

DIAGNOSTIC MEDICAL IMAGING (RADIOLOGIC TECHNOLOGY) - ASSOCIATE IN SCIENCE

Plan Code: 2612

This degree is designed to prepare the student for Certification by the California Department of Public Health, Radiological Health Branch (CRT), California Fluoroscopy Permit, and Registration by the American Registry of Radiological Technologists (ARRT) after testing. The ARRT is the national testing/registration body (www.ARRT.org (<http://www.ARRT.org>)). The end objective is to prepare students for employment as practicing medical imaging professionals in acute care hospitals, medical clinics and/or private offices.

Program Student Learning Outcomes

- Demonstrate the ability to attain the Institutional Student Learning Outcomes (ISLOs).
- Diagram the photographic and digital process and define the technical factors utilized in medical image formation.
- Distinguish the fundamental structure of matter, diagram the production of x-rays, and examine how different radiographic techniques affect the resulting image on a radiograph.
- Assess how radiation affects body systems, differentiate between different types of radiation and their effects on human tissue, and formulate ways to decrease exposure.
- Manage proper patient positioning of the skeletal system, cranium, and viscera to achieve industry standard radiograph.
- Demonstrate ability to properly use all equipment required to produce a diagnostic radiograph; produce an industry standard and diagnostic radiograph.
- Demonstrate understanding of the knowledge and skills necessary to function as professional, ethical, accurate, and reliable members of the Radiologic health care team.

Prerequisite Courses

The following prerequisite courses must be completed within five years prior to the first spring semester of the program:

Code Number	Course Title	Units
ANAT 41	Anatomy & Physiology	5
AH 60	Medical Terminology	3
AH 61	Integration of Patient Care	2
Total Prerequisite Units		10

Program Requirements

This degree requires the completion of General Education coursework plus the following:

Code Number	Course Title	Units
DMI PROGRAM COURSE SCHEDULE		
FIRST YEAR		

Spring Semester REQUIRED COURSES:

DMI 10	Introduction of Radiologic Technology	3
DMI 403	Cross-Sectional Anatomy	3

Summer Session REQUIRED COURSES:

DMI 20	Introduction to Radiologic Physics	3
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Fall Semester REQUIRED COURSES:

DMI 11	Radiographic Techniques	1
DMI 12	Contrast Fluoroscope/Radiographic Proced.	3
DMI 21	Applied Radiological Physics	2
DMI 30	Positioning for General Diagnostic Rad	3

Winter Session REQUIRED COURSES:

DMI 40A	Clinical Radiology	2.5
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Spring Semester REQUIRED COURSES:

DMI 24	Radiation: Biology and Protection	3
DMI 31	Positioning for Cranial Radiography	3
DMI 40B	Clinical Radiology	7.5
DMI 60	Radiologic Pathology	3

SECOND YEAR

Summer Session REQUIRED COURSES:

DMI 40C	Clinical Radiology	6
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Fall Semester REQUIRED COURSES:

DMI 15	Computer Applications in Radiology	3
DMI 40D	Clinical Radiology	11
DMI 222	Venipuncture for Medical Imaging	0.5

Winter Session REQUIRED COURSES:

DMI 61	Fluoroscopy	2
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Spring Semester REQUIRED COURSES:

DMI 14	Trends and Self-Assessment in Rad Tech	3
DMI 40E	Clinical Radiology	11

Required Subtotal **73.5**

Complete one of the following: ¹ 19-39

LBCC General Education (Plan A) (<https://lbcc-public.courseleaf.com/academic-requirements/general-education-transfer-degree-certificate-requirements/general-education-plans/plan-a/>)

CSU GE Breadth (Plan B) (<https://lbcc-public.courseleaf.com/academic-requirements/general-education-transfer-degree-certificate-requirements/general-education-plans/plan-b/>)

IGETC Pattern (Plan C) (<https://lbcc-public.courseleaf.com/academic-requirements/general-education-transfer-degree-certificate-requirements/general-education-plans/plan-c/>)

Electives (as needed to reach 60 degree-applicable units) ²

Minimum Degree Total **60**

¹ Units for the major may be double-counted for LBCC GE, CSU GE, or IGETC; see counselor for limitations.

² Elective units from course(s) numbered 1-599, if needed, to reach 60 degree-applicable units.

RECOMMENDED but not required courses:

Code Number	Course Title	Units
DMI 462	Mammography	3.5
LEARN 11	Learning and Academic Strategies	3

DIAGNOSTIC MEDICAL IMAGING (RADIOLOGIC TECHNOLOGY) - CERTIFICATE OF ACHIEVEMENT

Plan Code: 3612

The courses within the Certificate of Achievement in DMI will prepare the student for Certification by the California Department of Public Health, Radiological Health Branch (CRT), California Fluoroscopy Permit, and Registration by the American Registry of Radiological Technologists (ARRT) after testing. The ARRT is the national testing/registration body (www.ARRT.org (<http://www.ARRT.org>)). The end objective is to prepare students for employment as practicing medical imaging professionals in acute care hospitals, medical clinics and/or private offices.

