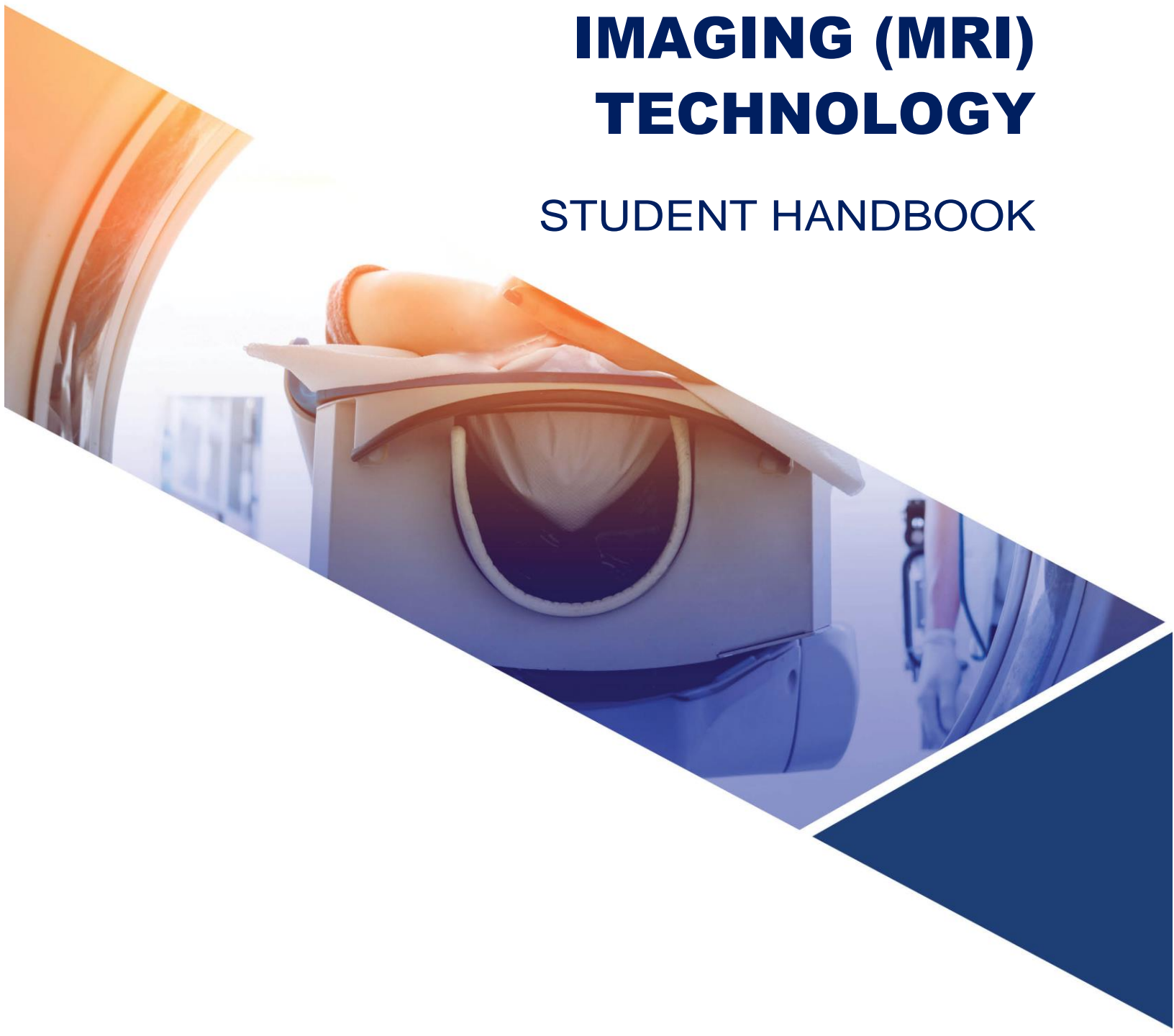




MIDWESTERN
CAREER
COLLEGE

MAGNETIC RESONANCE IMAGING (MRI) TECHNOLOGY

STUDENT HANDBOOK





MIDWESTERN CAREER COLLEGE

Welcome students,

On behalf of all the faculty and staff here at MCC, we would like to welcome you to Midwestern Career Colleges Magnetic Resonance Imaging (MRI) Technologist program. An MRI Technologist is responsible for interpreting physician's instructions, explaining MRI procedures to patients, preparing examination tables, positioning patients for imaging, selecting software options and imaging parameters to perform diagnostic testing by taking images of patients' bodies using computerized MRI scanners.

