City Colleges of Chicago

Malcolm X College

Radiography Program

Policies and Procedures Student Handbook

General and Clinical Education

2021-2022

Malcolm X College

Associate in Applied Science

Radiography

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Disclaimer: The contents of the Radiography Policies and Procedures Student Handbook are subject to change. If you have any questions, please contact the program's director.

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Mission Statement

The program strives to empower students of diverse backgrounds and abilities to achieve academic career and personal success. The program provides graduates with a level of preparation to become licensed and certified entry level radiographers, and employed upon completion of all program requirements.

Program Effective Measures (Goals)

1. Students will be clinically competent.
2. Students will communicate effectively.
3. Students will use critical thinking skills.
4. Students will demonstrate the importance of professionalism.

Student Learning Outcomes

1. Students will demonstrate positioning skills.
2. Students will select appropriate technical factors.
3. Students will practice radiation protection.
4. Students will use effective oral communication skills in the clinical setting.
5. Students will practice written communication skills.
6. Students will adapt to non-routine examinations.
7. Students will adapt to positioning of trauma patients.
8. Students will be able to critique radiographic images.
9. Students will exhibit ongoing professional development.

10. Students will understand the importance of the profession by attending the annual Radiological Society of North American conference.
11. Students will understand ethical dilemmas.
12. Students will pass the ARRT national certification exam on the 1st attempt.
13. Students will find employment within 12 months of graduation.
14. Students will complete the program in 24 months.
15. Students will be prepared to apply for state licensure.

Radiography Program Philosophy

Assessment in necessary to determine if the students have learned the necessary skills and tasks to perform in the workplace. The program is dedicated to providing an accredited instruction that has a well-rounded current curriculum with appropriate learning outcomes in an environment whereby students can gain the knowledge and skills necessary to become certified and licensed entry-level technologists.

To this end, teaching and learning has to be a cooperative experience. We must be able to determine the quality of the student's learning, their critical thinking and understanding of the materials. We have multiple activities for evaluation and assessment. In order for students to master the course content they must be thoroughly prepared with the basic foundational and core skills of mathematics, communication, humanities, natural and social sciences. Education for the radiographer needs to be built upon the base of general education. The program solicits the support of many of the general education departments to fulfill the need to be as well rounded as possible.

Students need to see the social and historical context of their chosen profession sot that they will understand the reciprocal interaction of profession, society, and daily lives. Career opportunities now and in the future will require individuals who can actively respond to changing work environments, continue to learn and grow, and work cooperatively with people of diverse backgrounds.

Education is a life-long and ever changing process. Students must integrate and compound all learning experiences, past and present. So that we might properly determine amount of knowledge gained or lack thereof toward specific learning outcomes it is necessary to assess the students' responses to each outcome.

Introduction

The Malcolm X College Radiography Program is accredited by the Joint Review Committee on Education in Radiologic Technology. The Joint Review Committee on Education in Radiologic Technology establishes STANDARDS for program review. In order to meet and maintain these guidelines, programs must have didactic and clinical education components. This handbook serves as a guide for that component and maintenance of accreditation.

The program consists of five clinical education courses (off campus) and fifteen didactic courses (on campus), designed to transform a student from a non-skilled level to proficiency to an entry-level radiographer.

This handbook will provide:

-General information related to the didactic education courses.

- General information related to the clinical education courses.

Malcolm X College

One of the City Colleges of Chicago

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Chicago, Illinois 60612

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www.ccc.edu/malcolmx

OFFICE OF RADIOGRAPHY PROGRAM

Dear Student:

This handbook is designed especially for you to serve as your guide and informational resource. It is intended to assist you in an orderly and organized matriculation through the program.

Congratulations on the beginning of a new career. Radiologic Technology is a dynamic and changing field. It offers many opportunities to serve as a member of the Health Care team and therefore impact the lives of our fellow human beings and improve the quality of their life. You have chosen well.

The faculty and staff are here to assist you in the attainment of your goal to become a registered Radiologic Technologist. Best wishes for a prosperous future.

Sincerely,

Stephanie Tarr, M.Ed., R.T. (R)

Program Director

Radiography Program Personnel

Ms. Stephanie Tarr, M. Ed., R.T. (R)

Program Director

Office # 2103P

Mr. Michael White, M.P.A., M.Ed., R.T. (R)(T)(CT)

Faculty

Office # 2103-10

Ms. Paulette La Bon, M.S.H.A., R.T. (R)

Clinical Coordinator

Office # 2103-07

Ms. Quantanna Owens B.Sc., R.T. (R)(CT)(M)

Clinical Coordinator

Office # 2103-002

Ms. Dandcee Kittivanichkulkrai, M.B.A., R.T. (R)(CT)(M)

Faculty

Office # 2103-11

Mr. Jean Puthenpurackal, M.B.A., R.T. (R)

Faculty

Office # 2103-04

Johanna Llanes, A.A.S., RT (R)

Laboratory Coordinator

Office # 2103-001

General Rules and Regulations

1. Students shall not eat or drink in the classroom or laboratory.
2. Excessive talking, laughing, and other disturbances will not be tolerated.
3. Disrespect of faculty, staff, and peers WILL NOT be tolerated.
4. All laboratory rules must be adhered to.

Before attending a clinical education center students MUST:

1. Have a current physical examination, TB test, flu shot and required immunization screenings on file in the Program Office.
2. Have a copy of current health insurance on file in the Program Office.
3. Have purchased the required uniform and lab coat with program patch.
4. Have a signed copy of the Student Program and Clinical Education Agreement on file in the Program Office.
5. Have purchased lead markers.
6. Have a film badge.
7. Have basic life support training (CPR) *subject to scheduling.
8. Be aware of contractual liability policy.
9. Have completed a criminal background check.
10. Have completed a drug screening.

The first clinical rotation schedule is considered as a probationary period. Each student will be evaluated on a regular basis to determine if he or she is able to function as professional technologists.

Dress Code

No hats, headscarves (except for religious purposes), excessive make-up or jewelry may be worn. No very short skirts, shorts, or other clothing and/or attire that may be construed as unethical, immoral, or unprofessional, may be worn in the classroom or clinical area. Hair must be barbered neatly or worn in a neat style.

Grooming

All students must maintain daily hygienic practices. Offensive odors will not be tolerated.

Accessories/Cell Phones

Cellular phones and/or pagers MUST NOT have an audible sound in the classroom and labs. Cellular phones must be OFF in the clinical areas. Students must respond to any and all calls during classroom break and on break in the clinicals.

Code of Conduct

Students are expected to conduct themselves in a professional manner at all times during clinical, classroom and laboratory education.

Clinical conduct

In addition to the program rules and regulations, students must follow the rules and regulations established by the clinical education center. Students are also expected to follow the American Society of Radiologic Technologists and the American Registry of Radiologic Technologists (see links below).

ASRT Code of Ethics – www.asrt.org

ARRT Standard of Ethics – www.arrt.org

ARRT - General Qualification and Eligibility for Certification

Candidates must comply with the "Rules of Ethics" contained in the ARRT Standards of Ethics.

The Rules of Ethics are standards of minimally acceptable professional conduct for all registered technologists and applicants. Registered technologists and applicants engaging in any of the conduct activities noted in the rules of ethics, or who permit the occurrence of said conduct or activities, have violated the Rules of Ethics are subject to sanctions.

One issue addressed by the Rules of Ethics, is the **conviction of a crime**, including a felony, gross misdemeanor, or a misdemeanor with the sole exception of speeding and parking

violations. All alcohol and/or drug related violations must be reported. Convictions as used in this provision include a criminal proceeding where a finding or verdict of guilt is made or returned but the adjudication of guilt is either withheld or not entered, or a criminal proceeding where the individual enters a plea of guilt or nolo contendere (no contest).

Candidates are not required to report offenses that were committed as a juvenile and were adjudicated through the juvenile court system.

All potential violations must be investigated by the ARRT in order to determine eligibility. Registered technologists and applicants who violate the Rules of Ethics must provide the ARRT with a written explanation, including court documentation must verify the nature of the conviction, the nature of the sentence.

If an applicant is convicted between the time of application and the exam administration date, it is the applicant's responsibility to inform the ARRT immediately and begins the review process. Additional information may be found in the ARRT website (www.arrt.org).

Individuals who have violated the Rules of Ethics (as stated above), may request a pre-application review of the violation in order to obtain a ruling of the impact on their eligibility for ARRT exam. The individual may submit a pre-application from at any time either before or after entry into an approved educational program. This review may enable the individual to avoid delays in processing the application for examination. The application request form does not waive the application procedures.

ARRT information may be obtained from the website, www.arrt.org

Bulletin Board

It is the student's responsibility to check the bulletin boards on a regular basis for information pertaining to the program.

Evaluation

A. Student evaluation of clinical education center and overall program

   Students are expected to complete a program and clinical site evaluation at the end of

the program. This information will be used to improve the quality of education.

B. Evaluation of student performance

1. Quizzes, Mid-term and Final.
2. Completion of assignments.
3. Didactic and clinical absences, tardiness.
4. Successful completion of clinical performance objectives.
5. Two or more types of warnings or suspensions in a given semester.
6. Successful completion of laboratory competency objectives.

Social Media Policy

Students enrolled in Health Sciences and Nursing programs at Malcolm X College must adhere to the Social Media Policy. Students must abide by the Standards of Conduct listed in the Academic and Student Policy Manual.

Prohibitions

Students are prohibited from taking and/or recording and/or sharing photos or videos of classroom and lab spaces while class and/or lab session held on campus or at clinical sites. Students are prohibited from taking and/or sharing photos or videos of clinical sites at any time. Students are prohibited from making any reference to any patient in their care, any patient in the care of an instructor, or any patient in the clinical facility. Students are prohibited from revealing any information in violation of the Health Insurance Portability and Accountability Act of 1996 (HIPAA). Read more about HIPAA here and HIPAA for professionals here.

Warnings

Students should bet mindful of possible violations of HIPAA laws and the disclosure of individual identifying information. Ignorance of HIPAA laws is not a defense of violations and students who violate the law will be held to the standards of it regardless of knowledge or foreknowledge. Violating the social media policy and/or HIPAA law can result in immediate

dismissal from the program and the student may be prohibited from being admitted into another MXC health sciences or nursing program.

As a student enrolled in a health care program, it is your responsibility to be aware that social media posts that reference activities in the classroom, lab, or clinical sessions of your health sciences program may inadvertently disclose protected information. Any inadvertent disclosure is subject to discipline under the prohibitions of this policy.

Penalties

Students in violation of the Social Media Policy are subject to disciplinary measures from their Program and/or the Department of Health Sciences and *depending upon the nature of the violation*, up to and including dismissal from the program and/or college. The judicial process as outlined in the Academic and Student Affairs Policy Manual will be followed for disciplinary matters. If a student is dismissed from the program/college for violation of this policy, no refund will be made regarding tuition, fees, and/or other Program costs.

Student Health Coverage Insurance

The District recognizes that certain courses of study and specific classes may place a Student at greater risk given the nature of the curriculum and associated laboratory, practicum or applied task required by the class syllabus. The District administers a Student Accident Health Plan* (SAHP), for Students enrolled in certain courses of study during the period of time the Student is engaged in official activities associated with the class, laboratory, practicum or applied task. While the District administers a SAHP, Students of Malcolm X College Health Sciences Programs are *encouraged* to have healthcare insurance coverage that will ensure the appropriate level of coverage should he/she be injured while engaged in any official course, lab or clinical activities on Malcolm X College premises and/or while engaged in such activities at an assigned clinical facility. ***SAHP coverage may not cover the full amount of health costs associated with an injury incurred while performing program related tasks associated with a course, lab or***

clinical. Students are required to report any injury immediately to the instructor present and to the Dean of the program for which he/she is currently enrolled.

Student Malpractice/Liability*

The District recognizes the need for students enrolled in health care curriculum to apply skills and techniques garnered in the classroom in a practical and professional setting. To that end, Malcolm X College contracts with health care institutions, health service agencies and community organizations to accept its students in clinical practice as required by programs of study. Certainly, the Institutions, agencies and practitioners accepting students require assurances that commercial Insurance is in place to protect the Institution against claims that may arise out of the actions of the Students.

Students are responsible for any malpractice claims levied against them [personally] for actions that occur outside of scheduled clinical practice time.

*For both individual health insurance coverage, and student malpractice/liability insurance, students must adhere to the policies of the program and for any clinical site at which he/she is placed.

Malcolm X College
Office of Accreditation and Compliance – July, 2021

Non-Academic Formal Complaint Filing Procedure

The Complaints/Compliments Management System is an online portal, whereby City Colleges of Chicago (CCC) students, faculty, staff, and community members can submit a formal complaint or compliment regarding an academic or non-academic matter. Complaints and/or compliments can be submitted here.

Procedure for Filing a Formal Non- Academic Complaint

Students, faculty, staff, and community member, once into the system must first select to file a complaint and select the appropriate CCC college location associated with the compliment or complaint. Next, the individual is required to select the appropriate category and select to provide supporting documents. Once the complaint is submitted, a notification is sent to the arbiter and a copy of the complaint and confirmation of the receipt is sent to the filer.

Each college department with a complaint category assigned to them, has a department lead (arbiter) designated to process the complaint and resolve issues in a timely manner. Per the CCC policy for grievances [or complaints] outside of the grade appeal process, students receive a response within five business days. A response may include, but is not limited to: a request for further information, a suggested resolution, or a final disposition. In the event a student wants to appeal a decision or is dissatisfied with the outcome, an appeal can be filed.

Oversight of Complaint Management System

All complaints are tracked from initial submission to final disposition and archived within Complaints/Compliments System. The Complaints/Compliments System is monitored by Malcolm X College's Ombudsman. Oversight of timely resolution of complaints through the system, in accordance with the CCC Non-Academic Student Complaint Policy is managed by a designated administrator (or Ombudsman) at each college.

Grade Appeals

The CRM system is separate from the process for filing a grade appeal. As an academic performance only issue, grade appeals continues to be managed through the office of the Vice President at Malcolm X College. Please follow the grade appeal process found in the Academic and Student Policy Manual here.

Student Grievance Procedure/Due Process Procedure

The program's policy covers, **Academic, Non Academic and Clinical Education** complaints,

grievances and any and all misconduct while in the didactic classes and in the clinical education center.

Academic Complaints

- **Grades.**
- **Honesty/Integrity.**
- **Plagiarism/Cheating, etc.**
- **Noncompliance with JRCERT policy.**

Non-Academic

- **Stealing.**
- **Intent to Defraud.**
- **Physical/Verbal abuse. (student-student or student-CCC District employee).**
- **Possession of Weapons, etc.**
- **Unprofessional conduct with MXC faculty/staff.**
- **Insubordination.**

Clinical

- **Excessive absenteeism, tardiness.**
- **Unprofessional conduct with patients.**
- **Unprofessional conduct with staff, etc.**
- **Any act that puts the patient or staff in any danger.**
- **Insubordination.**

STEP 1

Any student having a complaint with an instructor, fellow student, clinical instructor, clinical supervisor or clinical technologists may file for conference time with the program director within three business days of the initial occurrence.

STEP 2

If after the conference with the program director, the student does not feel that there is an appropriate resolution to his/her oral complaint he/she may file a written complaint with the Vice President of Academic and Student Affairs within fourteen business days of the oral conference. Go to: http://ccc.custhelp.com/app/feedback

STEP 3

Within three business days of the submission of the written complaint a meeting will be scheduled with the Dean of Career Programs to hear the student's grievance. A response to the written complaint will be given to all parties involved within fourteen business days of the meeting.

STEP 4

If the student remains dissatisfied with the response from the program director, he/she may file a subsequent complaint within three business days with the Dean of Career Programs or Dean of Student Services or his/her designee. A response will be given in fourteen business days from receipt of complaint.

FINAL STEP 5

If the student remains dissatisfied with the response from the Dean of Career Programs and /or Dean of Students Services, he/she may file a subsequent complaint within three business days with the Vice President of the College within fourteen business days. The Vice President by his/her discretion may refer the student to the college's disciplinary committee (depending on the nature of the complaint), or to the college President for final resolution. A written response will be given in fourteen business days from receipt of complaint.

Student complaints regarding **Non -Compliance** with the **JRCERT** Standards

The Joint Review Committee on Education in Radiologic Technology is located at 20 North Wacker Drive, Suite 2850, Chicago, Ill 60606-3182, 312-704-5300, www.jrcert.org

The JRCERT Standards are:

Standards 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.

The complete Accreditation Guidelines can be found at www.jrcert.org .

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Admission

New students are accepted into the program during the spring semester of each year, with the program starting date the first week of the summer term in the month of June.

All students admitted into the program must complete **ALL COURSES**, both General Education and Radiologic Technology, prior to graduation.

See program faculty/staff for advising and counseling.

For specific criteria regarding admission –see program's brochure.

Re-Admission

Academic Failure Prior to Graduation:

Program re-admission **IS NOT** an automatic process. Students must petition for readmission by submitting a request stating the reason(s) for re-applying and the reason(s) for the first failure. The faculty and program director will evaluate the applicant's request. A final report will be given to the student of the program's decision prior to the beginning of the semester in which the student is requesting readmission. Students will not be allowed to reenter the program more than one time, after the initial or first admission. Available seats in the class will be taken into consideration for all cohorts of students based on clinical seat assignments.

Competency and skill development in clinical education must be maintained. Therefore, as a condition of readmission, students who passed their clinical course at the time of academic failure **MUST** audit the clinical course offered at the time of readmission.

Board Failure after Graduation

Alumni who have failed the national board examination four times and wish to seek readmission, must resubmit an application for admission plus fee. The application will be included in the pool of applicants for the year in which you apply. Maintenance of clinical competencies is based on current employment. See program's director for determination.

Criteria for Review for Re-Admission

- Academic failure.
- Clinical failure.
- Extenuating circumstances for failure.
- Space availability.

Students with Disabilities

No qualified individual with a disability shall, by reason of such disability, be academically dismissed from participation in or be denied the benefits of its services, programs or activities, or be subjected to discrimination. CCC's goal is to promote equality of opportunity and full participation in our services, programs and activities. CCC endeavors to provide reasonable accommodations to qualified individuals in accordance with the Americans with Disabilities Act (ADA) of 1990, Section 504 of the Rehabilitation Act of 1973, and all pertinent federal, state and local anti-discrimination laws. Students who believe they have a need for disability accommodations are responsible for requesting such accommodation(s) and are responsible for providing all requisite documentation to verify eligibility to the Disability Access Center (DAC).

DACs (www.ccc.edu/DAC) will provide reasonable accommodations for qualified students with disabilities as required by law.

Non Discrimination Policy

The City Colleges of Chicago (District 508), does not discriminate on the basis of race, color, national origin, sex, sexual orientation, religion, age, disability or marital status in its employment practices, admission policies or access to its educational programs, resources, and activities.

