

Diagnostic Medical Imaging

The mission of the Diagnostic Medical Imaging Program is to prepare individuals in the judicious use of ionizing radiation in both diagnostic radiographic and fluoroscopic procedures. This is accomplished by the application of knowledge in anatomy, physiology, and osteology; in the skillful positioning of the client-patient; the selection of correct technical factors; the proper handling and manipulation of radiation producing equipment; the utilization of accepted radiation protection procedures; and the processing of the image in preparation for diagnostic interpretation.

The program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT) (20 N. Wacker Drive, Suite 2850, Chicago, IL 60606; phone: 312-704-5300; email: mail@jrcert.org; website: www.jrcert.org) and graduates are eligible to take the national certifying examination administered by the American Registry of Radiologic Technologists (ARRT - www.arrt.org). All 146 graduates of the Diagnostic Medical Imaging program since 2004 have passed the national certification examination on the first attempt for a 100% pass rate. Seventy five graduates took the certification examination of the ARRT in 2009–2013 and 100% passed on the first attempt. Forty seven graduates actively sought employment in medical imaging in 2009–2013 and 100% are employed. Twenty eight students started the program in July 2011 and 17 of them graduated in June 2013 for a program completion rate of 61%. Additional information can be obtained [here](#).

The Diagnostic Medical Imaging curriculum begins once a year in Late Summer Session (July). The curriculum consists of eight consecutive semesters (24 months, including summer sessions) combining classroom/laboratory components at the College with Clinical Education courses at an area affiliate hospital. In the Clinical Education components, the student-radiographer is supervised by College faculty and clinical staff while interacting with the patient in the general radiographic/fluoroscopic setting, the emergency room, the operating room, the CT suite, doing mobile (portable) x-rays, and in the angiographic/interventional radiology suite.

Student Learning Outcomes:

Upon completion of this program graduates will be able to:

1. Competently and safely perform radiographic/fluoroscopic procedures.
 - Apply knowledge of routine radiographic procedures
 - Demonstrate quality patient care
 - Practice/apply appropriate radiation protection
2. Communicate effectively.
 - Demonstrate effective written and oral communication skills
3. Think critically and problem solve in various patient care situations.

- Demonstrate logical image sequencing for patients with multiple exams
- Identify diagnostic quality images and correct non-quality images accordingly

4. Demonstrate professionalism.

- ~~Indicate membership in professional organizations~~
- Demonstrate professional behavior in delivering patient care

5. ~~Fulfill the community's need for nationally certified radiographers.~~

- ~~Pass the national examination of the American Registry of Radiologic Technologists (ARRT)~~
- ~~Actively gain employment in the imaging field or continue education into advanced imaging modalities~~

Program Entry Requirements:

Admission is selective and competitive, and requires that potential students fulfill all admission requirements of the College. Applications received from October 1 until February 1 will receive priority in the testing and review process. The requirements for admission to the Diagnostic Medical Imaging program are:

1. High school diploma or general education diploma (GED).
2. A minimum of one year of high school biology or Biology 106 or equivalent with "C" or better grades in the past 10 years.
3. Applicants must demonstrate readiness for ENGL 101 and MATH 118 as determined by the College's placement tests or by successfully completing identified developmental course work.
4. Applicants with previous college experience must have a minimum of a 2.50 grade point average. The most recent previous college experience with at least 12 credits will be used for evaluation.
5. Participation in the pre-entrance Allied Health testing program.
6. Once all Program entry requirements are met, students will receive instruction arranging and completing a six to eight hour observation in a local hospital radiology department and observe routine radiography procedures.

Clinical experience in the program includes contact with children. In order to participate in this experience, students must obtain a criminal records check and child abuse history clearance prior to entrance into the program. The College, in its admissions process, will consider information regarding criminal convictions and/or crimes of moral turpitude.

Admission is conditional pending receipt and evaluation of a criminal background check to determine whether there is any conviction which may bar the student from taking the certifying examination of the American Registry of Radiologic Technologists (ARRT). Any official change or the initiation of any governmental proceeding affecting the information revealed by the required criminal or child abuse background check must be reported immediately to the curriculum coordinator of DMI.