Our Associate degree program allows to learn all aspects of imaging techniques, from the use of interactive lab skills to the provided online resources that will enhance your overall student experience. Upon completing our program and externship, you will be eligible to take American Registry of Radiologic Technologist (ARRT) and the American Registry of Magnetic Resonance Imaging Technologists (ARMRIT) exams. In addition to earning an Associate of Applied Science in Magnetic Resonance Imaging Technology, MCC offers you the opportunity to become a certified Phlebotomist. Students will be able to sit for National Center for Competency Testing's Phlebotomy Technician Certification Exam, which will allow you to work in the allied healthcare field as a Phlebotomist even before completing your MRI Program.

We encourage you to read this handbook and refer to this as a helpful guide. All our faculty and staff are here to support you, encourage you and answer any questions that may arise along your new education path. Again, we welcome you and wish luck on your journey.

Best regards,

Danielle Dertz, BS, R.T.(MR)(ARRT)(ARMRIT)
Magnetic Resonance Imaging Technology Program Director

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Associate of Applied Science in Magnetic Resonance Imaging (MRI) Technology Program

Mission Statement

The mission of Midwestern Career College's Associate of Applied Science in Magnetic Resonance Imaging (MRI) Technology program is ***to provide premier career-focused education in Magnetic Resonance Imaging (MRI) technology to prepare competent entry-level Magnetic Resonance Imaging Technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains.***

Program Objectives

The Associate of Applied Science in Magnetic Resonance Imaging (MRI) Technology Program prepares students to:

- Demonstrate knowledge and clinical competency to perform the duties of an entry-level MRI Technologist;
- Communicate effectively and professionally as a member of the healthcare team;
- Demonstrate problem-solving and critical thinking skills;
- Demonstrate professional and ethical conduct.

Program Goals

The Associates of Applied Science in Magnetic Resonance Imaging (MRI) Technology Program prepares competent entry-level Magnetic Resonance Imaging technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains.

Cognitive

- Recognize the difference between normal anatomy and pathology;
- Understand how to adjust protocols per exam;
- Develop critical thinking in a high paced MRI setting.

Psychomotor

- Demonstrate knowledge and skill level to select appropriate protocols and parameters needed to perform successful MRI exams;
- Demonstrate proper patient positioning procedures.

Affective

- Recognize the importance of proper patient care and safety in a challenging environment;
- Learn the value of patient understanding, empathy, and sympathy;
- Provide patient care and instructions specific to exam procedures.

Program Directory

Name	Title	Email	Location
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Description of the Profession

Magnetic Resonance Imaging (MRI) Technologists are allied health professionals who are an integral part of a team of medical practitioners. They use specialized equipment to create cross-sectional image scans of patients. MRI Technologists provide quality diagnostic images of patients that are used by doctors to diagnose illness or disease. They interact directly with patients including interviewing them, explaining the scanning process and positioning patients on the examining table. MRI Technologists also administer intravenous injections of contrast dyes.

Magnetic Resonance Imaging (MRI) Technologist Education

The preferred entry-level education for the magnetic resonance imaging (MRI) Technologist is the associate degree; all programs are expected to meet the minimal curriculum requirements as defined in the Core Curriculum for Magnetic Resonance Imaging (MRI) Technology.

Role of the Magnetic Resonance Imaging (MRI) Technologist in Health Care Field

MRI technologists deal directly with patients and typically work under the supervision of a radiologist. They use MRI equipment, such as the machine and coils to create cross-sectional images of the internal structures of the body. These images display the anatomic and physiologic conditions of the body and are used by physicians to assist in their diagnoses.

Preparing the patient for scanning is the first step. This involves explaining the procedure and ensuring the patient is not wearing any jewelry or metal that may cause a reaction with the magnetic field. Once the patient understands the procedure and safety protocols, the technologist is responsible for positioning the patient properly to ensure an accurate scan.

Once the patient is positioned properly, the scan will begin. Following the instructions from the radiologist, the MRI technologist will monitor and adjust the scans parameters accordingly. After the procedure is complete, the technologist will often consult with the radiologist and assist in the diagnosis. At times, MRI Technologists also administer intravenous injections of contrast dyes.

