I. CATALOG INFORMATION

A. Discipline: RADIOLOGIC TECHNOLOGY (RADT)

B. Subject Code and Number: RADT M01BL

C. Course Title: Radiographic Technique Lab I

D. Credit Course units:

Units: 1

Lecture Hours per week: 0

Lab Hours per week : 3

Variable Units : No

E. Student Learning Hours:

Lecture Hours:

Classroom hours: 0 - 0

Laboratory/Activity Hours:

Laboratory/Activity Hours 52.5 - 52.5

Total Combined Hours in a 17.5 week term: 52.5 - 52.5

F. Non-Credit Course hours per week

G. May be taken a total of: [X] 1 [ ] 2 [ ] 3 [ ] 4 time(s) for credit

H. Is the course co-designated (same as) another course: No [X] Yes [ ]
If YES, designate course Subject Code & Number:

I. Course Description:

Provides basic knowledge in factors that govern and influence the production and recording of radiographic images. Uses class demonstrations and experiments to illustrate the application of radiographic equipment for digital radiographic imaging. Includes the performance of basic quality control experiments.

J. Entrance Skills

*Prerequisite: No [ ] Yes [X] Course(s)
RADT M10A and RADT M10AL and RADT M10B

*Corequisite: No [ ] Yes [X] Course(s)
RADT M01A and RADT M01AL and RADT M01B and RADT M11

Limitation on Enrollment: No [X] Yes [ ]

Recommended Preparation: No [X] Yes [ ] Course(s)

Other: No [X] Yes [ ]

K. Other Catalog Information:

II. COURSE OBJECTIVES

Upon successful completion of the course, a student will be able to:

		Methods of evaluation will be consistent with, but not limited by, the following types or examples.
1	perform basic quality control tests	Questions at the end of each experiment Exams
2	differentiate between technical factor problems, procedural problems, and equipment malfunctions.	Questions at the end of each experiment Exams
3	evaluate image quality on a radiographic image.	Questions at the end of each experiment Exams
4	perform experiments which prove the different factors that affect image quality.	Questions at the end of each experiment Exams
5	analyze the relationships of factors controlling image quality.	Questions at the end of each experiment Exams
6	evaluate the results of basic quality control (QC) tests.	Questions at the end of each experiment Exams

III. COURSE CONTENT

Estimated %	**Topic**	**Learning Outcomes**
Lecture (must total 100%)		
Lab (must total 100%)		
40.00%	Image quality analysis	1, 4, 5, 6
20.00%	Image processing analysis	1, 2, 3, 4, 5, 6
10.00%	Artifacts/grids/image analysis	1, 2, 3, 4, 5, 6

10.00%	Generator calibration	2, 6
20.00%	Technical factors	1, 2, 3, 4, 5, 6

IV. TYPICAL ASSIGNMENTS

A. Writing assignments

Writing assignments are required. Possible assignments may include, but are not limited to:	
1	write answers to the questions at the end of each experiment.
2	write essay questions on exams.
3	write an evaluation of the image quality on a radiographic image.
4	write summary of experiments and class demonstrations.

B. Appropriate outside assignments

Appropriate outside assignments are required. Possible assignments may include, but are not limited to:	
1	assigned readings from text and professional journals.
2	complete all worksheets assigned in class.
3	obtain discarded radiographs and present a critique in class.

C. Critical thinking assignments

Critical thinking assignments are required. Possible assignments may include, but are not limited to:	
1	discuss and analyze data from radiographic quality test.
2	calculate problems in constructing a technique chart.
3	formulate a conclusion as necessary after each experiment.

V. METHODS OF INSTRUCTION

Methods of instruction may include, but are not limited to:

☐ Distance Education – When any portion of class contact hours is replaced by distance education delivery mode (Complete DE Addendum, Section XV)

☐ Lecture/Discussion

☒ Laboratory/Activity

☒ Other (Specify) performing experiments using energized radiographic equipment

☐ Optional Field Trips

☐ Required Field Trips

VI. METHODS OF EVALUATION

Methods of evaluation may include, but are not limited to:

☒ Essay Exam

☒ Classroom Discussion

☒ Skill Demonstration

[X] Problem Solving Exam
[X] Reports/Papers/ Journals
[X] Participation
[X] Objective Exams
[ ] Projects
[X] Other (specify)

weekly quiz

VII. REPRESENTATIVE TEXTS AND OTHER COURSE MATERIALS

Bushong, Stewart. Radiologic Science for Technologists: Physics, Biology and Protection. 10th ed. Mosby, 2013.

