinations	*			
9. Select the correct kVp level for specific examinations	*			
10. Identify storage location for all types of needles & syringes	*			
11. Identify the various indicators used to verify the sterility of radiographic trays & instruments	*			
12. Demonstrate proper method of drawing up sterile solutions				
13. Demonstrate proper disposal of needles/syringes in a puncture-resistant container				
14. (Fluoro Rooms) Send all images to PACS				
15. (Fluoro Rooms) Send "flagged" images to PACS				
16. (Fluoro Rooms) Demonstrate proper room set-up for a G.I Series				
17. (Fluoro Rooms) Demonstrate proper room set-up for a sterile procedure (arthogram, jt. injection)				

Student Signature: _____

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By the end of Clinical Education II, the Medical Radiography student will be able to:	**1st Unsuccessful Attempt/Date**	**2nd Unsuccessful Attempt/Date**	**Successfully Completed**	**RT Initials/ Date**
18. (ED Rotation) Disconnect & connect patient from ED Monitor (O_2 Sat, BP Cuff, Cardiac Leads)				
19. (ED Rotation) Identify chest lead locations				
20. (ED Rotation) Turn monitor to Monitor Pause and back on				
21. (ED/Trauma Room) Demonstrate use of the trauma stretcher in trauma room				
22. (Portable Rotation) Set technique & take exposure				
23. (Portable Rotation) Display accurate usage of all locks on mobile radiographic equipment				
24. (OR/Surgical Rotation) Wash c-arm after surgical case				
25. (OR/Surgical Rotation) Manipulate the c-arm in a surgical environment				
26. (OR/Surgical Rotation) Manipulate the portable in a surgical environment				
27. (OR/Surgical Rotation) Assist with portable/c-arm spine procedure				
28. (OR/Surgical Rotation) Participate in a Port-a-Cath/Central Line Procedure				
29. (OR/Surgical Rotation) Participate in an extremity (portable or c-arm) procedure				
30. (OR/Surgical Rotation) Participate in a GU Case				

Student Signature: _____

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By the end of Clinical Education II, the Medical Radiography student will be able to:	**1st Unsuccessful Attempt/Date**	**2nd Unsuccessful Attempt/Date**	**Successfully Completed**	**RT Initials/ Date**
31. In image analysis class, be prepared to review UGI/BE images or shoulder/pelvis images	*			
32. In image analysis class, be prepared to review a set of Vertebral Column images	*			
33. Identify the signs and appropriate reaction for Cardiac Arrest	*			
34. Identify the signs and appropriate reaction for Respiratory Distress	*			
35. Identify the signs and appropriate reaction for a Grand Mal Seizure	*			
36. Identify the signs and appropriate reaction for Anaphylactic Shock	*			
37. Identify the signs and appropriate reaction for Hypovolemic Shock	*			
38. Identify the signs and appropriate reaction for Cerebrovascular Accident (stroke or brain attack)	*			
39. Identify the signs and appropriate reaction for Hypoglycemic Insulin Reactions	*			
40. Identify the signs and appropriate reaction for Hyperglycemic Insulin Reactions	*			
41. (Fuji) Enter patient information				
42. (Fuji) Identify which view is selected for exposure				
43. (Fuji) Locate exposure index information (S#)				
44. (Fuji) Demonstrate how to rotate, flip, crop, add markers, and make comments				
45. (Fuji) Identify adequate exposure factors				
46. (Fuji) Demonstrate how to Archive Images				
47. (Fuji) Demonstrate how to retrieve images from a different date				

Student Signature: _____

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By the end of Clinical Education II, the Medical Radiography student will be able to:	**1st Unsuccessful Attempt/Date**	**2nd Unsuccessful Attempt/Date**	**Successfully Completed**	**RT Initials/ Date**
48. (DR unit) Enter patient information				
49. (DR unit) Identify view selected for exposure				
50. (DR unit) Change exposure factors for various situations				
51. (DR unit) Locate exposure (index) information				
52. (DR unit) Demonstrate how to rotate, flip, crop, add markers, and make comments				
53. (DR unit) Demonstrate the steps needed to add a view				
54. (DR unit) Demonstrate the steps needed to add a study				
55. (DR unit) Demonstrate the steps needed to archive images				
56. (DR unit) Demonstrate the steps needed to preview an image and resend the image				
57. (DR unit) Manipulate the x-ray table				
58. (DR unit) Manipulate locks for the different detector (array) positions				
59. (DR unit) Demonstrate how to manipulate the locks on the x-ray tube				
60. (DR unit) Demonstrate the tube position for both upright and table radiography				

Student Signature: _____

EASTERN MAINE COMMUNITY COLLEGE

MEDICAL RADIOGRAPHY PROGRAM

MRT 163 - CLINICAL EDUCATION III
COURSE OBJECTIVES

STUDENT NAME _____

CLINICAL OBJECTIVES RECEIVED _____

POINTS _____

*****Notice to Radiographers: Please do not sign off student objectives without student signature on bottom of page***

By the end of Clinical Education III, the Medical Radiography student will be able to:	**1st Unsuccessful Attempt/Date**	**2nd Unsuccessful Attempt/Date**	**Successfully Completed**	**RT Initials/ Date**
1. Alter the technical factors to compensate for SID changes	*			
2. Alter the technical factors to compensate for grid changes	*			
3. Demonstrate proficiency in the usage of the Radiographic Rating Charts	*			
4. Demonstrate proficiency in the usage of the Anode Cooling Charts & Fluoroscopy Heat Accumulation	*			
5. Demonstrate proper gowning (gown, mask, & gloves) for sterile procedures	*			
6. Set a manual technique (mA, seconds, kVp) for various situations	*			
7. (Portable Rotation) Set technique & take exposure				
8. (Portable Rotation) Manipulate portable in NICU, set technique & take exposure				
9. (OR/Surgical Rotation) Assist with a portable sterile procedure				
10. (OR/Surgical Rotation) Assist with an extremity (portable or c-arm) procedure				
11. (OR/Surgical Rotation) Assist with a surgical c-arm procedure				
12. Panoramic PC 1000 (ED) Demonstrate how to turn the control panel on, off, & set control panel for an exposure				
13. Panoramic PC 1000 (ED) Demonstrate how to place the imaging plate in the black sleeve & place in the unit				
14. Panoramic PC 1000 (ED) Demonstrate how to use the head clamps & chin supports				
15. Panoramic PC 1000 (ED) Demonstrate how to manipulate IP drum when setting up the Panorex; Rt. from Lt. vs. Lt. from Rt.				

Student Signature: _____

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By the end of Clinical Education III, the Medical Radiography student will be able to:	**1st Unsuccessful Attempt/Date**	**2nd Unsuccessful Attempt/Date**	**Successfully Completed**	**RT Initials/ Date**
16. (Evening Rotation/ED or Trauma Room) Set up the room for an extremity procedure				
17. (Evening Rotation/ED or Trauma Room) Set control panel for an extremity procedure				
18. (Evening Rotation/ED or Trauma Room) Set up the room for a trunk procedure				
19. (Evening Rotation/ED or Trauma Room) Set control panel for a trunk procedure				
20. (Angio Rotation) Identify anatomy on monitor for an angiographic examination				
21. (Angio Rotation) Load injector				
22. (Angio Rotation) Set up and clean up sterile trays				
23. (Cath Lab) Assist setting up patients with BP hook-up/ ECG electrodes/O2 sat				
24. (Cath Lab) Open sterile equipment and assist scrub with procedure set-up				
25. (Cath Lab) Purge injector with scrub				
26. (Cath Lab) Identify 3 major coronary arteries on monitor				
27. (Cath Lab) Observe at least one cardiac implant (pacemaker or defibrillator) and identify lead(s) within the heart				
28. Given CT cross-sectional images of the thorax, identify the structures	*			
29. Given CT cross-sectional images of the abdomen, identify the structures	*			
30. Given CT cross-sectional images of the pelvis, identify the structures	*			
31. Given CT cross-sectional images of the vertebral column, identify the structures	*			
32. Given CT cross-sectional images of the brain, identify the structures	*			

Student Signature: _____

EASTERN MAINE COMMUNITY COLLEGE

MEDICAL RADIOGRAPHY PROGRAM

MRT 267 - CLINICAL EDUCATION IV
COURSE OBJECTIVES

STUDENT NAME _____

CLINICAL OBJECTIVES RECEIVED _____

POINTS _____

******Notice to Radiographers: Please do not sign off student objectives without student signature on bottom of page***

By the end of Clinical Education IV, the Medical Radiography student will be able to:	**1st Unsuccessful Attempt/Date**	**2nd Unsuccessful Attempt/Date**	**Successfully Completed**	**RT Initials/ Date**
1. Refer to fluoro room reference log for equipment needed for special fluoro exams (ie: arthrography, HSG's, myelography, VCUG, etc.)				
2. (Fluoro Room) Perform room set-up for a sterile procedure				
3. (Fluoro Room) Display aseptic technique in opening a sterile tray & sterile items				
4. (OR/Surgical Rotation) Manipulate c-arm equipment in a sterile environment				
5. (OR/Surgical Rotation) With c-arm equipment, store images				
6. (OR/Surgical Rotation) Connect c-arm equipment to network port and send images to PACS				
7. (OR/Surgical Rotation) With direct supervision, perform all aspects of a c-arm procedure				
8. (OR/Surgical Rotation) With c-arm, assist with a Port-a-Cath/Central Line Placement Procedure				
9. (OR/Surgical Rotation) Assist with a surgical spine (portable or c-arm) procedure				
10. (OR/Surgical Rotation) Assist with an extremity (portable or c-arm) procedure				
11. (OR/Surgical Rotation) Assist in a GU or abdominal procedure				
12. (OR/Surgical Rotation) Assist in an orthopedic procedure				
13. (OR/Surgical Rotation) Assist with a c-arm procedure requiring manipulation of c-arm to obtain more than one projection				
14. (OR/Surgical Rotation) Observe calibration & measurement on OEC C-Arm	*			
15. Participate in an ERCP procedure				
16. Identify an appropriate plan of action for radiography of a multiple trauma situation	*			

Student Signature: _____

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By the end of Clinical Education IV, the Medical Radiography student will be able to:	**1st Unsuccessful Attempt/Date**	**2nd Unsuccessful Attempt/Date**	**Successfully Completed**	**RT Initials/ Date**
17. (Evening Rotation) Participate (with the radiographer) in imaging an atypical patient				
18. (Evening Rotation) Participate (with the radiographer) in imaging an atypical patient – second case				
19. (Evening/ED or Trauma Room) Demonstrate alternate ways of positioning/realigning tube & IR for an extremity procedure				
20. (Evening/ED or Trauma Room) Set the control panel and assist for an extremity procedure				
21. (Evening/ED or Trauma Room) Set the control panel and assist in a trunk procedure				
(CT Rotation) Identify spinal anatomy on monitor				
22. Vertebral body				
23. Transverse process				
24. Lamina				
25. Pedicles				
26. Spinous process				
27. Vertebral foramen				
28. Disc				
(CT Rotation) Identify basic abdomen and pelvic anatomy				
29. Liver				
30. Spleen				
31. Kidneys				
32. Urinary bladder				
33. Small intestine				
34. Large intestine				

Student Signature: _____

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By the end of Clinical Education IV, the Medical Radiography student will be able to:	**1st Unsuccessful Attempt/Date**	**2nd Unsuccessful Attempt/Date**	**Successfully Completed**	**RT Initials/ Date**
(CT Rotation) Identify basic thorax anatomy				
35. Heart chambers				
36. Aorta				
37. SVC				
38. Lungs				
39. Carina				
40. Trachea				
41. Esophagus				
(CT Rotation) Identify basic cranial/facial/sinus anatomy				
42. Sinuses				
43. Zygomatic arches				
44. Ventricles				
45. Orbits				
46. (CT Rotation) Set up room for CT procedure including loading of injector				
47. (CT Rotation) Administer oral contrast media; provide patient with allergy & LMP sheets				
48. (CT Rotation) Move patient into gantry, angle gantry & initialize gantry				
49. (Angio Rotation) Identify anatomy on monitor for an angiographic examination				
50. (Angio Rotation) Load injector				
51. (Angio Rotation) Set up and clean up sterile trays				
52. (Cath Lab) Assist setting up patients with BP hook-up/ ECG electrodes/O2 sat				
53. (Cath Lab) Open sterile equipment and assist scrub with procedure set-up				
54. (Cath Lab) Purge injector with scrub				
55. (Cath Lab) Identify 3 major coronary arteries on monitor				
56. (Cath Lab) Observe at least one cardiac implant (pacemaker or defibrillator) and identify lead(s) within the heart				

Student Signature: _____

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57. (NM Rotation) Observe a bone scan				
58. (NM Rotation) Check scan with radiologist; follow through as needed				
59. (US Rotation) Locate images on PACS				
60. (US Rotation) Type required patient information into a scanning unit				
61. (US Rotation) Demonstrate the use of the OB pregnancy wheel				
62. (US Rotation) Identify general abdominal/pelvic anatomy				
63. (US Rotation) Identify general obstetrical anatomy				
64. (Rad Rx Rotation) Demonstrate the use of hand controls & patient positioning (refer to simulation sheets)				
65. (Rad Rx Rotation) Demonstrate block & wedge placement; demonstrate dose selection on controls				
66. (MRI Rotation) Assist with patients				
67. (MRI Rotation) Identify cross-sectional anatomy on monitor screen				
68. Demonstrate proficiency performing a venipuncture procedure (simulation)	*			

