

# DIAGNOSTIC MEDICAL IMAGING SCIENCES

## (Radiologic Technology)

LONG BEACH CITY COLLEGE

Curriculum Guide for Academic Year 2009-2010

Associate in Science and/or Certificate of Achievement or Certificate of Accomplishment

ALL INFORMATION CONTAINED HEREIN IS SUBJECT TO CHANGE WITHOUT NOTICE.

For possible updates to this guide please refer to the following website: <http://osca.lbcc.edu>

### PROGRAM MISSION STATEMENT

The Diagnostic Medical Imaging Program at Long Beach City College is dedicated to providing high-quality education and clinical practicum to qualified students. It is responsive to the diverse needs of the local medical community. It specializes in the education and training that lead to entry-level employment as a competent, ethical health care professional, and an Associate of Science Degree. The program emphasizes the necessity of professional development and life-long learning.

### CAREER OPPORTUNITIES

This field of concentration is designed to prepare the student for Certification by the State Department of Health Services, Radiological Health Section, and Registration by the American Registry of Radiological Technologists after testing. The end objective is to prepare students for employment as practicing medical imaging professionals in Acute Care Hospitals, Medical Clinics and/or private offices.

### DEPARTMENTAL ADMISSION REQUIREMENT

Applications will not be accepted until the following prerequisites have been met:

1. Graduation from an accredited high school or the equivalent.
2. Before students may begin the program, the following proficiencies must be met:

#### READING:

- a. A passing score on the reading section of the Long Beach City College assessment test, **or**
- b. Completion of † READ 82 or 83 at Long Beach City College with a grade of "C" or better, **or**
- c. A qualifying score on a reading competency examination administered to eligible students at the completion of † English 182AB **or**
- d. Documentation from LBCC Counseling stating proficiency has been met.

#### MATHEMATICS:

- a. A passing score on the Elementary Algebra Diagnostic test (part of the Long Beach City College assessment test) **or**
  - b. Successful completion of a math course at the level of intermediate algebra (Math 130) or higher **or**
  - c. Documentation from LBCC Counseling stating proficiency has been met
3. High school grade point average or current college GPA is considered.
  4. Completion of AH 60, AH 61, and ANAT 41 within five years with a letter grade of "C" or better.
  5. C.P.R. for Health Care Providers certification is required before the practicum phase, which begins 1st Fall semester.
  6. Evidence of physical and emotional fitness by medical examination and personal interview. This is submitted in the Summer of the 1<sup>st</sup> year in DMI 20.

#### **Selection Process**

The following will be considered in the selection process:

1. Date of application
2. Number of program required science and general education courses taken.  
(ENGL 1, Psychology 1, Speech 10, 20, or 30, Humanities, Anatomy 41, AH 60, AH 61)
3. Applicant responses to required application procedure (i.e. attending advisement session).
4. It is suggested that applicants complete as many of the General Education courses as possible prior to admission to the program.
5. Current college grade point average (a minimum cumulative GPA of 2.0 or better is required for program admission).

**NOTE:** Students MUST keep the Admissions and Records Office AND the School of Health and Science advised of their current address and telephone number. Please keep both offices informed if you change your name. Any changes MUST be submitted in writing.

**Information Session**

Students who need additional information are invited to attend an information session, held on the first Tuesday of every month from September to May (EXCEPT JANUARY) at 11:15 a.m. in Room C100. For additional information, please call (562) 938-4678.

**Application Procedures**

Applications are accepted on a continuous basis.

1. Apply for admission to the college through the Admissions Office.
2. Make an appointment to take the college assessment test.
3. Submit transcripts from high school and previous college work to the Admissions Office and the School of Health and Science.
4. Complete the Diagnostic Medical Imaging Program Application form and bring the completed application form and documentation with a self-addressed stamped, legal size envelope (4 and 1/8 X 9 and 1/2 inches, available in the Bookstore) to the School of Health and Science, Room C100.
5. All applicants will be notified by mail (see #4 regarding required envelope) regarding the status of their applications. Applicants will be invited to an Advisement Session which they MUST attend. Only those applicants who are qualified and who have attended an Advisement Session (different from an Information Session) will be considered for admission into the program.