Radiation Protection

State of Illinois Rules and Regulations

Students in the Radiography program are expected to conform to the Rules and Regulations for Protection against Radiation as publishes by the Illinois Department of Nuclear Safety. Students must also conform to the standards set by the Joint Review Committee on Education in Radiologic Technology (JRCERT). If a student receives a dosimetry report on an exposure greater than the minimum annual dose required, the work history will be investigated and reported to the state for further review and action to the taken. The "high dose "amount set by the NCRP is 50 mSv per year. The film badge reports are reported monthly, therefore the monthly dose that would trigger an investigation would be 4.2 mSv per month. Above the minimum allowable dose reported each month.

Process for Investigation

1. Review of dosimetry report monthly after receipt of report from Global dosimetry for minimum or possible high dose report.
2. If dose report is reported at high dose (4.2 mSv), the student work place activities are investigated i.e. badge exposed to other radiant energy.
3. When the cause of the high dose has been determined a summation of the investigative report is placed in the students file.
4. The student is counseled regarding radiation protection guidelines after investigation.

5. A report is submitted to the Illinois Emergency Management Agency for their review and determination of action to be taken and a report is given to the students.

Copy Policy

Students are not to copy program materials without the consent of the program director. Program materials such as time sheets and hospital paraphernalia are not to be copied. Failure to adhere to this policy will lead to disciplinary action.

MRI Potential Hazards and Risks

Magnetic Field Risk

The static magnetic field of the MRI system is exceptionally strong. A 1.5 T magnet generates a magnetic that is approximately 21,000 greater than the earth's natural field. In such an environment ferromagnetic metal objects can become airborne as projectiles. Small objects such as paper clips and hairpins have a terminal velocity of 40mph when pulled into a 1.5 T magnet and therefore pose a serious risk to the patient and anyone else in the scan room. The force with which projectiles are pulled toward a magnetic field is proportional to the mass of the object and distance from the magnet. Even surgical tools such as hemostats, scissors and clamps, although made of a material known as surgical stainless steel, are strongly attracted to the main magnetic field. Oxygen tanks, gurneys, floor buffing machines, and construction tools are highly magnetic and should never be brought into the scan room. However, there are non-ferrous oxygen tanks and gurneys available, which are MRI compatible. Sand bags must also be inspected since some are filled, not with sand, but with steel shot which is highly magnetic.

Consumer products such as pagers, cell phones, cameras and analog watches may be damaged by the magnetic field. Pacemakers may be reprogrammed or turned off by the magnetic field. The magnet field erases credit cards with magnetic strips. Patients with ferrous intra-cranial vascular clips may be at risk due to the possible movement of the clip. See Contraindications for MRI below.

Radio-frequency (RF) Field Risk The radio-frequency field may induce currents in wires that are adjacent or on the patient, causing skin burns. It may induce currents in intra-cardiac leads, resulting in inadvertent cardiac pacing. Prolonged imaging may cause the patient's core body temperature to rise. In practice, significant patient heating is only encountered in infants.

Cryogen Risk During a planned or accidental shutdown of the magnetic field (aka "quench"), the liquid Helium in the magnet turns into gas and may escape into the scan room displacing the oxygen in the room leading to asphyxia.

Biological Effects Due to Magnetic Field For the static magnetic fields currently used in MRI up to 2 Tesla, there are no known biological effects. The majority of studies show no effects on cell growth and morphology. Data accumulated by the National Institute for Occupational Safety, the World Health Organization, and the US State Department show no increased risk for leukemia or other cancer. Some reversible biological effects have been observed on human subjects exposed to 2.0 T and above. These effects include fatigue, headaches, hypotension and irritability.

Access Restriction

Magnetic field distribution (fringe field) The stray magnetic field outside the bore of the magnet is known as the fringe field and this is a 3 dimensional field measured in Gauss. MRI systems are shielded to confine the fringe field within the scan room. Magnetic fields less than **5 Gauss** are inconsequential to MRI safety. In most systems the 5 Gauss field is confined within the scan room, so the fringe field does not affect any area external to the magnet room.

The **30 Gauss** field demarcates the point where projectile hazards become significant and only MRI compatible equipment can safely enter this region. Each MRI system has its own unique fringe field due to varying magnetic design, shielding characteristics, and field inhomogeneity. Each site must be supplied with a schematic that clearly defines the fringe field of the magnet. The schematic must demarcate the 30 Gauss and 5 Gauss lines.

Absolute Contraindications

Intra-ocular metal foreign bodies are a cause of major concern in MR safety. It is not uncommon for patients who have worked with sheet metal to have metal fragments or slivers located in and around the eye. Since the magnetic field exerts a force on ferromagnetic objects, a metal fragment in the eye could move or be displaced and cause injury to eye or surrounding tissue.

The LINX Reflux Management System is a series of titanium beads with a magnetic core implanted around the lower end of the esophagus to control gastro esophageal reflux disease (GERD). This implant is totally contraindicated for MRI in both the 1.5T and 3T.

There are two basic types of insulin pumps, one is used as an external device and the other is implanted. Both types currently pose hazards to patients referred to MRI procedures. For an external insulin pump, in general, the device typically needs to be removed and kept out of the MRI environment to ensure that there is no adverse impact on the functionality of the external pump. The implanted pump will be adversely affected by the magnetic field and will need to be removed prior to imaging.

Student Safety

Individuals entering a MRI suite must remove all readily removable metallic personal belongings and devices on or in them (e.g., watches, jewelry, body piercing if removable, contraceptive diaphragms), metallic drug delivery patches, and clothing items which may contain, metallic fasteners, hooks, zippers, loose metallic components, metallic threads, etc

https://www.youtube.com/watch?v=NozXuDTrj1U

https://www.youtube.com/watch?v=hlRpl_GMPPc

Academic Regulations

1. Retention Policies

   All coursework—students must maintain a minimum grade point average of 2.0 in each

semester/term, students will not be permitted to continue in the program if a grade of "C" or better is not maintained, and all students must complete all of the general education courses with a "C" or better in order to graduate.

2. Grading

   All the methods of evaluation will be given a specific point value. The midterm and final letter grades will be determined by the total point value earned from each exam. The student will not be able to advance to the next course until he or she has satisfied all of the competencies.

Didactic courses with laboratory		Didactic courses without laboratory	
Tests & Quizzes	=75%	Tests & Quizzes	=75%
Lab	=15%	Assignments	=25%
Assignments	=10%		100%
	100%		

Grading scale in all coursework.

Grades A, B, and C will be computed by the following methods:

A= 100-94% B=93-87% C=86-80%

Students will not be permitted to continue in the program if a grade of "C" or better is not maintained in ALL Radiography classes/coursework/clinical.

Attendance / Tardiness

A. Because of the structure of the program, class and clinical practicum attendance is vital to providing a well-rounded education and a continuing knowledge of Radiologic Technology. Students, therefore are expected to attend classes and clinical regularly and on time.
B. Students who are absent or late to any particular class or laboratory period are held responsible for all the requirements of the course. The degree to which classroom

absences will affect the total grade for that course will be at the discretion of the instructor. Attendance criterion is included on each course syllabus and outline in this program handbook.

Course Load

All students are expected to enroll for the normal course load scheduled during each semester including the summer of the Junior and Senior years. No student may register for more than 18 hours of coursework without permission from the Director and Dean.

Eligibility for Registry Examination by the American Registry of Radiologic Technology

A. Applications will be disseminated, signed and mailed by the program director.
B. All program requirements (general education and professional coursework plus all requested fees) must be completed on or before graduation in order to be eligible for the board examination. Review classes are presented throughout the curriculum. Attendance is mandatory for ALL review sessions. This will better prepare the student for mastery and continued maintenance of theory and practice.
C. Students are eligible to take the examination after processing by the ARRT. However, students are strongly recommended to schedule for the examination immediately after notification by the ARRT. Students are expected to adhere to all program schedules, both didactic and clinical. **There are no exceptions to this rule.**

Eligibility for Licensure by the Illinois Emergency Management Agency

A. Application must be disseminated by the program director.
B. Application must be mailed to IEMA with a letter from the program director documenting completion of all program requirements.

Employment Requirements

Students are able to accept employment after processing and notification of temporary license. Technologists can receive an active license after certification by the ARRT. Students can become

employed with a board eligible status. Continued employment is contingent upon certification and active licensure.

Unsatisfactory Performance

If a student's performance in any didactic course is below the acceptable competence level, the faculty and the program director will counsel the student. Written evaluation of academic progress is done at midterm and final. All students must maintain a grade of "C" or better to move to the next level. If a student's performance in any given area at the clinical site is below the acceptable competence level, the clinical staff and the college faculty will counsel the student. Every attempt is made to resolve all violations of program and/or hospital rules. If the hospital clinical instructor terminates the student from the clinical site, the program does not have any responsibility for reassigning a student to another site during that rotation. Termination from the clinical site is tantamount to failure of the current clinical course. Subsequently, the student cannot move to the next level.

Program Completion

The program consists of two full years, including summers. Students are considered as having completed all program requirements when they have achieved a grade of "C" or better in all courses listed on the Radiography curriculum (both program courses and general education courses).

Radiography Program Fees and Other Associated Costs

Listed below are related program costs for matriculation through the program. These fees MUST be paid at the time that they are assessed.

- Medical Examination (see program form)
- Health Insurance
- Drug Screening & Criminal Background Check $80
- CPR $45

- Books (2 years) $1000
- Uniforms –Students must purchase 3 sets, plus laboratory jackets and white shoes
- Lead Markers $24
- Student ISSRT membership for one year $25
- Spring conference and student bowl (mandatory for senior students) $300
- Pinning Ceremony $300
- Class Pin $2.67
- Class Photo $25
- Graduation Application –Free
- Mandatory Tutoring Sessions (last year, last semester)
- Registry Certification Application $200
- Licensure Application $120
- Completion of surveys for program assessment and JRCERT accreditation

Fees are subject to change based on cost at the time of purchase.

Program completion costs will be assessed at the beginning of the fall semester (second year).

Successful completion of all coursework, surveys, film badges and payment of all fees will be considered as PROGRAM COMPLETION.

Program Evaluation

The program provides an opportunity for all graduates to evaluate the program. The program offers twenty courses in its curriculum that covers both the didactic and clinical components. The program graduate evaluates both the overall program and the clinical areas. These evaluations assist in the assessment of the program for program improvement.

Courses – Didactic Components

RT 101 – Introduction to Radiation Sciences

Fundamental concepts of medical imaging and the radiation sciences. Includes origins of the profession, common terminology and chemicals; technical factors influencing development of the radiograph and technical factors which produce the image. Writing assignments, as appropriate to the discipline, are part of the course.

RT 102 – Attitudes in Patient Care

Skills needed for proper patient care. Includes physical and psychological skills to cope with various situations. Writing assignments, as appropriate to the discipline, are part of the course.

RT 105 – Imaging Physics

Structure of matter, electric circuitry, especially the x-ray circuit, interactions between ionizing radiation and matter, and principles necessary for production of the radiographic image. Writing assignments, as appropriate to the discipline, are part of the course.

RT 115 – Basic Principles of Image Production

Analysis of various technical factors and accessories which affect radiographic image. Includes basic qualitative factors of image production and laboratory experiments. Writing assignments, as appropriate to the discipline, are part of the course.

RT 124 – Introduction to Patient Care

Proper positioning and basic nursing procedures necessary for patient care. Includes proper placement and manipulation of patient and equipment. Writing assignments, as appropriate to the discipline, are part of the course.

RT 128 – Image Evaluation

Analysis of image and quality of radiographic images submitted for interpretations; covers patient's size, cooperation and pathological condition relative to and influencing accuracy and quality of resultant image. Writing assignments, as appropriate to the discipline, are part of the course.

RT 131 – Radiographic Procedures I

Proper positioning of patient for demonstration for suspect pathology of abdomen and its contents, correlated with course in anatomy and physiology, and routine and contrast media procedures. Writing assignments, as appropriate to the discipline, are part of the course.

RT 140 – Intro to Clinical Education

Physical and technical skills needed to apply ionizing radiation to human beings. Includes clinical orientation and assessment to determine professional preparedness. Writing assignments, as appropriate to the discipline, are part of the course.

RT 141 – Radiography Clinical Education I

Orientation and initial skills development in basic radiographic procedures; visualization of abdomen and its contents stressed to prepare student for further study in major are of specialization. Includes communication, operation of equipment, patient care, and technical skills development. Writing assignments, as appropriate to the discipline, are part of the course.

RT 200 – Pathology

Covers disease process with radiographic manifestations; laboratory sessions include used of radiographs and images from other modalities to visualize various types of pathologic conditions. Writing assignments, as appropriate to the discipline, are part of the course.

RT 202 – Radiology Management

Administration, purchasing and personnel control; practical experience in department administration. Writing assignments, as appropriate to the discipline, are part of the course.

RT 205 – Applied Radiographic Techniques

Practical applications of previously learned concepts; effects of technical factor selection, use of accessories and changes in patient type and condition. Writing assignments, as appropriate to the discipline, are part of the course.

RT 206 – Imaging

The components of radiological imaging system chains; imaging systems will be explored including current systems and new and emerging modalities. Writing assignments, as appropriate to the discipline, are part of the course.

RT 208 – Radiobiology

Effects of radiation on cells, organs and organisms, and implications on present and future populations, use of ionizing radiation in internal and external treatment of benign and malignant disease. Writing assignments, as appropriate to the discipline, are part of the course.

RT 232 – Radiographic Procedures II

Positioning and patient care skills applied to additional body systems and correlated with clinical study; proper positioning of patient for demonstration of suspect pathology correlated with previous procedures. Includes skeletal and urinary systems. Writing assignments, as appropriate to the discipline, are part of the course.

RT 233 – Radiographic Procedures III

Study of additional body system; includes procedures less frequently performed and those requiring special skills or equipment. Procedures covered will not normally require invasive techniques. Writing assignments, as appropriate to the discipline, are part of the course.

RT 234 – Special Radiographic Procedures

Procedures frequently performed in modern department but which employ surgical or other invasive techniques and injection of contrast media into circulatory system.

Covers emergency procedures and pertinent aspects of some pharmaceuticals. Writing assignments, as appropriate to the discipline, are part of the course.

CLINICAL EDUCATION SECTION

Clinical Affiliates

Advocate Illinois Masonic Hospital

836 W. Wellington Avenue

Chicago, IL 60657

Anne & John H. Lurie Children's Hospital

225 E. Chicago Avenue

Chicago, IL 60611

Humbolt Park Health

1044 N. Francisco Ave

Chicago, IL 60622

Jackson Park Hospital

7531 S. Stony Island

Chicago, IL 60649

Jesse Brown V.A. Medical Center

820 S. Damen

Chicago, IL 60612

John H. Stroger Cook County Hospital

1969 W. Ogden

Chicago, IL 60612

Provident Hospital of Cook County

500 E. 51st Street

Chicago, IL 60615

RML Specialty Hospital

3435 W. Van Buren

Chicago, IL 60624

Roseland Community Hospital

45 W. 111th Street

Chicago, IL 60628

Rush University & Medical Center

1650 W. Harrison

Chicago, IL 60612

South Shore Hospital

8012 S. Crandon

Chicago, IL 60617

St. Anthony's Hospital

2875 W. 19th Street

Chicago, IL 60623

Loyola University Medical Center

2160 S. 1st Ave

Maywood. IL 60153

St. Bernard Hospital

321 W. 64th Street

Chicago, IL 60621

MacNeal Hospital

3249 S. Oak Park Avenue

Berwyn, IL 60402

University of Chicago Hospitals

5941 S. Maryland

Chicago, IL 60615

Mercy Hospital and Medical Center

2525 S. Michigan

Chicago, IL 60616

University of Illinois Medical Center

1740 W. Taylor Street

Chicago, IL 60612

Mt. Sinai Hospital and Medical Center

California Avenue @ 15th Street

Chicago, IL 60608

Weiss Memorial Hospital

4646 N. Marine Drive

Chicago, IL 60637

MALCOLM X COLLEGE

One of the City Colleges of Chicago

1900 West Jackson Boulevard
Chicago, Illinois 60612
312.850.7000
www.ccc.edu/malcolmx

Office of Radiography Program

Dear Clinical Instructor/Perspective Student,

This handbook is designed especially for you to serve as your guide and informational resource. It is intended to assist you to better serve the students and the program.

I realize that the knowledge, and subsequently, the education in Radiologic Technology are constantly and rapidly changing. Therefore, if the objectives or any aspects of the information included herein, fails to address new developments in your area, I ask that you express your comments or suggestions, so that the next handbook will include the new and discard the obsolete.

If there are areas of ambiguity, confusion or unclearness, please contact the clinical coordinator of myself so that we may assist you. Students are instructed to adhere to the program as well as the hospital's Policy.

I wish to thank you for the excellent services and support that you have rendered to the Radiography students and to the program. With your assistance, I look forward to an enjoyable and productive new academic year.

Sincerely,

Stephanie Tarr, M. Ed., R.T. (R)

Program Director

Clinical goals

The program has a responsibility to provide appropriate facilities for supervised clinical education.

The clinical affiliates shall assist the program in meeting the following goals:

1. Produce graduates who are both competent and compassionate.
    - Provide the general technical and patient care procedures needed to meet the tasks of a radiographer.
    - Evaluate mastery of procedures.
    - Assist in meeting objectives.
    - Provide guidance and counseling of students.

2. Instill professional values
    - Aid students in understanding and appreciating the professional responsibilities of the radiographer to the patient, to themselves and their professional society.
    - Teach the importance of accuracy in performance of job tasks.
    - Teach the importance of accuracy in producing quality radiographs.
    - Teach ethical principles that will regulate the action and behavior of the radiographer in accordance with moral law and the "Code of Ethics" established by the American Society of Radiologic Technologist and the American Registry of Radiologic Technologists.

3. Enhance educational mobility
    - Provide periodic in-service sessions.
    - Orientate to the technical areas for upward or lateral movement.

Rules and Regulations

Clinical education requires that all students adhere to the rules and regulations of both the affiliate institution and the college.

Clinical performance involves the cognitive, psychomotor and affective domains.

Clinical allows a student to refine his/her skills and to integrate the didactic with the clinical.

Each student must be fully oriented to the department's physical facilities and rules and regulations.

Assignment Rotation

Students will be assigned to the clinical site in the first year, fall semester. Students must register for clinical education course RT 140 and follow in a sequential order to clinical education course RT 244. Students will rotate to a different clinical on a semester basis. Student assignment and rotations are set and governed by the program. Students must attend clinical rotations as assigned. Personal work schedules and/or other personal issues are not considered for scheduling. The senior year summer and spring clinical rotation will extend beyond the academic term ending dates.

Mammography Statement

The Radiography Program sponsored by Malcolm X College, has revised its policy, effective July 31, 2017 regarding the placement of students in clinical mammography rotations to observe and/or perform breast imaging. (Additionally, the policy may be applied to any imaging procedures performed by professionals who are of the opposite gender of the patient.)

Under the revised policy, all students, male and female, will be offered the opportunity to participate in clinical mammography rotations. The program will make every effort to place a male student in a clinical mammography rotation if requested; however, the program is not in a position to override clinical setting policies that restrict clinical experiences in mammography to female students. Male students are advised that placement in a mammography rotation is not guaranteed and is subject to the availability of a clinical setting that allows males to participate

in mammographic imaging procedures. The program will not deny female students the opportunity to participate in mammography rotations if clinical settings are not available to provide the same opportunity to male students.

The change in the program's policy regarding student clinical rotations in mammography is based on the sound rationale presented in a position statement on student clinical mammography rotations adopted by the Board of Directors of the Joint Review Committee on Education in Radiologic Technology (JRCERT) at its April 2016 meeting. The JRCERT position statement is included as Addendum A to the program's policy and is also available on the JRCERT Web site, www.jrcert.org, Programs & Faculty, Program Resources.

Schedules

The schedule is based on the status of the student and the semester or term of enrollment.

Junior Status

2nd & 3rd Semesters

2 days per week in the clinical

Senior Status

4th, 5th, & 6th Semester

3 days per week in the clinical

Schedules are given to the students at the beginning of the semester. Beginning and ending times per day are determined by the college and clinical affiliate.

Service rotation schedules: i.e. GI, IVU, General, Surgery, etc., are determined by the clinical instructor and the program.

Daily breaks and lunch periods will be assigned by the clinical instructor at each site.

Clinical schedules may change to accommodate seminars or special programs on campus.

Attendance

In order to meet the prescribed performance and technical objectives, attendance in the clinical area is mandatory.

Absenteeism and Tardiness Policy (Classroom and Clinical)

If for any reason, you are going to be absent or late, please call and email to notify the clinical associate and the clinical coordinator. The call/e-mail should be received prior to the starting time.

A student is considered late if he/she arrives one minute after the scheduled time.

Authorized Absence:

1. Jury Duty.
2. Military Duty.
3. Funeral leave up to 3 days in the death of a spouse, mother, father, child, sibling grandmother, grandfather.
4. Professional organization meetings.
5. Medical absence (must be documented by a physician and evaluated by the program director and faculty).

Students must present documents for the above absences at the next class session. Disciplinary action surrounding unauthorized absenteeism and tardiness can lead to suspension. Based on the evaluation process and the method of grading, suspensions may lead directly to academic failure.

Absences may also be granted to students that may have extenuating circumstances. A petition must be filed with the program director.

Unexcused Absences, Tardiness, and Leave Early without proper documentation policy

If a student is absent, tardy or leave early for any reason other than those listed above, it is considered unexcused. Excessive undocumented absences, tardiness, and leaving early from the clinical site will result in the following corrective actions per semester:

1. First unexcused absence, tardy, and/or leave early – verbal warning, noted on student conference form, 25% reduction in attendance points.
2. Second unexcused absence, tardy, and/or leave early – written warning, noted on student conference form, 50% reduction in attendance points.
3. Third unexcused absence, tardy, and/or leave early – student will receive a formal written notice from the program director, 75% reduction in attendance points.
4. Fourth unexcused absence, tardy, and/or leave early – the student will receive a final letter grade of "F" and will be terminated from the program (and zero attendance points).

Students will be allowed 2 clinical absences/semester with proper documentation and no more than 6 absences per calendar year – Fall/Spring/Summer. Absences can be cumulative but only in the case of illness. It is the student's responsibility to notify the program of long term illnesses. After the first unexcused absence, students will have a reduction in points as outlined above. All documentation will be evaluated by the program director.

Clinical Early Check-In, Drug Screen, and Background Check Policy

Clinical Early Check-In

The Radiography Program has 18 clinical affiliates. Some of the affiliates require that the student check-in early to start the clinical rotation on time at the beginning of the semester. Early check-in includes, but not limited to, flu shot, drug screen, background & medical records check, immunization screening, and hospital orientation. The student must adhere to the deadlines given in writing by the clinical coordinator in order to start the rotation on time. Failure to adhere to the dates may lead to miss clinical days by the student, which lead to disciplinary action (see Unexcused Absences, Tardiness, and Leave Early Policy).

Drug Screen

Students must be able to pass a drug screen in order to be eligible to rotate through the clinical facilities. Student's drug screen panel must show a result of "negative" to be able to rotate

through the clinical affiliates. Any other result such as “diluted” specimen or test “positive” for any illicit drugs, will lead to immediate termination from the program. ‘Dilute-positive’ result means that the student will be terminated from the program. ‘Dilute-negative’ result means that the student must retake the test within 2 days of the program receiving the results or risk being terminated from the program. Students must take the test on the schedule date. Students must arrive at the clinical facility prepared to take the drug screen. Any delay taking the drug screen past the schedule date/time will lead to termination from the program. Upon signing/checking at the facility, student must not leave the facility.

Background Check

It is the policy of the program that ALL students receive a background check after acceptance into the program. If something flags in the student’s background at this time, the student will complete the ARRT Pre-Application process to determine ARRT eligibility status. The program director will help the student facilitate this process within at least 1 month of notification. If the student fails to complete this process, the student will be suspended from all program activities, functions, classes, and clinicals until the application is completed to the ARRT.

Sign-In Sheet

All students must sign the attendance sheet every time they attend clinicals. If for any reason a student signs in after the assigned time they will be considered tardy. Under NO circumstance should a student sign another student’s name. This is justification for disciplinary action which includes suspension and/or termination from the program. If a student fails to sign in or out, he/she will not receive clinical time for that day.

Make-Up Absences

Students WILL NOT be allowed to make-up any absences. Students are exempt from clinical on all school/hospital holidays.

Leaving Assigned Area

Students shall not leave the clinical area without the permission of the chief technologist or the clinical associate. If this policy is violated, the student will lose the clinical day without make-up day.

- Continued violations will lead to dismissal from the program.
- The Clinical associate must maintain accurate records of attendance.
- The Clinical Coordinator will check attendance records for violations.

Health Insurance

Prior to initial clinical rotation each student must show proof of personal health insurance coverage. Copies of documentation are kept in the program records, and are make available to the clinical affiliates on request.

Malpractice Insurance

Malpractice insurance coverage is provided by the college for all students, faculty and staff while on hospital premises.

Medical Examination

All new students must provide a copy of a recent medical examination. Physical requisites to perform many radiography tasks are listed in the program brochure. Ability to perform examinations should be verified by a physician.

Students are provided with a printed form to have completed by their respective physician, Health Maintenance Organization or clinic. Students must complete the immunization screening on the Medical Form or lose their seat in the program. Medical examination forms are kept in the student's file and made available to the student upon request.

Students will be requested by the program and the clinical affiliates to perform drug testing, TB testing and immunization screening annually or by semesters. Students must complete a criminal background check prior to attending clinical education.

Radiation Protection Policies

One of the program's primary objectives is to educate the student about the necessity for the use of radiation protection methods for the patient, self, and general population. Students are required to follow the ALARA concepts (As Low As Reasonably Achievable) for radiation exposure dose.

The following policies are taken from the National Council on Radiation Protection and measurements (NCRP) reports #53, 54, 57, 91, 102, 105, and 116, and from the Illinois Department of Nuclear Safety rules and regulations. They are designed to protect the students, to convey awareness of the presence of ionizing radiation and to encourage safe habits in the clinical environment. During the first semester all students will be taught basic radiation protection procedures. These instructions will provide information so that female students will be able to understand the possible biological risks of ionizing radiation to the embryo and fetus. Also, during the first semester, the female student shall read the United States Nuclear Regulatory Commission (NRC) guide #8.13 on possible risks to the fetus and embryo and the NCRP report #53.0. The student must sign and acknowledge the form stating that they understand these risks. The signed forms will be placed in the female student records.

The six policies immediately listed below pertain and apply to all Radiography Program students.

- Students shall not hold patients. This includes all procedures including fluoroscopy (dynamic imaging).

- Students shall not hold cassettes, imaging plates or any other image receptor devices.
- Students shall wear lead aprons when observing fluoroscopy examinations and shall also wear lead gloves and lead thyroid shield when appropriate.
- Students should NOT stand close to the table while the fluoroscopic tube is emitting radiation.
- Students shall wear lead aprons while observing, assisting or performing mobile radiographic procedures.
- Students shall wear the dosimeter at the collar level on the outside of the lead apron.
- Students at all clinical affiliates are expected to conform to all radiation safety standards as defined by federal, state, and local regulations.

Clinical affiliates are expected to monitor and evaluate the student's adherence to these standards.

Dosimeters

The program will provide dosimeters for each student. Quarterly reports will be reviewed by the program director and stored in room 7000 for the students. Dosimeters are to be worn to monitor radiation dose/exposure. Dosimeters are to be changed quarterly. Failure to submit or lost dosimeter will lead to disciplinary action and $30 charge for the dosimeter.

In order to exchange the dosimeters in a timely manner, the following protocol will be in place:

1. First missed dosimeter exchange the student will receive a written notice of non-compliance and second date to turn in dosimeter. If a second date is missed, student will pay $30 to MXC Business Office immediately and submit a written notice to the clinical coordinator regarding to what happened to the dosimeter. If the student fails to comply, the student will be suspended from all program activities until procedure is followed.
2. Lost/Damaged dosimeter. Student must provide written notice to clinical coordinator stating what happened to the dosimeter immediately before the submit date. Student will immediately pay $30 to MXC Business Office before the original submit date. If the

student misses the original submit date due to lost badge, the student will be suspended until the payment is made and the clinical coordinator has received the written notice. Proof of payment (receipt) must be given to the clinical coordinator before the dosimeter is ordered.

