

MEDICAL IMAGING

**Biological and Health Sciences Division, Room C140,
(847) 543-2042**

MEDICAL IMAGING (Associate in Applied Science) Plan 21MI

The Medical Imaging Program prepares radiographers to work in medical facilities producing radiographic examinations which are interpreted by a radiologist or another medical specialist. Graduates of the program are qualified to take the national certification examination given by the American Registry of Radiologic Technologists. Graduates also meet the additional criteria required for Illinois licensure. The Medical Imaging program is nationally accredited by the Joint Review Committee on Education in Radiologic Technology: 20 North Wacker Drive, Suite 2850 Chicago, IL 60606-3182, (312) 704-5300, mail@jrcert.org.

To complete an AAS, students must meet the General Requirements on page 93.

Consistent with the Mission and goals of the College of Lake County, the Medical Imaging Program strives for excellence in preparing students for entry-level positions in the Medical Imaging profession. By maintaining high academic and clinical standards, graduates receive an Associate in Applied Science degree in Medical Imaging, become eligible for certification as Registered Radiologic Technologists, and attain clinical competency as entry-level professional radiographers.

The Medical Imaging program sets forth the following goals:

1. Provide graduates with entry-level knowledge and skills to function as competent radiographers.
2. Produce graduates who will provide an optimal level of patient care.
3. Maintain program effectiveness.

Interested students may take MIM110 prior to being admitted to the program. However, the number of students that can be admitted to any clinical education course is limited for any given session. Therefore, a screening procedure is used to select the academically best qualified from those who request consideration.

Preference is given to residents of Community College District 532 (CLC) and residents of other community college districts with which CLC has joint educational agreements.

Students who live outside of CLC's district but are eligible for in-district tuition because they are employed by a district employer are NOT considered residents of the district for purposes of selection into the program.

Students enrolled in the program are required to undergo a background check and a urine drug screen prior to attending their clinical site (MOA 212). The results of the background check and drug screen may result in the student losing his/her seat in the program. The costs are borne by the student.

Students who are selected for the program are required to attend a mandatory orientation session. Failure to attend the mandatory orientation session may result in the student losing their seat in the program and the next qualified student on the list will be selected in his/her place.

To be considered for admission to the Medical Imaging Program, you must:

1. Attend a MIM information session. Sessions are scheduled for the first Monday of each month (except January, June and August) at 2:00 p.m. Attendance date must be no more than two years prior to the screening deadline of the year for which you are applying. For additional information and session location, please call (847) 543-2880.
 2. Submit the following records to the Admission and Records Office:
 - a. Application for admission to the college.
 - b. Official transcript/test results (sent to the Admission and Records Office directly from the appropriate institution):
 - i. Student record from the last high school attended. Date of graduation must appear on the transcript. If you did not or will not graduate from high school, submit official GED test results.

OR

 - ii. College or university record (must be regionally accredited) documenting completion of an Associate Degree or Bachelor's Degree. The transcript must indicate degree awarded and date of conferral.
 - c. Official transcripts (sent directly to CLC from appropriate institution) from any previous regionally accredited college(s) showing coursework relevant to the MIM selection criteria.
 - d. MIM request for screening.
3. Minimum selection criteria. Official transcripts and records must show that students satisfy all of the following criteria:
 - a. high school graduate or the equivalent, or high school senior in last term,
 - b. language proficiency and basic algebra readiness.
 - c. cumulative GPA of 2.0 or above for any credit courses completed at CLC,
 - d. credit for two years of high school algebra (remedial or modified algebra will not count) with a grade of "C" or better,
OR completion of MTH 108 at CLC with a grade of "C" or better,
OR an equivalent course from another accredited college with a grade of "C" or better,
OR a score on the CLC Math Placement Test that indicates proficiency in MTH 108,

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- e. credit for BIO 121, BIO 123 or BIO 161 at CLC with a grade of “C” or better,
OR an equivalent course from another accredited college with a grade of “C” or better,
- f. credit for one year of high school physics or chemistry with a grade of “C” or better; **OR** completion of CHM 120 or CHM 121 or PHY 121 at CLC with a grade of “C” or better,
OR an equivalent course from another accredited college with a grade of “C” or better,
- g. eighteen (18) years of age by mid-term of the fall semester following the screening deadline,
- h. completion of the Health Occupation Basic Entrance Test (HOBET).

Note: Applicants may take the Health Occupation Basic Entrance Test (HOBET) only twice per screening year. It may be taken once between January 1st and June 30th, and once between July 1st and December 31st. Test scores in excess of this limit will not be considered for screening purposes. Please contact the Testing Center at (847) 543-2076 for test dates and times. Test scores more than five years old will not be considered. Screening Deadline: First Wednesday in March. If space is available in the program after the initial screening deadline, qualified students will be accepted in an order based on academic qualifications

4. Meet minimum technical performance standards as defined for the profession.

Technical Performance Standards

Please read the following statements that describe the performance standards relative to Medical Imaging.

All interested students must meet the following performance standards:

- transport, move, lift or transfer patients from a wheelchair or litter to an x-ray table or to a patient’s bed
- move, adjust and manipulate a variety of x-ray equipment in order to properly align equipment with respect to the patient and image receptor according to established procedures and standards of speed and accuracy (to include mobile equipment)
- physically place patients in proper positions for x-ray examinations according to established procedures and standards of speed and accuracy
- handle stressful situations related to technical, procedural or patient-care situations
- communicate effectively in order to explain and direct patients as it pertains to their radiologic examinations
- provide physical and emotional support to patients during radiographic procedures
- physically respond to situations requiring emergency care of patients until more qualified help can arrive
- visually review and evaluate radiographic images to identify shades of gray, proper patient positions, proper exposure factors, and other appropriate technical qualities

The screening deadline is the first Wednesday in March.