Carlton, Richard, and Arlene Adler. Principles of Radiographic Imaging: An Art and a Science. 5th ed. Cengage, 2013.

Carlton, Richard, and Arlene Adler. Workbook to Accompany Principles of Radiographic Imaging: An Art and a Science. 5th ed. Cengage, 2013.

VIII. STUDENT MATERIALS FEES

[X] No [ ] Yes

IX. PARALLEL COURSES

College	*Course Number*	*Course Title*	*Units*
Long Beach City College	DMI 11	Radiographic Techniques	1
Cypress College	RADT 153 C	Radiography Patient Care	3
Foothill College	R T 53AL	Applied Radiographic Technology Laboratory I	1

X. MINIMUM QUALIFICATIONS

Courses in Disciplines in which Masters Degrees are not expected:
Bachelor's degree and two years experience or associate degree and 6 years experience, plus license in the discipline.

XI. ARTICULATION INFORMATION

A. Title V Course Classification:

1. This course is designed to be taken either:

   [ ] Pass/No Pass only (no letter grade possible); or
   [X] Letter grade (P/NP possible at student option)

2. Degree status:
   Either [X] Associate Degree Applicable; or [ ] Non-associate Degree Applicable

B. Moorpark College General Education:

1. Do you recommend this course for inclusion on the Associate Degree General Education list?
   Yes: [ ] No: [X] If YES, what section(s)?

   [ ] A1 - Natural Sciences - Biological Science
   [ ] A2 - Natural Sciences - Physical Science
   [ ] B1 - Social and Behavioral Sciences - American History/Institutions
   [ ]

☐ B2 - Social and Behavioral Sciences - Other Social Behavioral Science
☐ C1 - Humanities - Fine or Performing Arts
☐ C2 - Humanities - Other Humanities
☐ D1 - Language and Rationality - English Composition
☐ D2 - Language and Rationality - Communication and Analytical Thinking
☐ E1 - Health/Physical Education
☐ E2 - PE or Dance
☐ F - Ethnic/Gender Studies

C. California State University(CSU) Articulation:

1. Do you recommend this course for transfer credit to CSU? Yes: ☒ No: ☐

2. If YES do you recommend this course for inclusion on the CSU General Education list?
   Yes: ☐ No: ☒ If YES, which area(s)?

   A1 ☐ A2 ☐ A3 ☐ B1 ☐ B2 ☐ B3 ☐ B4 ☐

   C1 ☐ C2 ☐ D1 ☐ D2 ☐ D3 ☐ D4 ☐ D5 ☐

   D6 ☐ D7 ☐ D8 ☐ D9 ☐ D10 ☐ E ☐

D. University of California (UC) Articulation:

1. Do you recommend this course for transfer to the UC? Yes: ☐ No: ☒

2. If YES do you recommend this course for the Intersegmental General Education Transfer Curriculum (IGETC)? Yes: ☐ No: ☒

   IGETC Area 1: English Communication

   ☐ English Composition
   ☐ Critical Thinking-English Composition
   ☐ Oral Communication

   IGETC Area 2: Mathematical Concepts and Quantitative Reasoning

   ☐ Mathematical Concepts

   IGETC Area 3: Arts and Humanities

   ☐ Arts
   ☐ Humanities

   IGETC Area 4: Social and Behavioral Sciences

   ☐ Anthropology and Archaeology
   ☐ Economics
   ☐ Ethnic Studies
   ☐

- [ ] Gender Studies
- [ ] Geography
- [ ] History
- [ ] Interdisciplinary, Social & Behavioral Sciences
- [ ] Political Science, Government & Legal Institutions
- [ ] Psychology
- [ ] Sociology & Criminology

IGETC Area 5: Physical and Biological Sciences (mark all that apply)