Program Student Learning Outcomes

- Diagram the photographic and digital process and define the technical factors utilized in medical image formation.
- Distinguish the fundamental structure of matter, diagram the production of x-rays, and examine how different radiographic techniques affect the resulting image on a radiograph.
- Assess how radiation affects body systems, differentiate between different types of radiation and their effects on human tissue, and formulate ways to decrease exposure.
- Manage proper patient positioning of the skeletal system, cranium, and viscera to achieve industry-standard radiograph.
- Demonstrate ability to properly use all equipment required to produce a diagnostic radiograph; produce an industry standard and diagnostic radiograph.
- Demonstrate understanding of the knowledge and skills necessary to function as professional, ethical, accurate, and reliable members of the Radiology health care team.

Prerequisite Courses

The following prerequisite courses must be completed within five years prior to the first spring semester of the program:

Code Number	Course Title	Units
ANAT 41	Anatomy & Physiology	5
AH 60	Medical Terminology	3
AH 61	Integration of Patient Care	2
Total Prerequisite Units		10

Program Requirements

Code Number	Course Title	Units
DMI PROGRAM COURSE SCHEDULE		
FIRST YEAR		
<i>Spring Semester REQUIRED COURSES:</i>		
DMI 10	Introduction of Radiologic Technology	3
DMI 403	Cross-Sectional Anatomy	3
<i>Summer Session REQUIRED COURSES:</i>		

DMI 20	Introduction to Radiologic Physics	3
<i>Fall Semester REQUIRED COURSES:</i>		
DMI 11	Radiographic Techniques	1
DMI 12	Contrast Fluoroscope/Radiographic Proced.	3
DMI 21	Applied Radiological Physics	2
DMI 30	Positioning for General Diagnostic Rad	3
<i>Winter Session REQUIRED COURSES:</i>		
DMI 40A	Clinical Radiology	2.5
<i>Spring Semester REQUIRED COURSES:</i>		
DMI 24	Radiation: Biology and Protection	3
DMI 31	Positioning for Cranial Radiography	3
DMI 40B	Clinical Radiology	7.5
DMI 60	Radiologic Pathology	3
SECOND YEAR		
<i>Summer Session REQUIRED COURSES:</i>		
DMI 40C	Clinical Radiology	6
<i>Fall Semester REQUIRED COURSES:</i>		
DMI 15	Computer Applications in Radiology	3
DMI 40D	Clinical Radiology	11
DMI 222	Venipuncture for Medical Imaging	0.5
<i>Winter Session REQUIRED COURSES:</i>		
DMI 61	Fluoroscopy	2
<i>Spring Semester REQUIRED COURSES:</i>		
DMI 14	Trends and Self-Assessment in Rad Tech	3
DMI 40E	Clinical Radiology	11
Total Units		73.5

Students who possess an associate degree or higher are eligible for the Certificate of Achievement option. Students who choose this option must still follow the DMI program application and waitlist process listed above in "DMI Program Application Requirements and Placement on the DMI Program Waitlist." Students who choose this option are selected from the waitlist in the same manner as all other DMI program applicants.

RECOMMENDED but not required courses:

Code Number	Course Title	Units
DMI 462	Mammography	3.5
LEARN 11	Learning and Academic Strategies	3

COMPUTED TOMOGRAPHY - CERTIFICATE OF ACCOMPLISHMENT

Plan Code: 4045

The courses within the Certificate of Accomplishment in CT will qualify the student to be eligible to take the ARRT post-primary examination in Computerized Tomography.

Program Student Learning Outcomes

- Demonstrate competent computerized tomography examinations for specific anatomical structures, patient symptoms, or pathology.

Prerequisite

Entry into the CT (Computed Tomography) program requires that applicants possess their ARRT credentials in an ARRT Primary Certification (Radiography, Nuclear Medicine, Radiation Therapy, or Ultrasound) and possess an associate degree or higher.

Program Requirements

Code Number	Course Title	Units
REQUIRED COURSES		
DMI 403	Cross-Sectional Anatomy	3
DMI 404	MRI/CT Pathology	3
DMI 405A	MRI Clinical Practicum	2.5
DMI 405B	MRI Clinical Practicum	2.5
DMI 406	Computerized Tomography Physics	3
DMI 407	Computerized Tomography Procedures	3
Total Units		17

MAGNETIC RESONANCE IMAGING TECHNOLOGIST - CERTIFICATE OF ACCOMPLISHMENT

Plan Code: 4613

The courses within the Certificate of Accomplishment in MRI will qualify the student to be eligible to take the ARRT Post-Primary examination in MRI.

Program Student Learning Outcomes

- Demonstrate a mastery of medical-imaging skills in MRI.

Prerequisite

Entry into the MRI (Magnetic Resonance Imaging) program requires that applicants possess their ARRT credentials in an ARRT Primary Certification (Radiography, Nuclear Medicine, Radiation Therapy, or Ultrasound) and possess an associate degree or higher. ARMRIT certification is not accepted.

Program Requirements

Code Number	Course Title	Units
REQUIRED COURSES		
DMI 401	Physical Principles of MRI	3
DMI 402	Magnetic Resonance Imaging Procedure	3
DMI 403	Cross-Sectional Anatomy	3
DMI 404	MRI/CT Pathology	3
DMI 405A	MRI Clinical Practicum	2.5
DMI 405B	MRI Clinical Practicum	2.5
Total Units		17