Conditions for Acceptance:

1. Results of complete physical examination, including required laboratory test results performed within six months. An immunization record, including Hepatitis B, H1N1 and any seasonal vaccination(s) required by any clinical affiliations must be on file in the Program office before the start of any DMI course (July of starting year). Prior to beginning the second year of the Program, students will be required to repeat the PPD test.
2. Verification of medical insurance is mandatory.
3. Attendance at a scheduled program orientation prior to entry.
4. Purchase of DMI student-radiographer uniform
5. Attendance at Late Summer Session Study Skills Workshops.
6. Obtain a criminal record check and a child abuse clearance prior to the entrance into the program. This DMI requirement is mandated by the Commonwealth of Pennsylvania 23 Pennsylvania C.S.A. 6355 of the Pennsylvania Child Protective Services Law.
7. Obtain drug screening clearance.
8. Clinical education requires a full range of motion. Pushing, pulling, twisting lifting and bending, standing and walking are required for the entire clinical day (7 hrs). Students who are registered with the Center on Disability must inform the instructor by the end of the first week of class if special accommodations are required.
9. Meet essential functions requirements.

The following guidelines are used for making decisions about an applicant's criminal and child abuse background:

Child Abuse Clearance:

Any record results in denial of admission into the DMI program.

Criminal Background Check:

- All felony convictions are subject to review by the ARRT Ethics Board. These include plea of guilty, plea of nolo contendere (no contest), withheld or deferred adjudication, suspended or stay of sentence, military court-martial. This review should be completed prior to applying to the DMI program.
- Misdemeanor speeding convictions involving alcohol or drug use are required to be reviewed by the ARRT prior to admission to the DMI program.
- Conviction of serious and/or violent crimes results in denial of admission to the DMI program.

Drug Screening Clearance:

Clinical affiliates require evidence of a negative drug screening test in order for a student to participate in clinical education at their facility. Therefore any student with a positive drug screening test cannot be admitted into the DMI Program.

Disciplinary Action:

Involvement in any incident which resulted in disciplinary action against a student at the Community College of Philadelphia or any post-secondary institution is considered in the admissions process. The Diagnostic Medical Imaging program reserves the right to deny admission to any applicant who has a documented history of violating College rules and regulations or who has been previously suspended or expelled from the College or any other post-secondary educational institution.

Students subjected to sanction as a result of violating an academic honor code or suspended or dismissed by an educational program may not qualify for the ARRT certification examination.

Reconsideration:

An applicant who believes that an error of fact has been made in terms of the information provided to the decision making committee can request reconsideration by the committee. This request must be made in writing within 10 days from the date of the letter notifying the applicant of the decision. The reconsideration should address what the applicant considers to be errors of fact.

Following reconsideration by the decision making committee, the applicant can appeal the committee's decision to the vice president for Academic Affairs whose decision is final.

Any official change or the initiation of any governmental proceeding affecting the information revealed by the required criminal or child abuse background check must be reported immediately to the curriculum coordinator of DMI.

Additional Requirements:

Possess current CPR certification - health care provider

Readmission:

1. One-time readmission into the DMI program is permitted.
2. Students requesting a readmission must meet program entry requirements and conditions for acceptance and are selected on a competitive basis as space permits.
3. Students may be required to retake DMI or general education courses as determined by the curriculum coordinator.
4. Students requesting readmission must petition to the program no later than May 1 for the fall semester or October 1 for the spring semester, and their records are subject to review by the program faculty and the Advisory Committee.
5. The program must be completed within five years after initial enrollment.
6. Students who were dropped for unprofessional conduct or safety issues may not be considered for a readmission.

Program of Study Requirements:

1. Students in the DMI curriculum may be dropped at any time if, in the opinion of the faculty and curriculum coordinator, such students are not suited to be radiographers.

2. Students whose attitude and behavior are considered unprofessional may be dropped from the curriculum, pending a review by the program faculty and Advisory Committee.
3. Students may not continue in the DMI curriculum with a grade of "D" or below in any DMI or general education courses.
4. DMI students must follow the curriculum sequence according to courses listed in each semester, unless approval is granted by the curriculum coordinator.
5. DMI students must submit proof of two-year CPR certification prior to entering the first year's spring semester (January).

