

I. CATALOG INFORMATIONA. Discipline: RADIOLOGIC TECHNOLOGY (RADT)B. Subject Code and Number: RADT M02AC. Course Title: Radiographic Practice II

D. Credit Course units:

Units: 3Lecture Hours per week: 3Lab Hours per week : 0Variable Units : No

E. Student Learning Hours:

Lecture Hours:

Classroom hours: 52.5 - 52.5

Laboratory/Activity Hours:

Laboratory/Activity Hours 0 - 0**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: 1 2 3 4 time(s) for creditH. Is the course co-designated (same as) another course: No Yes

If YES, designate course Subject Code & Number: _____

I. Course Description:

Covers routine, trauma, geriatric and pediatric radiographic imaging of the skull, paranasal sinuses and facial bones. Focuses on fluoroscopic and contrast media procedures of the gastrointestinal and genitourinary systems with an introduction to angiographic and interventional procedures.

J. Entrance Skills

*Prerequisite: No Yes Course(s)RADT M01A and RADT M01AL and RADT M11*Corequisite: No Yes Course(s)RADT M02AL and RADT M02B and RADT M02BL and RADT M12Limitation on Enrollment: No Yes

Recommended Preparation: No Yes Course(s)

Other: No 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	explain the routine and special positions/ projections for all radiographic/fluoroscopic procedures.	Quizzes and exams.
2	discuss equipment and supplies necessary to complete basic radiographic and fluoroscopic procedures.	Quizzes and exams.
3	identify the structures demonstrated on routine radiographic and fluoroscopic images.	Quizzes and exams.
4	critique radiographic and fluoroscopic images for diagnostic quality including part position, anatomy visualized, contrast, density, markers and collimation.	Quizzes and exams.
5	discuss general radiation safety and protection practices associated with radiographic and fluoroscopic examinations.	Quizzes and exams.
6	name the type, dosage and route of administration of contrast media commonly used to perform radiographic contrast and special studies.	Quizzes and exams.
7	discuss the importance of documenting and reporting patient history, symptoms and incident reporting.	Quizzes and exams.
8	identify methods and barriers of communication and describe how each may be used or overcome effectively during patient education.	Quizzes and exams.
9	compare special considerations for trauma, surgical, mobile, geriatric, and pediatric patients with the normal adult.	Quizzes and exams.
10	explain angiographic and interventional procedures performed in a radiology department.	Quizzes and exams.
11	describe computed tomography, MRI (magnetic resonance imagery), ultrasound, radiation therapy, nuclear medicine and their role in diagnostic imaging.	Quizzes and exams.

III. COURSE CONTENT

Estimated %	Topic	Learning Outcomes
Lecture (must total 100%)		
20.00%	Fixed and mobile fluoroscopic equipment	1, 2, 3, 4, 5, 6, 7, 8,

		9
20.00%	Gastrointestinal procedures	1, 2, 3, 4, 5, 6, 7, 8, 9
10.00%	Urinary system procedure	1, 2, 3, 4, 5, 7, 8, 9
15.00%	Cranium, facial bones, and paranasal sinuses procedures	1, 2, 3, 4, 5, 7, 8, 9
15.00%	Trauma, mobile, and surgical procedures	1, 2, 3, 4, 5, 7, 8, 9
10.00%	Pediatric radiography	1, 2, 3, 4, 5, 6, 7, 8, 9
5.00%	Angiographic and interventional procedures	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
5.00%	Additional imaging modalities	9, 11

IV. TYPICAL ASSIGNMENTS

A. Writing assignments

Writing assignments are required. Possible assignments may include, but are not limited to:	
1	written essay questions on exams.
2	research paper on radiographic topic
3	written assignments on skull, gastrointestinal, and genitourinary radiographic exams in workbook manual.

B. Appropriate outside assignments

Appropriate outside assignments are required. Possible assignments may include, but are not limited to:	
1	online research and assignments on skull, gastrointestinal, and genitourinary.
2	assigned readings from text to prepare for midterm exam.

C. Critical thinking assignments

Critical thinking assignments are required. Possible assignments may include, but are not limited to:	
1	analyze and critique rejected radiographic images
2	assess and formulate trauma situations

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) Instructor led discussion/seminar, audio-visual,on-line modules

Optional Field Trips

Required Field Trips

VI. METHODS OF EVALUATION

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

- | | | |
|--|--|---|
| <input type="checkbox"/> Essay Exam | <input checked="" type="checkbox"/> Classroom Discussion | <input type="checkbox"/> Skill Demonstration |
| <input checked="" type="checkbox"/> Problem Solving Exam | <input type="checkbox"/> Reports/Papers/Journals | <input checked="" type="checkbox"/> Participation |
| <input checked="" type="checkbox"/> Objective Exams | <input checked="" type="checkbox"/> Projects | <input checked="" type="checkbox"/> Other (specify) |

Review and analysis of radiographic exams for classroom presentation.

VII. REPRESENTATIVE TEXTS AND OTHER COURSE MATERIALS

Bontrager, Kenneth, and John Lampignano. Textbook of Radiographic Positioning and Related Anatomy. 8th ed. Elsevier, 2014.

Bontrager, Kenneth, and John Lampignano. Workbook for Textbook of Radiographic Positioning and Related Anatomy. 8th ed. Mosby, 2014.

McQuillen, Kathy. Radiographic Image Analysis. 3rd ed. Saunders, 2011.

VIII. STUDENT MATERIALS FEES

No Yes

IX. PARALLEL COURSES

College	Course Number	Course Title	Units
Cabrillo College	RT 61	Principles of Radiographic Imaging II	2
Foothill College	R T 51B	Fundamentals of Radiologic Technology II	4
Yuba College	RT 3B	Radiographic Procedure	2.5

X. MINIMUM QUALIFICATIONS

Courses in Disciplines in which Masters Degrees are not expected:
 Any bachelor's degree and two years of professional experience, or any associate degree and six years of professional experience.

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
 Letter grade (P/NP possible at student option)

2. Degree status:

Either 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: 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

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- 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 (non-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:

Radiographic and medical journal reading assignments using the Library's print and online resources.

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

assignment?

YES: NO:

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

XIII. PREREQUISITE AND/OR COREQUISITE JUSTIFICATION

Requisite Justification for RADT M01A

A. Sequential course within a discipline.

1. name the basic body positions used when positioning patients for radiographic examinations.
2. list and describe the terms employed in radiographic positioning using lines, planes, bony landmarks and localization points.
3. recall the methods of basic radiation protection for both patient and personnel, especially time, distance and shielding.
4. discuss the importance of documenting and reporting patient history and symptoms, and incident reporting.
5. list the projections, both routine and special, for each anatomical area.
6. identify on radiographs and drawings the anatomy and positions for each anatomical area.
7. describe and explain each examination assigned utilizing the prescribed position of part, direction of the central ray, anatomical structures and pathology demonstrated.
8. critique each radiographic film for diagnostic quality including part position, anatomy visualized, contrast, density, markers, and film size.
9. compare and contrast special considerations for trauma, pediatric and geriatric patients with the normal adult.
10. discuss the establishment of rapport with the patient considering cultural awareness, clinical situations, communications barriers, and radiation safety concerns.

B. Standard Prerequisite or Corequisite required by universities.

C. Corequisite is linked to companion lecture course.

D. Prerequisite or Corequisite is authorized by legal statute or regulation.
Code Section: _____

E. Prerequisite or Corequisite is necessary to protect the students' health and safety.

- F. Computation or communication skill is needed.
- G. Performance courses: Audition, portfolio, tryouts, etc. needed.

and

Requisite Justification for RADT M01AL

- A. Sequential course within a discipline.
 1. execute medical imaging procedures under the appropriate level of supervision.
 2. assess the patient and record clinical history.
 3. select technical factors to produce quality diagnostic images with the lowest radiation exposure possible.
 4. integrate the use of appropriate and effective written, oral and nonverbal communication with patients, the public and members of the health care team in the clinical setting.
 5. maintain patient confidentiality standards and meet HIPAA (Health Insurance Portability and Accountability Act of 1996) requirements.
 6. provide patient-centered, clinically effective care for all patients regardless of age, gender, disability, special needs, ethnicity or culture.
 7. adapt procedures to meet age-specific, disease-specific and cultural needs of patients.
 8. critique images for appropriate anatomy, image quality, and patient identification with the clinical instructor.
 9. demonstrate clerical duties needed to process the exam.
 10. demonstrate competency in principles of radiation protection standards in accordance with California Radiation Health Code (Title 17).
 11. produce a minimum of four radiographic exam competencies.
- B. Standard Prerequisite or Corequisite required by universities.
- C. Corequisite is linked to companion lecture course.
- D. Prerequisite or Corequisite is authorized by legal statute or regulation.
Code Section: _____
- E. Prerequisite or Corequisite is necessary to protect the students' health and safety.

- F. Computation or communication skill is needed.
- G. Performance courses: Audition, portfolio, tryouts, etc. needed.

and

Requisite Justification for RADT M11

- A. Sequential course within a discipline.
 1. perform simulated lab procedures utilizing a fellow student as the mock patient using non-energized x-ray equipment.
 2. simulate positioning for exams of the upper and lower extremities, vertebral column and bony thorax.
 3. align the mock patient, central ray and image receptor system properly.
 4. show the proper way to apply gonadal shielding to the mock patient whenever possible.
 5. perform all the assigned skills lab procedures utilizing a radiographic phantom and the energized x-ray tube.
 6. align the phantom, central ray, and image receptor properly.
 7. select correct technique on the energized console, make the exposure on the phantom and process the image.
 8. perform a minimum of one (1) dark room rotation during the lab period.
 9. demonstrate radiation protection methods according to the California Radiation Health Code (Title 17).
 10. evaluate and critique the procedure, performance, and the radiographs exposed with the assistance of faculty.
- B. Standard Prerequisite or Corequisite required by universities.
- C. Corequisite is linked to companion lecture course.
- D. Prerequisite or Corequisite is authorized by legal statute or regulation.
Code Section: _____
- E. Prerequisite or Corequisite is necessary to protect the students' health and safety.
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- F. Computation or communication skill is needed.
- G. Performance courses: Audition, portfolio, tryouts, etc. needed.

Requisite Justification for RADT M02AL

- A. Sequential course within a discipline.
- B. Standard Prerequisite or Corequisite required by universities.
- C. Corequisite is linked to companion lecture course.
- D. Prerequisite or Corequisite is authorized by legal statute or regulation.
Code Section: _____
- E. Prerequisite or Corequisite is necessary to protect the students' health and safety.
- F. Computation or communication skill is needed.
- G. Performance courses: Audition, portfolio, tryouts, etc. needed.

and

Requisite Justification for RADT M02B

- A. Sequential course within a discipline.
- B. Standard Prerequisite or Corequisite required by universities.
- C. Corequisite is linked to companion lecture course.
- D. Prerequisite or Corequisite is authorized by legal statute or regulation.
Code Section: _____
- E. Prerequisite or Corequisite is necessary to protect the students' health and safety.
- F. Computation or communication skill is needed.
- G. Performance courses: Audition, portfolio, tryouts, etc. needed.

and

Requisite Justification for RADT M02BL

- A. Sequential course within a discipline.
- B. Standard Prerequisite or Corequisite required by universities.
- C. Corequisite is linked to companion lecture course.
- D. Prerequisite or Corequisite is authorized by legal statute or regulation.
Code Section: _____
- E. Prerequisite or Corequisite is necessary to protect the students' health and safety.
- F. Computation or communication skill is needed.
- G. Performance courses: Audition, portfolio, tryouts, etc. needed.

and

Requisite Justification for RADT M12

- A. Sequential course within a discipline.
- B. Standard Prerequisite or Corequisite required by universities.
- C. Corequisite is linked to companion lecture course.
- D. Prerequisite or Corequisite is authorized by legal statute or regulation.
Code Section: _____
- E. Prerequisite or Corequisite is necessary to protect the students' health and safety.
- F. Computation or communication skill is needed.
- G. Performance courses: Audition, portfolio, tryouts, etc. needed.

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 work in collaboration with other students and bring radiographs from the clinical setting and present case studies to strengthen the skills of each member of the class and help gain clinical proficiency; experience the importance of collaboration and of being a team member in the health care field. Such collaborative efforts reinforce skills of relating to a diverse population.
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; make use of professional health care and radiography journals to keep abreast of the state of the art in medical imaging and to stay current with continuing education requirements.
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 digital and analog imaging equipment.

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 and describe how to prioritize radiographic procedures when there are multiple exams ordered.
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 M02A: Not Applicable

XVI. GENERAL EDUCATION COURSE OUTLINE ADDENDUM

RADT M02A: Not Applicable

XVII. STUDENT MATERIALS FEE ADDENDUM

RADT M02A: Not Applicable

XVIII. REPEATABILITY JUSTIFICATION TITLE 5, SECTION 55041

RADT M02A: Not Applicable

XIX. CURRICULUM APPROVAL

Course Information:

Discipline: RADIOLOGIC TECHNOLOGY (RADT)

Discipline Code and Number: RADT M02A

Course Revision Category: Outline Update

Course Proposed By:

Originating Faculty Robert Darwin 01/28/2014

Faculty Peer: Guadalupe Aldana 01/31/2014

Curriculum Rep: Linda Loiselle 01/29/2014

Department Chair: Carol Higashida 02/03/2014

Division Dean: Kimberly Hoffmans 01/29/2014

Approved By:

Curriculum Chair: Jerry Mansfield 03/01/2014

Executive Vice President: Lori Bennett 03/05/2014

Articulation Officer: Letrisha Mai 02/13/2014

Librarian: Mary LaBarge 02/13/2014

Implementation Term and Year: Fall 2014

Approval Dates:

Approved by Moorpark College Curriculum Committee: 03/04/2014

Approved by Board of Trustees (if applicable): _____

Approved by State (if applicable): _____