Students must earn a minimum grade of “C” in each Medical Imaging course to continue in and graduate from the program.

Summer Session One4
 + BIO 244 Anatomy and Physiology I.....4

Fall Semester One16
 + BIO 245 Anatomy and Physiology II4
 MIM 110 Introduction to Medical Imaging3
 MIM 111 Radiographic Anatomy and Positioning I5
 MIM 112 Principles of Radiographic Exposure.....3
 MIM 170 Introduction to the Clinical Education Center1

+ If BIOI 124 has been taken, BIO 244 and BIO 245 are not needed.

Spring Semester Two14
 ENG 121 English Composition I3
 MIM 113 Radiographic Anatomy and Positioning II....5
 MIM 114 Clinical Practice I.....3
 PSY 121 Introduction to Psychology3

Summer Session Two4
 MIM 115 Clinical Practice II3
 MIM 116 Advanced Radiographic Procedures I1

Fall Semester Two14
 MIM 210 Technical Aspects of Patient Care2
 MIM 211 Imaging Equipment6
 MIM 212 Clinical Practice III3
 CMM 121 Fundamentals of Speech *or*
 CMM 123 Dynamics of Small Group Discussion *or*
 CMM 128 Interviewing Practices3

Spring Semester Two17
 MIM 214 Advanced Topics in Radiography6
 MIM 215 Clinical Practice IV3
 MIM 216 Computer Imaging2
 CMM 127 Intercultural Communication3
 HUM 127 Critical Thinking3

Summer Session Three3
 MIM 271 Clinical Practice V3

Total Hours for AAS Degree72

Pregnancy Policy

During the first semester in the medical imaging program, all students will be taught basic radiation protection procedures. These instructions will include enough background so that female students will be able to understand the possible biological risks of ionizing radiation to the embryo and fetus.

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Female students shall read the United States Nuclear Regulatory Commission (NRC) guide #8.13 on possible biological risks to the fetus and embryo and sign an acknowledgement form stating that they understand these risks. NRC guide #8.13 and the acknowledgement form are found in the appendices of the MIM handbook. The signed forms will be placed in the female student's CLC files.

1. Students may inform the program director and the radiation safety officer should a pregnancy occur during the educational period. The pregnancy then becomes declared. Student may rescind pregnancy declaration at any time.
2. The possible risks to the embryo and fetus shall be reviewed and the review documented and signed by the radiation safety officer and the student. The student will then be referred to the program director for discussion and documentation of pregnancy options.
3. The student will decide and the program director document one of the following options:
 - a. A leave of absence may be taken until the birth of the child. All medical imaging grades will be recorded as withdrawn (W) if the student grades are acceptable at the time. This will permit the student to return with no penalty. Student acceptance to clinical facilities depends upon availability of sites.
 - b. The student may continue in the program upon the written recommendation of the student's obstetrician or prenatal agency which has the student under its care. In this case, two badges will be used, one worn at the collar and on top of the apron during fluoroscopy and one worn on the belt and under the apron during fluoroscopy to record the student exposure and the fetal exposure respectively. Should recorded fetal exposure increase to 500 mrem or be received at a rate greater than 50 mrem per month at any time during pregnancy, the student will be required to take a leave of absence. See (1). All course objectives and rotations shall be equivalent to any and all students enrolled in this particular course. Adherence to policies 1-4 should eliminate almost all fetal exposure. Other counseling on radiation protection procedures shall be done as needed.
 - c. The student may terminate the program. The college medical imaging program will counsel students, but has no responsibility for the decisions made by students regarding educational choices if they become pregnant during the educational period.

For more information on recommended courses or program specific advising, contact the following faculty members or the Biological and Health Sciences division at (847) 543-2042:

Joe Dielman

Lynn Wiechert

MAGNETIC RESONANCE IMAGING (Certificate) Plan 21MR

The Magnetic Resonance Imaging (MRI) certificate prepares radiographers to work in medical facilities as MRI technologists. Graduates of the program are qualified to take the national MRI certification examination given by the American Registry of Radiologic Technologists.

Please note that MRI is an advanced certificate and open only to students who are registered in radiography or radiation therapy by the ARRT or in nuclear medicine technology by ARRT or the Nuclear Medicine Technology Certification Board (NMTCB) or in sonography by ARRT or in any sonography-related modality by ARDMS. In addition, students must maintain registration in radiography or radiation therapy by the ARRT or in nuclear medicine technology by the ARRT or NMTCB or in sonography by ARRT or in any sonography-related modality by ARDMS at all times to be eligible for certification and registration in magnetic resonance imaging.

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| Fall Semester (odd years) | 8 |
| MIM 251 MRI Physics and Instrumentation | 3 |
| MIM 253 MRI Procedures | 2 |
| MIM 272 MRI Practicum+ | 3 |
| Spring Semester | 7 |
| MIM 255 MRI Sectional Anatomy and Pathology..... | 4 |
| MIM 272 MRI Practicum+ | 3 |

Total Hours for Certificate

+ The Practicum has been designed to be flexible and accommodate a variety of schedules. Actual clinic days and hours will be determined by the student and the instructor.

Consistent with the Mission and Goals of the College of Lake County, the Magnetic Resonance Imaging and the Computed Tomography certificates strive for excellence in preparing students for advanced-level positions in the Medical Imaging profession. By maintaining high academic and clinical standards, graduates receive a certificate in MRI or CT, become eligible for certification as MRI or CT Registered Technologists, and attain clinical competency as advanced professional radiographers.

To be considered for admission to the Magnetic Resonance Imaging or the Computed Tomography Program, students must:

