



COURSE OUTLINE – Fall 2018

Course Number: RAD102	Course Title: Introduction to Radiography	Credits: 2
Lecture Hours: 1 Lab Hours: 2		Co-Requisites: RAD119, RAD127, BIO103, MAT Elective

Catalog Description (2018-2019):

An introduction to radiography including accreditation requirements, professional organizations, professional ethics, legal responsibilities, and patient care. Fall offering.

Required Texts:

Title: Introduction to Radiologic Sciences and Patient Care. 6th Ed.

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Publisher: W.B. Saunders

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Revision Date: Fall 2018

Course Competencies/Goals:

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

1. Develop an understanding of the intricacies associated with providing direct patient care in today's health care setting.
2. Describe methods to evaluate patient physical status, compare normal and abnormal values.
3. Explain special considerations necessary when performing procedures on patients with oxygen, tubes, catheters, and collection devices.
4. Classify pharmacologic agents utilized in the radiology department and describe the role of the radiographer in the administration of the pharmacologic agents.
5. Appreciate the comprehensiveness of radiologic technology and its contributions to health care from a technological, legal and ethical point of view.
6. Apply principles of patient care, ethics, and communication in accordance with accepted professional standards.

Course-specific General Education Knowledge Goals and MCCC Core Skills

General Education Knowledge Goals

Goal 1. Communication. Students will communicate effectively in both speech and writing.

Goal 2. Mathematics. Students will use appropriate mathematical and statistical concepts and operations to interpret data and to solve problems.

Goal 3. Science. Students will use the scientific method of inquiry, through the acquisition of scientific knowledge.

Goal 4. Technology. Students will use computer systems or other appropriate forms of technology to achieve educational and personal goals.

Goal 5. Social Science. Students will use social science theories and concepts to analyze human behavior and social and political institutions and to act as responsible citizens.

Goal 6. Humanities. Students will analyze works in the fields of art, music, or theater; literature; philosophy and/or religious studies; and/or will gain competence in the use of a foreign language.

Goal 7. History. Students will understand historical events and movements in World, Western, non-Western or American societies and assess their subsequent significance.

Goal 8. Diversity. Students will understand the importance of a global perspective and culturally diverse peoples.

Goal 9. Ethical Reasoning and Action. Students will understand ethical issues and situations.

MCCC Core Skills

Goal A. Written and Oral Communication in English. Students will communicate effectively in speech and/or writing, and demonstrate proficiency in reading.

Goal B. Critical Thinking and Problem-solving. Students will use critical thinking and problem solving skills in analyzing information.

Goal C. Ethical Decision-Making. Students will recognize, analyze and assess ethical issues and situations.

Goal D. Information Literacy. Students will recognize when information is needed and have the knowledge and skills to locate, evaluate, and effectively use information for college level work.

Goal E. Computer Literacy. Students will use computers to access, analyze or present information, solve problems, and communicate with others.

Goal F. Collaboration and Cooperation. Students will develop the interpersonal skills required for effective performance in group situations.

Goal G. Intra-Cultural and Inter-Cultural Responsibility. Students will demonstrate an awareness of the responsibilities of intelligent citizenship in a diverse and pluralistic society, and will demonstrate cultural, global, and environmental awareness.

Student Learning Objectives:

Week 1 - Hospitals and the Health Care Team:

By the end of this week, students will be able to:

1. Identify the responsibilities of the health care facility and members of the health care team. (CG 1,5; GE 1,5,6,8,9; CS A,D,F,G)
2. List the general responsibilities of the radiographer. (CG 1; GE 5,8,9; CS A,F,G)
3. Identify patient services available in the radiography department. (CG 1,5; GE 1,8; CS A,G)
4. Identify various settings involved in the delivery of health care. (CG 1,5; GE 1,7,8; CS A,F,G)
5. Discuss the reimbursement/payment options for health care services. (CG 1,5; GE 1,5,8,9; CSA,B,C,G)
6. Discuss the relationship, responsibilities, and interdependencies between administrative, institutional, and radiology services and personnel. (CG 1,5; GE 1,8; CS A,B,F,G)