Graduation Requirements:

To qualify for the Associate in Applied Science (A.A.S.) degree in Diagnostic Medical Imaging, students must complete 76 credit hours as prescribed and attain a grade point average of 2.0 in all program core courses and no grade below a "C" in any course.

Note: Since radiation could be dangerous to a fetus, students who become pregnant while in the Diagnostic Medical Imaging program are strongly encouraged to notify the program's curriculum coordinator in writing of their special circumstances. Students who elect this option must submit appropriate documentation from their obstetrician. Neither the College nor the clinical affiliate can assume responsibility for any harm that might occur to a fetus as a result of exposure to ionizing radiation. A pregnant student may choose to continue in the education process without modification. A student who withdraws from the Diagnostic Medical Imaging program because of pregnancy can gain readmission to the program by following the established procedure.

For Reference:

The American Registry of Radiologic Technologists (ARRT) reserves the right to deny or reject an application for certification as stated in the STANDARDS OF ETHICS of the ARRT from an applicant convicted of a crime, including a felony; a gross misdemeanor; or a misdemeanor with the sole exception of speeding and parking violations. All alcohol and/or drug related violations must be reported. Conviction as used in this provision includes a criminal proceeding where a finding or verdict of guilt is made or returned but the adjudication or guilt is either withheld or not entered, or a criminal proceeding where the individual enters a plea of guilty or nolo contendere.

Any breach of the Standard of Ethics of the ARRT will result in immediate dismissal of the student.

Diagnostic Medical Imaging Course Sequence

| Course Number and Name | Prerequisites and Corequisites | Credits | Gen Ed Req. |
|--|--------------------------------|---------|-------------|
| <i>Summer Session II</i> | | | |
| DMI 101 - Introduction to Diagnostic Medical Imaging | | 2 | |
| MATH 118 or higher | | 3 | Mathematics |

| | | | |
|--|---|---|---------------------|
| <i>First Semester—Fall</i> | | | |
| <u>DMI 105</u> - Image Production and Evaluation I | Coreq: <u>DMI 131</u> | 4 | |
| <u>DMI 119</u> - Intro to Radiologic Physics | | 2 | |
| <u>DMI 131</u> - Patient Care and Procedures I | Coreq: <u>DMI 105</u> | 5 | |
| <u>DMI 181</u> - Radiographic Osteology and Pathology I | | 2 | |
| <u>BIOL 109</u> - Anatomy & Physiology I | | 4 | Natural Science |
| <i>Second Semester—Spring</i> | | | |
| <u>DMI 106</u> - Image Production and Evaluation II | <u>DMI 105</u> , Coreq: <u>DMI 132</u> | 2 | |
| <u>DMI 120</u> - Radiographic Equipment and Operation | <u>DMI 119</u> | 2 | |
| <u>DMI 132</u> - Patient Care and Procedures II | <u>DMI 105</u> & <u>DMI 131</u> Coreq: <u>DMI 106</u> | 5 | Am/Global Diversity |
| <u>DMI 182</u> - Radiographic Osteology and Pathology II | <u>DMI 181</u> | 2 | |
| <u>BIOL 110</u> - Anatomy & Physiology II | <u>BIOL 109</u> | 4 | |
| <i>Summer Session I</i> | | | |
| <u>DMI 198</u> - Clinical Education III | <u>DMI 132</u> | 2 | |
| <u>CIS 103</u> - Applied Computer Technology | | 3 | Tech Comp |
| <i>Summer Session II</i> | | | |
| <u>DMI 199</u> - Clinical Education IV | <u>DMI 198</u> | 2 | |
| <i>Third Semester—Fall</i> | | | |
| <u>DMI 221</u> - Advanced Imaging/Computer Modalities | <u>DMI 106</u> , <u>DMI 120</u> , <u>DMI 199</u> Coreq: <u>CIS 103</u> | 4 | |
| <u>DMI 231</u> - Patient Procedures III | <u>DMI 132</u> | 5 | |
| <u>DMI 261</u> - Radiation Biology and Protection | <u>DMI 119</u> , <u>DMI 120</u> | 2 | |
| <u>ENGL 101</u> - English Composition I | | 3 | |
| Social Science Elective | | 3 | Social Sciences |
| <i>Fourth Semester—Spring</i> | | | |
| <u>DMI 222</u> - Angiographic/Interventional Procedures | <u>DMI 221</u> | 2 | |
| <u>DMI 232</u> - Patient Procedures IV | <u>DMI 231</u> | 5 | |
| Humanities Elective | | 3 | Humanities |
| <u>ENGL 102</u> - The Research Paper | <u>ENGL 101</u> with a grade of "C" or better | 3 | ENGL 102, Info Lit |