Professional Conduct

MRI students at MCC are being educated to serve the community; therefore, it is expected that they will conduct themselves in a professional manner in all settings in which they are representing the college, including but not limited to the classroom, laboratory and clinical areas. This policy is in addition to, not a replacement for the Standards of Student Conduct explained in the MCC Catalog.

Professional conduct includes, but is not limited to, punctuality, respect for other people, their property, and their right to learn, as well as principles explained in the ARMTRIT Code of Ethics and ARRT Standards of Ethics and Ethical Conduct for the Magnetic Resonance Imaging (MRI) Technologists. It also includes an appropriate respect for those in authority. Students are to be mindful of the things discussed and their attitude around everyone while in the classroom or at a clinical site. We expect the student to observe the following:

- **Honesty** – Being truthful in communication with others.
- **Trustworthiness** – Maintaining the confidentiality of patient information; admitting errors and not intentionally misleading others or promoting self at the patient's expense.
- **Professional Demeanor** – Being thoughtful and professional when interacting with patients and their families; striving to maintain composure under pressure or fatigue, professional stress or personal problems; maintaining a neat and clean appearance and dressing in attire that is reasonable and accepted as professional to the patient population served.
- **Respect for the Rights of Others** – Dealing with professional staff and peer members of the health team in a considerate manner and with a spirit of cooperation; acting with respect toward all persons encountered regardless of age, race, color, national origin, disability, religion, gender, sexual preference, socioeconomic status or veteran/Reserve/National Guard status; respecting the rights of patients and their families to be informed and share in patient care decisions; respecting patients' modesty and privacy.
- **Personal Accountability** – Participating responsibly in-patient care to the best of your ability and with appropriate supervision; undertaking clinical duties and persevering until they are complete; notifying the responsible person if something interferes with your ability to perform clinical tasks effectively.
- **Concern for the Welfare of Patients** – Treating patients and their families with respect and dignity both in their presence and in discussions with others; discerning accurately when supervision or advice is needed and seeking these out before acting; recognizing when your ability to function effectively is compromised and asking for relief or help; not using alcohol or drugs in a way that could compromise patient care or your own performance; not engaging in romantic, sexual, or other nonprofessional relationships with a patient, even upon the apparent request of a patient.
- **Promptness** - It is expected that students arrive on time to classes, labs and clinical rotations at all times.

Guidelines for Use of Magnetic Resonance Imaging (MRI) Technology Laboratory

The MRI Technology laboratory provides students a setting to practice and demonstrate skills in a mock scanning room setting. Use of MRI equipment, instrumentation and supplies is restricted to students enrolled in the MRI technology program.

If a student is using the laboratory during non-scheduled times, the student is required to:

- Email the program director at ddertz@mccollege.edu indicating that you wish to come to lab for practice;
- Sign in at the front desk area;
- Disclose the names of anyone who is with you in the lab area;
- Return all equipment to original location and status when finished;
- Dispose of trash appropriately;
- Wipe down equipment with authorized wipes;
- Return all equipment to its designated area;
- Sign out at the front desk area.

Due to the nature of the environment and equipment, the presence of children is strictly prohibited in the MRI technology laboratory.

Clinical Policies and Procedures

The following policies include expectations, regulations, policies, and procedures pertaining to experience in the clinical practice area. An orientation at each clinical site will facilitate review of policies specific to that particular site. Failure to comply with policies may result in removal from the clinical site or other academic or disciplinary actions.

Externship Packet Documentation

Each program cohort has an established due date for externship packet submission. The due date is announced to students during the New Student Orientation.

A complete externship packet containing all the documentation is listed in the MCC Externship Handbook and must be submitted by the due date. Students who fail to submit a complete externship packet by the established due date will be unregistered from the externship course. Partial or incomplete packet submissions will not be accepted.

Background Check

Students must complete a background check as part of the MCC admission process. A felony on student record will not necessarily disqualify the student from consideration for admission. However, it can adversely affect the student's ability to complete the Externship course and meet program completion requirements, find employment in the field related to their education, or take professional certification exams in the medical professions. MCC encourages students to consider their personal history to make the appropriate education and career choices.

The majority of MCC's affiliated sites will accept a background check completed within a year of assignment at the clinical site. However, some sites may require a more recent background check completed before the start of clinical rotation. Any expenses incurred for the additional background check will be the responsibility of the student.

Drug Screening

Some of MCC's affiliated sites require students to obtain and pass a drug screening before placement. If problems arise with a student's drug screening, the student will not be permitted to attend the Externship course which will result in program withdrawal.

Externship Clearance Exam

Students are required to pass an Anatomy exam to be cleared for the externship placement. The exam consists of 100 cross-sectional anatomy questions. Students must pass the exam with a 75% to be eligible to participate in externship course. Students should contact The Program Director to schedule the exam.

Externship Experiences

During the clinicals the students will perform a series of scans in a supervised MRI environment, interact with patients and radiology staff, and use functioning MRI equipment.

Competencies

Students are required to meet competencies based on both the ARRT and ARMRIIT requirements.

All applicants for certification must meet the criteria to be eligible to sit for the ARMRIIT certification examination. Which are:

- 1) Complete the didactic portion of the MRI Technologist Program;
- 2) Complete one thousand (1,000) hours of documented MRI clinical experience;
- 3) Pass the school administered program exit exam with a 70% or higher.

Detailed ARMRIIT certification requirements can be found here:

<http://www.armrit.org/pdf/APP0719-1.pdf>

All applicants for certification must meet the criteria to be eligible to sit for the ARRT certification examination. Which are:

- 1) Complete the didactic portion of the MRI Technologist Program;
- 2) Complete seven (7) mandatory general patient care activities;
- 3) Complete eight (8) mandatory MRI safety requirements;
- 4) Complete seventeen (17) mandatory MRI procedures and ten (10) electives to be selected from a list of twenty-four (24) MRI procedures, and
- 5) Complete seven (7) mandatory quality control tests;
- 6) Pass the school administered program exit exam.

Mandatory procedures must be completed on actual patients in the presence of the preceptor. Elective procedures should be performed on patients however, up to half of the procedures can be performed on volunteers.

A detailed list for the ARRT Primary Certification Didactic and Clinical Competency Requirements exams can be found here:

https://www.arrt.org/docs/default-source/discipline-documents/mri--primary/mri-competency-requirements.pdf?sfvrsn=78dd01fc_20

Program Exit Exam

Program exam is a school administered exam that is given to the student after completion of both the didactic and clinical portion of the program. The exam is a combination of information learned during the entirety of the program. The exam is given in two (2) sections. The first section is a combination of physics, safety and clinical application. The second section is cross sectional anatomy. Both portions of the exam must be passed with a 70% to be eligible to sit for the certification.

The exit exam can be taken as many times as needed and a failing grade will not count against the student. For a student who wishes to get reimbursed for ARMRIT certification, the exit exam must be successfully completed beforehand.

Blood/Body Fluid Exposure

This procedure is to be followed if a student is involved in a blood/body fluid exposure incident:

- The clinical instructor or a designated supervisor immediately assists the student in cleansing the wound or affected area with soap and water or irrigating splash area (i.e., eyes, mucous membranes) with normal saline or water. If eyes have been splashed, flush 15 minutes at eyewash station with wash bottle or saline;
- Follow facility protocols for exposure, i.e. emergency room visit, employee health center;
- Notify the MRI technology program director or clinical instructor assigned to you; school incident report must be completed;
- The facility will assist the student in filling out all necessary documentation forms and will coordinate any necessary follow-up according to their exposure policy;
- Costs incurred by a student's blood and body fluid exposure are the student's responsibility.

Electronic Device Use

A student shall not have a cell phone or any other electronic device during clinical activities, unless approved by the Clinical Instructor. These devices are disruptive to the environment and should only be utilized during breaks and in allowable areas per the clinic's policies. Failure to follow this policy may result in dismissal from the clinical site and could result in a disciplinary action.

Dismissal from a Clinical Education Site

This policy is in addition to not a replacement for the Termination of Externship Assignment policy in the Externship Handbook.

Any request by a clinical site to remove (temporary or permanently) a student from the site because of the student's behavior or performance will be evaluated on a case-by-case basis. The Program Director will investigate the situation and together with the Externship Coordinator render a decision on the outcome. Depending on the nature of the clinical dismissal, actions may range from putting in place a

clinical performance contract, placement at a new clinical site, required make-up time, clinical probation, or program dismissal. If a student is removed from the clinical site, immediate and/or future clinical placement is not guaranteed. A student's clinical experience may be delayed for several months or a full academic year depending on clinical availability. Due to the variety of circumstances that involve the affective and psychomotor domains of learning, no one disciplinary standard can apply to all incidents. The nature and degree of disciplinary action taken will be based on the type and seriousness of the infraction, the student's academic and clinical record, and previous history of warnings/disciplinary actions. Incidents that compromise patient safety or violate patient confidentiality (HIPAA) will have serious consequences.

Clinical Work Policy

All student activities associated with the curriculum, especially while students are completing clinical rotations, will be educational in nature. Students will **not** be substituted for hired staff personnel within the clinical institution, in the capacity of a MRI Technologist.

Clinical Attendance

Students are required to follow the Externship Schedule and Attendance Policy listed in the Externship Handbook.

- Clinical attendance during inclement weather follows the Campus Closure Policy on the college website. In general, a student must make a personal decision if travel is safe. If the student decides it is not, the student should contact the site and the Externship Department.
- Chronic tardiness will not be tolerated. Tardiness is disruptive to the patient-care setting, therefore, if a student is more than 15 minutes late, and has not notified the clinical site, the clinical instructor has the authority to release the student from the clinical site and send them home. This will result in an eight-hour absence.
- Students are not permitted to leave the clinical site prior to the end of their clinical shift. If all cases have been completed, it is the student's responsibility to seek out other tasks and activities to support their clinical education.

Clinical Supervision

Prior to achieving competency in accordance with program standards, a student must be directly supervised by a qualified MRI Technologist during all procedures/contrast injections. All students will follow the policy for supervision at the respective clinical site. After achieving competency in a procedure, the student is then allowed to perform that procedure/contrast injection with indirect supervision. Key requirements:

- All students must be supervised by a preceptor from the clinical site while in the technologist role during imaging procedures.
 - a. Direct supervision indicates that the preceptor also be in the technologist role and immediately available to assume control over imaging exam/contrast injection at any given moment.

b. Indirect supervision is defined as a qualified MRI Technologist being immediately available in the room to assist the student, if needed. This applies to all students regardless of student achievement.

- Students are not to perform imaging/contrast injection procedures without a qualified MRI Technologist present in the room during the procedure.
- Any student who finds himself or herself without proper supervision must immediately notify the Clinical Supervisor at the site, the Externship Coordinator, or the Program Director.

Clinical Dress Code

All students are expected to adhere to a clinical dress code policy. If a clinical site's standards are more stringent, they will supersede program policies. Clothing worn to and from clinical site should be program scrubs.

Appropriate uniform requirements include:

- Student identification badge;
- Clean, comfortable shoes;
- Scrubs will be provided by the school. No personal clothing such as scrub jackets or hats will be allowed at the clinical site or during class hours;
- Identification badges must be worn at clinical sites.

In addition to the attire described above, the student should be mindful of the following expectations:

- Hair shall be neat, clean, well-trimmed and properly combed at all times;
- Mustaches and beards must be neatly trimmed (for safety). If a student does not have a mustache and/or beard, the student's face must be clean-shaven;
- Hands and teeth are to be clean at all times. Fingernails should be clean and trimmed. Fingernail polish is not permitted during clinical rotations. Decorative or studded fingernails are not allowed. False fingernails of any type are strictly prohibited;
- Jewelry of any kind is not recommended in the MRI area as they may become dislodged and threaten the safety of a patient or staff member. It is highly recommended that jewelry and all watches, lab tops, tablets and any object containing metal be left at home. MCC and your clinical site are not responsible for lost/stolen or damaged personal items;
- Visible body piercing (including tongue piercing) is not acceptable.

A clinical site reserves the right to send a student home if the student does not comply with the requirements of the site or the Program.

Student Responsibility Statement

By being enrolled in the Associate of Applied Science in Magnetic Resonance Imaging (MRI) Technology program, I acknowledge that it is student's responsibility to read and understand the Magnetic Resonance Imaging (MRI) Technology Program Handbook and abide by all policies.

I understand that the policies and procedures contained in this Handbook are subject to change without notice at the discretion of the Program Director.

I acknowledge that the Program Director will attempt to notify me of any changes in a timely manner; but that I am ultimately responsible for being familiar with the most current version of all policies in the Program Handbook is available on the college website.

I accept the responsibility to understand requirements for my program of study and I assume responsibility for meeting those requirements.