- [ ] Physical Science Lab or Physical Science Lab only (none-sequence)
- [ ] Physical Science Lecture only (non-sequence)
- [ ] Biological Science
- [ ] Physical Science Courses
- [ ] Physical Science Lab or Biological Science Lab Only (non-sequence)
- [ ] Biological Science Courses
- [ ] Biological Science Lab course
- [ ] First Science course in a Special sequence
- [ ] Second Science course in a Special Sequence
- [ ] Laboratory Activity
- [ ] Physical Sciences

IGETC Area 6: Language other than English

- [ ] Languages other than English (UC Requirement Only)
- [ ] U.S. History, Constitution, and American Ideals (CSU Requirement ONLY)
- [ ] U.S. History, Constitution, and American Ideals (CSU Requirement ONLY)

XII. REVIEW OF LIBRARY RESOURCES

A. What planned assignment(s) will require library resources and use?

The following assignments require library resources: None.

B. Are the currently held library resources sufficient to support the course assignment?

YES: [X] NO: [ ]

If NO, please list additional library resources needed to support this course.

XIII. PREREQUISITE AND/OR COREQUISITE JUSTIFICATION

RADT M01BL: Not Applicable

XIV. WORKPLACE PREPARATION

Required for career technical courses only. A career technical course/program is one with

the primary goal to prepare students for employment immediately upon course/program completion, and/or upgrading employment skills.

Detail how the course meets the Secretary of Labors Commission on the Achievement of Necessary Skills (SCANS) areas. (For a description of the competencies and skills with a listing of what students should be able to do, go to: http://www.ncrel.org/sdrs/areas/issues/methods/assment/as7scans.htm)

The course will address the SCANS competency areas:

1. Resources: the students will identify weekly learning objectives, devise a plan to allocate adequate study time to learn the weekly objectives, learn to organize the steps involved in radiography procedures, meet assignment deadlines, and be prepared to participate in class discussions.

2. Interpersonal: the students will experience the importance of collaboration and of being a team member in the health care field.

3. Information: the students will refer to radiographic technique charts to select the correct amount of radiation for imaging the body part of interest; use computers in the skills lab, which prepares them to evaluate, organize and communicate information in the clinical facility; and make use of professional health care and radiography journals to keep abreast of the state of the art in medical imaging.

4. Systems: the students will learn to follow specific protocols for the safe use of radiation production equipment.

5. Technology: the students will differentiate between photostimulable phosphor (PSP) and direct acquisition technology.

The course also addresses the SCANS skills and personal qualities:

1. Basic Skills: the students will read professional journals and manuals related to new radiographic techniques and equipment.

2. Thinking Skills: the students will describe how to alter radiographic procedures for the pediatric, geriatric, and trauma patient.

3. Personal Qualities: the students will demonstrate accountability through regular attendance and punctuality in class; demonstrate reliability by completing assignments as instructed and in a timely manner; show respect for each other, others with whom they come in contact, and those in authority.

XV. DISTANCE LEARNING COURSE OUTLINE ADDENDUM

RADT M01BL: Not Applicable

XVI. GENERAL EDUCATION COURSE OUTLINE ADDENDUM

RADT M01BL: Not Applicable

XVII. STUDENT MATERIALS FEE ADDENDUM

RADT M01BL: Not Applicable

XVIII. REPEATABILITY JUSTIFICATION TITLE 5, SECTION 55041

RADT M01BL: Not Applicable

XIX. CURRICULUM APPROVAL

Course Information:

Discipline: RADIOLOGIC TECHNOLOGY (RADT)

Discipline Code and Number: RADT M01BL

Course Revision Category: Technical Course Revision

Course Proposed By:

Originating Faculty Robert Darwin 04/12/2016

Faculty Peer: Guadalupe Aldana 05/11/2016

Curriculum Rep: Linda Loiselle 04/13/2016

Department Chair: Carol Higashida 08/24/2016

Division Dean: Norman Marten 05/07/2016

Approved By:

Curriculum Chair: Jerry Mansfield 09/09/2016

Executive Vice President: Julius Sokenu 09/18/2016

Articulation Officer: Letrisha Mai 05/05/2016

Librarian: Mary LaBarge 05/03/2016

Implementation Term and Year: Spring 2017

Approval Dates:

Approved by Moorpark College Curriculum Committee: 09/06/2016

Approved by Board of Trustees (if applicable): _____

Approved by State (if applicable): 10/14/2016