3. Lost/Damaged dosimeter within a dosimeter's cycle. A new dosimeter will be ordered upon notification of lost/damaged dosimeter by the student. The student will not be allowed to attend the clinical setting until the new badge arrives. Due to the fact that it will take time for the dosimeter to arrive on campus and the student will not be in the clinical setting, the student clinical grade may be affected per program Attendance policy.
    A. Students cannot attend the clinical setting without a dosimeter
    B. Students must pay MXC Business Office for any lost/damage dosimeter before receiving a new dosimeter and returning to the clinical setting.
4. Missing submit dates will lead to written notice of non-compliance and possible suspension.

Protocol for High Radiation Exposure

If a student receives a reported high dose above 50 mrem, he/she will be temporarily removed from the clinical area pending an investigation of the reported dose received. The student will also be counseled by the Radiation Safety Officer on basic Radiation Protection principles of the ALARA concept. The investigation report results will be sent to the Illinois Emergency Management Agency/Division of Nuclear Safety for further review and report of appropriate action. The student is reassigned in the clinical area pending completion of investigation.

MRI Potential Hazards and Risks

Magnetic Field Risk The static magnetic field of the MRI system is exceptionally strong. A 1.5 T magnet generates a magnetic that is approximately 21,000 greater than the earth's natural

field. In such an environment ferromagnetic metal objects can become airborne as projectiles. Small objects such as paper clips and hairpins have a terminal velocity of 40mph when pulled into a 1.5 T magnet and therefore pose a serious risk to the patient and anyone else in the scan room. The force with which projectiles are pulled toward a magnetic field is proportional to the mass of the object and distance from the magnet. Even surgical tools such as hemostats, scissors and clamps, although made of a material known as surgical stainless steel, are strongly attracted to the main magnetic field. Oxygen tanks, gurneys, floor buffing machines, and construction tools are highly magnetic and should never be brought into the scan room. However, there are non-ferrous oxygen tanks and gurneys available, which are MRI compatible. Sand bags must also be inspected since some are filled, not with sand, but with steel shot which is highly magnetic.

Consumer products such as pagers, cell phones, cameras and analog watches may be damaged by the magnetic field. Pacemakers may be reprogrammed or turned off by the magnetic field. The magnet field erases credit cards with magnetic strips. Patients with ferrous intra-cranial vascular clips may be at risk due to the possible movement of the clip. See Contraindications for MRI below.

Radio-frequency (RF) Field Risk

The radio-frequency field may induce currents in wires that are adjacent or on the patient, causing skin burns. It may induce currents in intra-cardiac leads, resulting in inadvertent cardiac pacing. Prolonged imaging may cause the patient's core body temperature to rise. In practice, significant patient heating is only encountered in infants.

Cryogen Risk

During a planned or accidental shutdown of the magnetic field (aka "quench"), the liquid Helium in the magnet turns into gas and may escape into the scan room displacing the oxygen in the room leading to asphyxia.

Biological Effects Due to Magnetic Field

For the static magnetic fields currently used in MRI up to 2 Tesla, there are no known biological

effects. The majority of studies show no effects on cell growth and morphology. Data accumulated by the National Institute for Occupational Safety, the World Health Organization, and the US State Department show no increased risk for leukemia or other cancer. Some reversible biological effects have been observed on human subjects exposed to 2.0 T and above. These effects include fatigue, headaches, hypotension and irritability.

Access Restriction

Magnetic field distribution (fringe field)

The stray magnetic field outside the bore of the magnet is known as the fringe field and this is a 3 dimensional field measured in Gauss. MRI systems are shielded to confine the fringe field within the scan room. Magnetic fields less than **5 Gauss** are inconsequential to MRI safety. In most systems the 5 Gauss field is confined within the scan room, so the fringe field does not affect any area external to the magnet room.

The **30 Gauss** field demarcates the point where projectile hazards become significant and only MRI compatible equipment can safely enter this region. Each MRI system has its own unique fringe field due to varying magnetic design, shielding characteristics, and field inhomogeneity. Each site must be supplied with a schematic that clearly defines the fringe field of the magnet. The schematic must demarcate the 30 Gauss and 5 Gauss lines.

This section summarizes the different zones of a UCSF MR suite and points out specific safety issues of greatest concern. At UCSF, each MRI site is divided into **4 safety zones** based on the American College of Radiology guidelines:

Absolute Contraindications

Intra-ocular metal foreign bodies are a cause of major concern in MR safety. It is not uncommon for patients who have worked with sheet metal to have metal fragments or slivers located in and around the eye. Since the magnetic field exerts a force on ferromagnetic objects, a metal fragment in the eye could move or be displaced and cause injury to eye or surrounding tissue.

The LINX Reflux Management System is a series of titanium beads with a magnetic core implanted around the lower end of the esophagus to control gastro esophageal reflux disease (GERD). This implant is totally contraindicated for MRI in both the 1.5T and 3T.

There are two basic types of insulin pumps, one is used as an external device and the other is implanted. Both types currently pose hazards to patients referred to MRI procedures. For an external insulin pump, in general, the device typically needs to be removed and kept out of the MRI environment to ensure that there is no adverse impact on the functionality of the external pump. The implanted pump will be adversely affected by the magnetic field and will need to be removed prior to imaging.

Student Safety

Individuals entering a MRI suite must remove all readily removable metallic personal belongings and devices on or in them (e.g., watches, jewelry, body piercing if removable, contraceptive diaphragms), metallic drug delivery patches, and clothing items which may contain, metallic fasteners, hooks, zippers, loose metallic components, metallic threads, etc.

https://www.youtube.com/watch?v=NozXuDTrj1U

https://www.youtube.com/watch?v=hlRpl_GMPPc

Pregnancy Policy/Radiation Protection Policy for Students

A number of studies have suggested that the embryo/fetus may be more sensitive to ionizing radiation than an adult, especially during the first three months of gestation. The National Council on Radiation Protection and Measurements has recommended that special precautions be taken to limit exposure when an occupationally exposed woman could be pregnant. Specifically, the NCRP has recommended the dose limit to the fetus from occupational exposure of the mother should NOT exceed 0.5 mSv (0.05 rem) in any one-month period. This dose limit is 1/10th of the occupational dose limit because the embryo/fetus is considered a member of

the general population who is unwillingly brought into a hazardous environment by virtue of its mother's occupation.

The student may voluntarily declare pregnancy during the educational period. The student is not prohibited from attending clinical when pregnant. There will be no restrictions in regards to service rotations in the clinical. The student shall decide with the Program Director on of the following options if or when pregnancy is voluntary declared.

1. A leave of absence may be taken until the birth of the child. The student will be permitted to return to the program (see admissions policy).
2. The student may continue in the program. In this case two dosimeters will be used, one worn at the collar outside the lead apron for the whole body dose, and one worn at the waist level under the lead apron to record the embryo/fetus exposure. The student who chooses to continue in the program is subject to all program policies the same as all other students. Counseling on radiation procedure shall be done as needed. Should the recorded fetal exposure reach 50 mSv (500 rem) at any time during the pregnancy, the student will be required to take a leave of absence.
3. The student must sign the "Declaration of Pregnancy" affirming her awareness of the program policy.
4. The student must submit a monthly doctor statement noting their ability to continue in the clinical setting with any adverse biologic harm.

The student has the right at any time to revoke the written declaration of pregnancy. The revoking of the declaration must be in writing.

MALCOLM X COLLEGE

RADIOGRAPHY PROGRAM

DECLARATION OF PREGNANCY

I, _____, do hereby make this voluntary declaration of pregnancy. My estimate date of conception was _____, 20__.

It has been explained to me that I am making this voluntary declaration of pregnancy. I understand that this means that Malcolm X College must take measures to ensure that the total dose to the embryo/fetus during the entire pregnancy from occupational exposure does not exceed 0.5 mSv (0.50 mrem) or 0.1 mSv per month. If, as of the date, the total dose to the embryo/fetus is 4.5 mSv (0.45 rem) or greater, the total dose to the embryo/fetus during the remainder of the pregnancy shall not exceed 0.5 mSv (0.05 rem).

It has also been explained to me that I may revoke the declaration of pregnancy at any time and that the revoking of the declaration must be in writing.
It has also been explained to me that I must comply with all other radiation protection rules and regulations.

_____ _____

Student Date

_____ _____

Radiation Safety Officer Date

Lead Markers

Students are required to have lead markers to assist in proper identification or marking of film.

Students must maintain lead marker throughout their tenure in the program.

Students are responsible for lost or damage to lead markers.

Hospital Identification Badges

Students must wear ID badges at all times in the clinical area.

Uniform/Patches

Students must purchase a prescribed uniform to be worn in the clinical area.

Students must wear patches sewn to the left upper arm of the uniform and lab coat.

Patches will identify students by discipline and/or program.

There are NO exceptions to this rule.

Professional Attitude/Conduct

Students must maintain a professional attitude and behavior as outlined by the "Code of Ethics" of the American Society of Radiologic Technologists and the American Registry of Radiologists. Students must comply with the Rules and Regulations of the hospital and the program.

- Students shall not eat, drink or smoke while on duty except in assigned areas.
- Excessive talking, laughing and other unprofessional behavior will not be tolerated in the hallways or around patients.
- Any student having a problem with and instructor, supervisor, or technologist may file for conference time. A conference date will be arranged with the student, instructor, technologist or supervisor and the Program Director.
- Personal telephone calls are not allowed (only emergency calls can be received by students).