Student Signature: _____

EASTERN MAINE COMMUNITY COLLEGE

MEDICAL RADIOGRAPHY PROGRAM

MRT 270 - CLINICAL EDUCATION V
COURSE OBJECTIVES

STUDENT NAME _____

CLINICAL OBJECTIVES RECEIVED _____

POINTS _____

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By the end of Clinical Education V, the Medical Radiography student will be able to:	**1st Unsuccessful Attempt/Date**	**2nd Unsuccessful Attempt/Date**	**Successfully Completed**	**RT Initials/ Date**
1. (OR/Surgical Rotation) With c-arm equipment, assist with the manipulation from AP to the Lateral position for a surgical procedure				
2. (OR/Surgical Rotation) With c-arm equipment, assist with a chest/abdominal procedure				
3. (OR/Surgical Rotation) With c-arm equipment, assist with an extremity procedure				
4. (OR/Surgical Rotation) Demonstrate calibration & measurement on OEC C-Arm	*****			
5. (MRI Rotation) Assist with patients				
6. (MRI Rotation) Identify cross-sectional anatomy on monitor screen				
7. (Angio Rotation) Identify anatomy on monitor for an angiographic examination				
8. (Angio Rotation) Load injector				
9. (Angio Rotation) Set up and clean up sterile trays				
10. (NM Rotation) Observe a bone scan				
11. (NM Rotation) Check scan with radiologist; follow through as needed				
12. (US Rotation) Locate images on PACS				
13. (US Rotation) Type required patient information into a scanning unit				
14. (US Rotation) Demonstrate the use of the OB pregnancy wheel				
15. (US Rotation) Identify general abdominal/pelvic anatomy				
16. (US Rotation) Identify general obstetrical anatomy				
17. (Rad Rx Rotation) Demonstrate the use of hand controls & patient positioning (refer to simulation sheets)				
18. (Rad Rx Rotation) Demonstrate block & wedge placement; demonstrate dose selection on controls				

Student Signature: _____

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By the end of Clinical Education V, the Medical Radiography student will be able to:	**1st Unsuccessful Attempt/Date**	**2nd Unsuccessful Attempt/Date**	**Successfully Completed**	**RT Initials/ Date**
19. (CT Rotation) Set up room for CT procedure including loading of injector				
20. (CT Rotation) Administer oral contrast media; provide patient with allergy & LMP sheets				
21. (CT Rotation) Move patient into gantry, angle gantry & initialize gantry				
22. (CT Rotation) Mix CM with appropriate medium prior to patient administration				
23. (CT Rotation) Verify the patient's GFR & Creatinine levels prior to CM administration				
24. (CT Rotation) Properly explain the difference between an arterial and portal venous study				
25. (CT Rotation) Properly identify planar reconstructions				
26. (CT Rotation) Identify the normal sensations experienced with administration of CM and the physiologic effects of osmolality				
(CT Rotation) Identify detailed abdomen/pelvic anatomy				
27. Liver				
28. Spleen				
29. Pancreas				
30. Adrenals				
31. Kidneys				
32. Aorta				
33. IVC				
34. Small intestine				
35. Large intestine				
36. Iliac wings				
37. Sacrum				
38. Psoas muscles				
39. Gallbladder				
40. Urinary bladder				
41. Ribs				
42. Vertebra				
43. Femoral head/neck				
44. Acetabulum				
45. Greater trochanters				
46. Symphysis pubis				

Student Signature:_____

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By the end of Clinical Education V, the Medical Radiography student will be able to:	**1st Unsuccessful Attempt/Date**	**2nd Unsuccessful Attempt/Date**	**Successfully Completed**	**RT Initials/ Date**
(CT Rotation) Identify detailed thorax anatomy				
47. Vertebral body				
48. Aorta				
49. Pulmonary artery				
50. Pulmonary vein				
51. SVC				
52. Trachea/Carina				
53. Heart chambers				
54. Adrenal glands				
55. Stomach				
56. Ribs				
57. Costo-vertebral joints				
58. Sternum/manubrium				
59. Lungs				
60. **(Cath Lab)** Assist setting up patients with BP hook-up/ ECG electrodes/O2 sat				
61. **(Cath Lab)** Open sterile equipment and assist scrub with procedure set-up				
63. **(Cath Lab)** Purge injector with scrub				
64. **(Cath Lab)** Identify 3 major coronary arteries on monitor				
65. (Cath Lab) Observe at least one cardiac implant (pacemaker or defibrillator) and identify lead(s) within the heart				
66. (Evening/ED or Trauma Room) Demonstrate alternate ways of aligning tube & IR for a trunk procedure				
67. (Evening/ED or Trauma Room) Demonstrate alternate ways of aligning tube & IR for an extremity procedure				
68. (Evening/Trauma Room) Actively assist with a trauma procedure in the trauma room				
69. Demonstrate proficiency in usage of **Tube Rating Charts**	*			
70. Demonstrate proficiency in usage of **Anode Cooling Chart** & **Fluoroscopic Heat Accumulation**	*			

Student Signature:_____