**REQUIRED COURSES**

**UNITS**      In      Completed  
                    Progress      Grade

**Prerequisite Courses**

The following courses must be completed within five years prior to the first Spring Semester of the program:

* ANAT 41	Anatomy & Physiology (F, SP, S)	5		
AH 60	Medical Terminology (F, SP, S)	3		
AH 61	Integration of Patient Care (F, SP)	2		
<b>TOTAL UNITS</b>		<b>10</b>		

**FIRST YEAR**

**Spring Semester**

† DMI 10	Intro. to Radiologic Technology	3		
<b>Subtotal Units</b>		<b>3</b>		

**Summer Session**

† DMI 20	Intro. to Radiologic Physics	3		
<b>Subtotal Units</b>		<b>3</b>		

**Fall Semester**

*# General Ed. Course	(see explanation in footnote)	3		
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Computer Class - Any class which satisfies computer portion of Information Competency requirement for graduation. Recommended course: COMIS 1	For complete listing see General Education Course Pattern Guide.	1-4		
† DMI 11	Radiographic Techniques	1		
† DMI 12	Contrast Fluoroscope & Radiographic Procedures.	3		
† DMI 21	Applied Radiological Physics	2		
† DMI 30	Positioning for General Diagnostic Radiography	3		
† DMI 40A	Clinical Radiology	2.5		
<b>Subtotal Units</b>		<b>18.5-21.5</b>		

**Spring Semester**

†* DMI 60	Radiologic Pathology	3		
† DMI 24	Radiation: Biology & Protection	3		
† DMI 31	Positioning for Cranial Radiography	3		
† DMI 40B	Clinical Radiology	6		
<b>Subtotal Units</b>		<b>15</b>		

**REQUIRED COURSES**

**UNITS**      In Progress      Completed Grade

**SECOND YEAR**

**Summer Session**

† DMI 40C	Clinical Radiology	6		
<b>Subtotal Units</b>		<b>6</b>		

**Fall Semester**

*# General Ed. Course	(see explanation in footnote)	3		
† AH 222	Intravenous Therapy	1		
† DMI 15	Computer Applications in Radiology	3		
† DMI 40D	Clinical Radiology	11		
<b>Subtotal Units</b>		<b>18</b>		

**Spring Semester**

*# General Ed. Course	(see explanation in footnote)	3		
† DMI 14	Trends & Self-Assessment. in Rad. Tech.	3		
† DMI 40E	Clinical Radiology	11		
† DMI 61	Fluoroscopy	2		
<b>Subtotal Units</b>		<b>19</b>		
<b>TOTAL UNITS (IN PROGRAM)</b>		<b>82.5-85.5</b>		
<b>TOTAL UNITS (INCLUDING PREREQUISITE COURSES)</b>		<b>92.5-95.5</b>		

**RECOMMENDED courses but not required:**

† DMI 62	Mammography	3.5		
LEARN 11	Learning and Academic Strategies	2		

A letter grade of "C" or better is required in all DMI, Allied Health, & Anatomy courses.

In general, "double-counting" is not allowed. That is, one course may not be used to fulfill both a field of concentration requirement and to fulfill a general education requirement.

**LEGEND**

† This course has a prerequisite; prerequisite courses must be completed with a letter grade of "C" or better (see catalog or schedule of classes).  
 # Specific General Education courses required: † ENGL 1 or 105 or ESL 34X, Speech 10, 20, or 30, Psychology 1, Humanities (any course that meets the Associate Degree requirement) and 1 unit of Physical Education (two half-unit (.5) P.E. courses).  
 \* This course is an exception to the "double-counting" rule; it may be double-counted.  
 (SP = Spring) (S = Summer) (F = Fall) (INF = Infrequently) = Represents general frequency of course offering •

**GRADUATION REQUIREMENTS**

**For CERTIFICATE OF ACHIEVEMENT:**

This certificate is a one to two year program in occupational/technical areas at Long Beach City College which provides training in job skills and employment opportunities. Complete the required units with a minimum cumulative grade point average of 2.0 ("C" average).

A Diagnostic Medical Imaging Sciences student must obtain a minimum of an Associate Degree but degree may be from another accredited institution. Student must have official transcripts on file in the Admissions and Records Office.

**For ASSOCIATE DEGREE:**

**NOTE: Effective Fall 2009, Title 5, section 55063 (a) (2) requires that students must complete each course counted toward the major or area of emphasis with a grade of "C" or better or "P" if the course is taken on a "Pass/No Pass" basis.**

The Associate Degree is a two-year college degree awarded by Long Beach City College which includes general education courses and a major. Complete the required units. In addition, refer to the catalog for residency requirements. The requirements for general education/proficiency and the field of concentration need to be from the same catalog year. This catalog year may be any year between the year of initial enrollment to the present, provided continuous enrollment is maintained throughout (see the catalog for definition of "continuous enrollment"). Fifty per cent

(50%) or more of the unit requirements for this field of concentration must be completed in residence (credit earned by exam, where applicable, may be included).

**NOTE:** To receive a certificate or degree you must submit completed application forms in the Admissions and Records Office during your final semester of course work.

**PROGRAM INFORMATION**

**Clinical Education**

The following modern medical centers in the community are used as extension campuses for the Clinical Education courses:

Irvine Regional Hospital & Medical Center  
Lakewood Regional Medical Center  
Los Alamitos Medical Center

Long Beach Memorial Medical Center  
Saint Francis Medical Center  
Saint Mary Medical Center

**Cost of Program**

Students purchase their own books and uniforms and pay a student body fee. The college has no dormitory facilities; students must provide for their own living expenses and transportation. Limited educational grants and loan funds are available. ESTIMATED expenses for the two year program:

Books and supplies	\$750	C.S.R.T. Membership (optional)	\$50
Student body fees	20 per semester	Parking fees	25 per semester
Uniforms	300	ARRT Exam	150
Graduation Expenses	500	CRT Exam	200
Enrollment Fees: 1 unit =	20 / semester	Health Fee	14 per semester
Background Check 75 (Prior to beginning the clinical practicum (DMI 40A), ALL students must submit a recent background check which is obtained at their own expense)			
A.S.R.T. Membership (optional)	75	Malpractice Insurance (optional)	15 /semester

**Accreditation**

Long Beach City College is fully accredited by the Western Association of Schools and Colleges. The program is approved by the California State Department of Health, Radiological Health Branch.

For any additional program information call (562) 938-4678.

**CERTIFICATES OF ACCOMPLISHMENT**

FOR OFFICE USE ONLY: 4040

**Name of Certificate: Radiologic Technology Fluoroscopy Permit**  
(Must be licensed CRT or in Second Year of Diagnostic Medical Imaging Program)

REQUIRED COURSE	UNITS	In Progress	Completed Grade
† DMI 61 Fluoroscopy	2		
<b>TOTAL UNITS</b>	<b>2</b>		

FOR OFFICE USE ONLY: 4043

**Name of Certificate: Mammography**  
(Must be licensed CRT or in Second Year of Diagnostic Medical Imaging Program)

REQUIRED COURSE	UNITS	In Progress	Completed Grade
† DMI 62 Mammography	3.5		
<b>TOTAL UNITS</b>	<b>3.5</b>		

FOR OFFICE USE ONLY: 4613

**Name of Certificate: Magnetic Resonance Imaging Technologist**

REQUIRED COURSE	UNITS	In Progress	Completed Grade
† DMI 401 Physical Principles of Magnetic Resonance Imaging	3		
† DMI 402 MR Imaging Procedures	3		
† DMI 403 Cross-sectional Anatomy	3		
† DMI 404 MRI Pathology	3		
† DMI 405AB MRI Clinical Practicum	2.5		
<b>TOTAL UNITS</b>	<b>14.5</b>		

**NOTE:** All courses must be completed within three (3) years of starting the program.

## LEGEND

† This course has a prerequisite; prerequisite courses must be completed with a letter grade of "C" or better (see catalog or schedule of classes).

(SP = Spring) (S = Summer) (F = Fall) (INF = Infrequently) = represents general frequency of course offering

## CERTIFICATE OF ACCOMPLISHMENT REQUIREMENTS

### For CERTIFICATE OF ACCOMPLISHMENT:

This certificate certifies a competency in a given area and requires less than 18 units. Complete the required unit(s) at Long Beach City College with a minimum grade of "C" in each course. Submit a completed application for the Certificate of Accomplishment in the Admissions and Records Office after completion of required unit(s).

*Students interested in transferring to a university to continue their study in this field of concentration or other majors are strongly advised to consult an LBCC academic counselor and refer to the ASSIST website ([www.assist.org](http://www.assist.org)) for major preparation information. Counselors can clarify the different major and admissions requirements at a university. Students may visit the Student Success/Transfer Services Center to access further educational resources. To set up an appointment to see a counselor or schedule the SOAR Test, call LAC (562)938-4561 or PCC (562)938-3920.*