| | | | |
|---|---------|---|--|
| <i>Summer Session I</i> | | | |
| DMI 299 - Clinical Education VII | DMI 232 | 2 | |
| <i>Minimum Credits Needed to Graduate: 76</i> | | | |

General Education Requirements

All General Education requirements are met through required courses (as indicated above) except for the **Writing Intensive** requirement and the **Interpretive Studies** requirement. Therefore, in order to graduate, students in this program must choose one course that is designated **Writing Intensive** and one course that is designated **Interpretive Studies**. The same course may be used to fulfill both requirements. View the courses that fulfill all [degree requirements](#) and receive a more detailed explanation of the College's general education requirements to help in your selection.

For More Information Contact:

The Division of Math, Science and Health Careers, Room W2-7, 1700 Spring Garden Street, Philadelphia, PA 19130, Telephone (215) 751-8430; or the College Information Center (215) 751 8010.

CURRICULUM MAP

DIAGNOSTIC MEDICAL IMAGING

PROGRAM ASSESSMENT

2014-2015

| | PROGRAM LEARNING OUTCOMES | | | | | | | | |
|------------------------------------|--|---|---|---|--|---|---|--|---|
| GOALS | Students will competently and safely perform radiographic/fluoroscopic procedures | | | Students will communicate effectively. | | Students will think critically and problem solve in various patient care situations. | | | Students will demonstrate professionalism. |
| STUDENT LEARNING OUTCOMES → | Students will perform routine procedures. | Students will demonstrate quality patient care. | Students will practice/apply radiation protection to patients, selves and others. | Students will demonstrate effective oral communication skills | Students will demonstrate effective written communication skills | Students will demonstrate logical image sequencing for patients with multiple exams | Students will demonstrate knowledge of C-arm equipment and OR procedures. | Students will identify diagnostic quality images and correct non-quality images accordingly. | Students will demonstrate professional behavior |
| COURSES | | | | | | | | | |
| DMI 101 | F | I,F | I | I | I | | | | I,A |
| DMI 105 | F | F | F | F | F | F | | | F |
| DMI 106 | F | F | F | F | F | F | | | F |
| DMI 119 | F | F | F | F | F | F | | | F |
| DMI 120 | F | F | F | F | F | F | | | F |
| DMI 131 | I,R | I,R,A | R,A | R,A | R | I,R | | I,R | R |
| DMI 132 | I,R,M,A | I,R,M,A | R,M,A | R | R | R | | R,A | R,A |
| DMI 181 | F | F | F | R | F | F | | | |
| DMI 182 | F | F | F | R,A | F | F | | | |
| DMI 198 | R,M | R,M | R,M | R,M | M | R,M | I,R,A | I,R,A | R |
| DMI 199 | R,M | R,M | R,M | R,M | M | R,M | R,A | R | R |
| DMI 221 | F | F | F | F | F | F | F | F | R |
| DMI 222 | F | F | F | F | F | F | F | | R,M |
| DMI 231 | R,M,A | R,M,A | R,M,A | R,M | R,M,A | R,M,A | R | R,M,A | R,M,A |
| DMI 232 | R,M,A | R,M | R,M | R,M,A | R,M,A | R,M,A | R | R,M,A | R,M |
| DMI 261 | F | F | R,M | F | F | F | | | |
| DMI 299 | M | M | M | M | M | M | M,A | M | M |

I = INTRODUCTION F = FOUNDATION R = REINFORCE, PRACTICE M = MASTERY A = PROGRAM ASSESSMENT