- Use of cell phones is prohibited while on duty. Cell phones should be used only during breaks and/or lunch.

Code of Conduct

Rules and regulations concerning conduct to be observed by all students **are not limited to the following list.** Conduct of behavior contrary to the rules of conduct shall be subject to disciplinary action, including dismissal, depending on the nature of the infraction. The following may constitute immediate suspension pending dismissal from the assigned clinical site. Before any action is taken, due processes given. Students have the right to meet with faculty and staff from both institutions to clarify and discuss the issues. Each violation will be reviewed on its own merit and nature of infraction.

A. MAJOR – constitutes immediate dismissal from the program
    1. Abuse patients in any manner (intentional or accidental, pending investigation).
    2. Be in possession of a weapon of any kind while on hospital premises.
    3. Engage in fighting on hospital premises. Intimidate or coerce another student or employee through physical or verbal threats.
    4. Exhibits gross insubordination.
    5. Immoral conduct of indecent behavior toward patients and/or staff.
    6. Use alcohol or other drugs while on hospital grounds if evidence is proven.
    7. Theft and unauthorized possession of hospital or another person's personal property.
    8. Misuse of confidential information.
    9. Willful damage, destruction, or instructional materials or other's personal property.
B. MINOR – constitutes suspension and/or immediate dismissal from program
    1. Signing in another student.
    2. Be excessively absent or repeatedly tardy.
    3. Loiter on hospital premises.

4. Smoking, eating or drinking in areas of the radiology department or other areas of the hospital not so designated.
5. Create or contribute to unsanitary conditions on hospital premises.
6. Engage in gambling on hospital grounds.
7. Refusal to follow instructions from those designated superior (insubordination).
8. Leaving the assigned area without permission.

Disciplinary Action/Grievance Procedure

Students who jeopardize the health care standards set by the affiliated hospitals and program are subject to probation, suspension or termination from the program (see Code of Conduct).

Dress/Grooming Code

- Uniforms must be CLEAN and WRINKLE-FREE.
- Shoes must be clean.
- Colognes and perfumes should be used in moderation.
- Cosmetics should be worn lightly.
- Maintain daily hygiene.
- Long hair and wigs should be worn in a manner that will not interfere in the daily work.
- Jewelry must not be worn.
- Nails must be neat and trimmed.
- A watch with a second hand may be worn.
- No scarves or hats are to be worn (unless for religious purposes).
- No tennis shoes or sandals ae to be worn. ALL white athletic walking shoes are acceptable.
- T-shirts, regardless of color, are not to be worn as an outer shirt.
- White t-shirt may be worn underneath the uniform.

The Program Director, faculty or staff will address appropriateness of dress and grooming code at any time.

Communicable Disease/Illness & Infection Control

Each hospital has an Infection Control Policy that governs the staff's behavior.

- Students must be aware of the Universal Precautions Policy at his/her clinical affiliate. Students should adhere to the following procedure if the clinical affiliate's policy does not specifically address it.
- Notify clinical personnel if a patient's history indicates a possible exposure to communicable diseases immediately.
- When accidentally or otherwise exposed to communicable diseases notify the clinical personnel immediately.
- Use proper handwashing techniques.
- Use good medical aseptic techniques when handling linens and contaminated items.
- Use bactericides for cleaning equipment and accessories.
- Use proper disposal of needles, syringes, vials and ampules.
- Use gloves, masks, gowns when indicated while handling ISOLATION OR AIDS patients.
- Use proper sterile techniques.

Illness or Injury While on Duty

If a student becomes ill or injured while on duty, the student must report to the chief technologist, administrative officer or clinical associate for further instructions. Emergency medical services will be provided by the affiliated hospital. The hospital is not responsible for any injury not reported within 24 hours of occurrence. An incident report should be completed and a copy sent to the program for injury cases. Medical documentation/excuse for absence(s) must be presented to the instructor/Program Director upon returning to campus.

Clinical Course Descriptions

RT 140 – Intro to Clinical Education

Physical and technical skills needed to apply ionizing radiation to human beings. Includes clinical orientation and assessment to determine professional preparedness. Writing assignments, as appropriate to the discipline, are part of the course.

RT 141 – Radiography Clinical Education I

Orientation and initial skills development in basic radiographic procedures; visualization of abdomen and its contents stressed to prepare student for further study in major are of specialization. Includes communication, operation of equipment, patient care, and technical skills development. Writing assignments, as appropriate to the discipline, are part of the course.

RT 242 – Radiography Clinical Ed II

Application of concepts learned in related radiography classes; emphasis on progression from role of observer to assistant, then to relative independence under supervision of qualified clinical instructors, radiographers, and faculty. Writing assignments, as appropriate to the discipline, are part of the course.

RT 243 - Radiography Clinical Ed III

Progression from role of assistant to greater independence under supervision of qualified clinical instructors. Quality and related aspects of special consent will be covered. Writing assignments, as appropriate to the discipline, are part of the course.

RT 244 - Radiography Clinical Ed IV

Progression of student to full clinical independence, upon demonstrating clinical competency. Student can refine skills through independent practice. Includes field experiences in elective specialization. Writing assignments, as appropriate to the discipline, are part of the course.

Clinical Course Structure

This course will include:

- Radiographic Procedures
- Method of Patient Care
- Human Structure and Function
- Principles of Radiographic Exposure
- Evaluation of Radiographs
- Equipment Maintenance
- Recognition of various Radiographic Pathologies

Clinical Course Goals

The student shall achieve:

- Positioning considerations for the skeletal system and various body cavities.
- Application of accessory equipment and positioning aids.
- Principle of body mechanics.
- The detection and resolution of changes in a patient's condition.
- Related anatomical structures, diseases and conditions for various body systems.
- Proper computation of factors affecting radiographic exposure.
- The evaluation process needed to determine the diagnostic value of the radiographic image.
- The aspects of preventative and corrective maintenance for the equipment.

Behavioral Objectives

The student should be able to:

- Manage and demonstrate a positive interpersonal relationship with the patient.
- Practice and illustrate manual dexterity.
- Correlate the theoretical principles with the clinical application.

- Arrange and permit a smooth transition to more complex examination.
- Organize his skills when proceeding through each examination.
- Demonstrate radiographic procedures unassisted.
- Provide documentation of his experiences for the Joint Review Committee.
- Practice professionalism, medical and moral ethics as stated by the ASRT and ARRT.
- Exercise good patient care using critical thinking and problem solving methodology.

Technical Performance Objectives

- The students must maintain a competence level of 80% above on the following:
- Identify the film with the proper patient name, date, x-ray number, etc.
- Place proper markers right or left in properly designated area.
- Center patient correctly for specific radiographs with respect to film, table and tube.
- Center film correctly for specific radiographs with respect to patient and tube.
- Check the patient both longitudinally and horizontally for proper centering.
- Place the central ray correctly for specific radiographs with respect to patient, table and film.
- Place the central ray at the correct angle as indicated by the specific view.
- Select the proper film size as indicated by the specified view or structures demonstrated.
- Use calipers to obtain correct measurement of part to be radiographed.
- Select the proper choice of exposure factors and set them on the control panel.
- Adjust collimation to the film size or structures to be radiographed.
- Select the correct source image distance as indicated by the structures demonstrated and the tube angle employed.
- Select and utilize all proper accessories as needed. Examples: Grids, sponges, sandbags and any other immobilization devices.
- Use critical thinking and problem solving techniques to formulate technique changes.

The following tasks must be performed:

- Imprint identification information onto film using radiographic, photographic or light imprint.
- Examine the radiographic requisition for each patient to verify the accuracy and completeness of the form.
- Question female patients of child-bearing age about menstrual cycle and/or possible pregnancy to alert radiologist and/or referring physician.
- When indicated place a gonadal shield over male and female reproductive organs prior to taking radiograph.
- Stand behind lead barrier or wear a lead apron while activating radiographic equipment, to provide protection from radiation exposure.
- Wear a monitoring device while on duty to obtain a record of radiation exposure over a given period of time.
- Place protective shield over radiosensitive organs (other than gonads) in or near the primary beam prior to exposure, when repeated examination or high dosage levels are required for procedure.
- Remove all unnecessary persons from prior to taking radiograph to reduce exposure to radiation.
- Restrict the beam to the area to be radiographed.
- Position patient, utilizing body landmarks, to achieve the best demonstration of the affected body part by adjusting table, radiographic and/or fluoroscopic equipment, and image receptor using knowledge of anatomy, standard radiographic positions and departmental protocol.
- To insure proper patient positioning during film exposure, use immobilization devices, when indicated, to prevent patient movement.
- Tape lead makers to margin of film cassette indicating time, body position (e.g., right, left, RAO, LAO) etcetera.

- Select film, screen and/or grid combination appropriate for the part to be radiographed.
- Prior to injecting an iodinated contrast medium, elicit such information about the patient which might indicate a risk of a reaction using patient's chart, radiograph file jacket and/or by questioning patient.
- Assist physician in the intravenous injection of contrast medium using appropriate aseptic technique.
- After injection of iodinated contrast medium, observe patient to detect adverse reactions to the medium using knowledge of common reactions.
- Introduce contrast medium (excluding intravenous injections) into patient according to procedure indicated by physician.
- Restrict the beam to limit exposure to the area of interest to improve image quality.

Physical Requirements of Increase Successful Performance in the Clinical Area

A person working in the field as a radiographer may be required to perform many extraneous and laborious tasks. **Patient care in the clinical area requires excellent communication and language skills.**

Therefore, all students should be able to:

- Stand on feet for approximately 8 hours
- Push and/or pull patients with weights that **may** exceed 200 lbs.
- Communicate in English well enough so that you can be understood by others, and others can understand you.
- Execute both hand and pedal dexterity.
- Give directions and respond to patient requests.
- Operate portable equipment.
- Critique visually a radiographic image.
- Exhibit good hearing ability & is able to exercise good body mechanics.
- Lift and carry various accessory equipment.

Requirements for rotation through the Clinical Education Centers

- Completion of Medical Examination (see program form).
- Documentation of Health Insurance (copy of health insurance card).
- Current documentation of TB screening (every six months).
- Drug screening (program designated agency).
- Criminal background checks (program designated agency).
- Other compliance based on clinical site policy and procedures (disseminated at Orientation).

All students must adhere to all Policy and Procedures determined by the Clinical Education Centers (including the Code of Ethics of the specific site). Failure to do so would be considered a violation of the program's Rules and Regulations.

Clinical Mastery

There must be an ongoing competency level of 80% on the clinical proficiency record. Each semester students must maintain 80% competency on all examinations learned in the laboratory, classroom and clinical center. However, students are not restricted from performing and demonstrating examinations on any service rotation.

Students are responsible for maintaining competency in areas covered in previous semesters and also in the present didactic component.

Students must demonstrate competency in:

RT 140 First year – Spring Semester

Routine chest and abdomen.

RT 141 First year – Summer Semester

Routine GU/GI series.

Routine upper extremity and shoulder girdle.

Areas previously covered in RT 140.

RT 242 Second year – Fall Semester

Lower extremity and pelvic girdle.

Complete Spine.

Areas previously covered in RT 140 & 141.

RT 243 Second year – Fall Semester

Skull radiography.

Thorax.

Special radiologic procedures

Areas previously covered in RT 140, 141 & 242.

RT 244 Second year – Spring Semester

Areas previously covered in RT 140, 141, 242 & 243.

Other body systems.

Clinical Proficiency Policy and Procedures

- **Each student initiates the clinical proficiency-evaluation/competency process.** The clinical proficiency/competency process will be discussed in the beginning of each semester during 'Clinical Orientation'. Each student must maintain a portfolio of clinical experience.
- Each student demonstrates the procedures to be evaluated; the evaluator is responsible for determining his/her competence.
- If a student fails to solicit the evaluation process, then it is the right of the evaluator to determine when the process begins.
- The evaluator will observe the student performing the examination, making no comments during the exam. Comments are made after the examination is completed. (However, if the evaluator sees an obvious error, which can prove detrimental to the patient or the examination, the evaluator will intervene.

Evaluation Tools:

- Proficiency Record: Determines each student's level of proficiency on each rotation. Accesses the quality of radiographs produced.
- Examination Performance Criteria: Determines the level of competency for a specific examination performed. Assesses the behavior and performance objectives stated in this document.
- Personal Development: Assesses personal qualities such as professionalism, character, and propensity to health care, attendance and punctuality.
- Film Critique: Determines level of competency for individual views exposed per examination. Assesses patient position, expose factors, collimation, film size and placement.
- Student Examination Record: Assesses the number and type of examination performed or observed per service rotation each semester.
- Students are not allowed to perform radiographic examinations without direct supervision until they have reached a level of mastery determined by a qualified radiographer.
- Repeat examinations, must be performed under direct supervision of a qualified radiographer.
- After mastery has been determined by a qualified radiographer, students are able to perform examinations under indirect supervision.

Clinical Evaluation Process

RT 140

Technical	30%	• Proficiency Evaluation
Attendance/Punctuality	30%	• Consistently prompt & reliable; no days or hours missed & no tardies – 100% total points.

		Very prompt & reliable in attendance; only 2 days missed, 2 tardy or short hours one day – 75% total points. Usually present on time; 3 days missed, 3 tardiness or short hours 2 different days – 50% total points. Frequently late or absent; 4 days missed, 4 tardies or short hours 3 different days – 25% total points. More than 5 days missed or tardies – 0% total points.
		• Adherence to program policy.
Patient Care	15%	• Examination performance criteria.
Professionalism	15%	• Personal development evaluation.
		• Adherence to program policy.
Exam	10%	• Comprehensive examination.

RT 141

Technical	20%	• Proficiency Evaluation
Attendance/Punctuality	30%	• Consistently prompt & reliable; no days or hours missed & no tardies – 100% total points. Very prompt & reliable in attendance; only 2 days missed, 2 tardy or short hours one day – 75% total points. Usually present on time; 3 days missed, 3 tardiness or short hours 2 different days – 50% total points. Frequently late or absent; 4 days missed, 4 tardies or short hours 3 different days – 25% total points.

		More than 5 days missed or tardies – 0% total points. • Adherence to program policy.
Patient Care	10%	• Examination performance criteria.
Professionalism	10%	• Personal development evaluation. • Adherence to program policy.
Exam	30%	• Comprehensive examination.

RT 242

Technical	15%	• Proficiency Evaluation
Attendance/Punctuality	15%	• Consistently prompt & reliable; no days or hours missed & no tardies – 100% total points. Very prompt & reliable in attendance; only 2 days missed, 2 tardy or short hours one day – 75% total points. Usually present on time; 3 days missed, 3 tardiness or short hours 2 different days – 50% total points. Frequently late or absent; 4 days missed, 4 tardies or short hours 3 different days – 25% total points. More than 5 days missed or tardies – 0% total points. • Adherence to program policy.
Patient Care	10%	• Examination performance criteria.
Professionalism	10%	• Personal development evaluation. • Adherence to program policy.
Exam	50%	• Comp/test/quizzes.

RT 243

Technical	10%	• Proficiency Evaluation
Attendance/Punctuality	20%	• Consistently prompt & reliable; no days or hours missed & no tardies – 100% total points. Very prompt & reliable in attendance; only 2 days missed, 2 tardy or short hours one day – 75% total points. Usually present on time; 3 days missed, 3 tardiness or short hours 2 different days – 50% total points. Frequently late or absent; 4 days missed, 4 tardies or short hours 3 different days – 25% total points. More than 5 days missed or tardies – 0% total points. • Adherence to program policy.
Patient Care	5%	• Examination performance criteria.
Professionalism	5%	• Personal development evaluation. • Adherence to program policy.
Exam	60%	• Comprehensive examination.

RT 244

Technical	5%	• Proficiency Evaluation
Attendance/Punctuality	7%	• Consistently prompt & reliable; no days or hours missed & no tardies – 100% total points. Very prompt & reliable in attendance; only 2 days missed, 2 tardy or short hours one day – 75% total points. Usually present on time; 3 days missed, 3 tardiness or short hours 2 different days – 50%

		total points. Frequently late or absent; 4 days missed, 4 tardies or short hours 3 different days – 25% total points. More than 5 days missed or tardies – 0% total points.
		• Adherence to program policy.
Patient Care	4%	• Examination performance criteria.
Professionalism	4%	• Personal development evaluation.
		• Adherence to program policy.
Exam	80%	• Comprehensive examination.

Unsatisfactory mastery (below 75%) on the RT 244 Final Comprehensive Exam may result in a grade of 'F'. Students will not be able to move forward until they have achieved a satisfactory mastery of the program's curriculum, RT 244 Final Comprehensive Exam. Students will have a second opportunity to take a Final Comprehensive Exam. If the student fails the Final Comprehensive Exam a second time, the student will not be allowed to move forward to take the ARRT Exam.

Grading

All the above methods of assessment will be given a specific point value. The mid-term and final letter grades will be determined by the total point value earned from each category. The student will not be able to advance to the next course until he/she has satisfied all the competencies of this course.

Grade Breakdown

Grades A, B, and C will be arrived by the following methods:

A = 100-94% B = 93-87% C = 86-80%

Students will not be permitted to continue in the program if a grade of “C” or better is not maintained in all courses.

APPENDICES

Sample Forms:

Student Clinical Evaluation Form

Student Conference Form

CCC Liability Form

Student Clinical Orientation Form

MRI Safety Form

MAGNETIC RESONANCE (MR) SAFETY SCREENING PROTOCOL

WARNING:

An MR room has a very strong magnetic field that may be hazardous to individuals entering the MR environment if they have certain metallic, electronic, magnetic, or mechanical implants, devices, or objects. Therefore, all students are required to fill out this form before going to their clinical internship. Be advised, the MR system magnet is ALWAYS on.

While assisting in the MR environment, should you feel any intolerable pulling, unnatural heat or burning sensation within himself/herself then the student must leave the MR environment as quickly as possible, to prevent personal injury.

Do not enter the MR environment or MR system room if you have any question or concern regarding an implant, device, or object.

Please indicate if you have any of the following known MR hazardous devices:

- ❑ Aneurysm clip(s)
- ❑ Cardiac pacemaker
- ❑ Implanted cardioverter defibrillator (ICD)
- ❑ Electronic implant or device
- ❑ Magnetically-activated implant or device
- ❑ Neurostimulation system
- ❑ Spinal cord stimulator
- ❑ Cochlear implant or implanted hearing aid
- ❑ Insulin or infusion pump
- ❑ Implanted drug infusion device
- ❑ Any type of prosthesis, implant or tattoo
- ❑ Artificial or prosthetic limb
- ❑ Any metallic fragment, foreign body, or piercing
- ❑ Any external or internal metallic object
- ❑ Hearing aid