Week 2- Education/Professional Development:

By the end of this week, students will be able to:

1. Discuss the general employment outlook and career advancement opportunities for the graduate radiographer. (CG 1,5; GE 1,7,8,9; CS A,B,E,F)
2. Define program and institutional accreditation, credentialing, certification, registration, licensure, and regulations. (CG 1,5; GE 1,7,8,9; CS A,B,E,F)
3. Identify the benefits of continuing education as related to improved patient care and professional enhancement. (CG 1,5; GE 1,5,6,8,9; CS A,D,E,F)

Week 1 -2 (LAB)- Professional Communication and Diversity:

By the end of this week, students will be able to:

1. Discuss professional verbal and nonverbal communication techniques using assistive devices when necessary. (CG 1,2,5,6; GE 1,5,8; CS A,B,F,G)
2. List the stages of death and dying including behavioral, ethical, personal, and physical characteristics. (CG 1,5; GE 1,5,6,8,9; CS A,B,C,F,G)
3. Explain special considerations necessary when performing radiographic procedures on special populations. (CG 1,5,6; GE 1,2,4,5,8; CS A,B,F,G)
4. Explain the role of the radiographer in patient education. (CG 1,5,6; GE 1,5,8,9; CS A,B,C,D,F,G)
5. Discuss how cultural, social, ethnic, and demographic considerations impact communication and health status. (CG 1,5; GE 1,5,6,8,9; CS A,B,C,G)

Week 3- Clinical Competency

By the end of this week, students will be able to:

1. Explain the clinical competency and remediation process. (CG1,6, GE1, CS A)
2. Describe the practice standards for the radiographer as defined by the ASRT and state licensure. (CG 1,5,6; GE 1,8; CS A,F,G)

Week 4- Patient History:

By the end of this week, students will be able to:

1. Describe the rationale and methodology for obtaining an accurate and thorough patient history. (CG 1,2,5,6; GE 1,4,6,7,8,9 ; CS A,D,E,F,G)
2. Differentiate objective from subjective data. (CG 1,2,5,6; GE 1,6,7,8,9 ; CS A,F,G)
3. Explain the proper electronic and manual techniques for documenting patient care. (CG 1,2,5,6; GE1,6,7,8,9 ; CS A,F,G)
4. Identify elements of a thorough pain assessment. (CG 1,2,5,6; GE 1,5,6,7,8,9; CS A,C,G)
5. Discuss safety and privacy issues as they relate to patient identification and documentation. (CG 1,5; GE 1,4; CS A,D,E)

Week 3-4 (LAB)- Safety and Patient Transfer:

By the end of this week, students will be able to:

1. Describe safety measures utilized in health care facilities. (CG 1,5,6; GE 1; CS A,F)
2. Identify how proper body mechanics are relevant to patient care. (CG 1,5,6; GE 1; CS A,F)
3. Explain how to safely transfer patients for radiology examinations. (CG 1,5,6; GE 1; CS A,F)
4. Describe immobilization techniques used to obtain radiographs. (CG 1,3,5,6; GE 1; CS A)
5. Identify five standard patient positions. (CG 1,3,6; GE 3,4 ; CS A,B)
6. Discuss the radiographer's role in environmental safety. (CG 1,5,6; GE 1,3,4; CS A,B,F,G)

Week 5- Patient Assessment:

By the end of this week, students will be able to:

1. Describe assessment skills used to evaluate a patient's condition. (CG 1,2,3,5; GE 1,2,4; CS A)
2. Identify proper terminology used in patient assessment. (CG 1,2,3,5; GE 1,8; CS A,G)

3. Differentiate between normal and abnormal assessment findings. (CG 1,2; GE 1,2,4; CS A)
4. Discuss the radiographer's role in patient assessment. (CG 1,2,3,5; GE 1,2,4; CS A)

Week 5-6 (LAB)- Vital Signs

By the end of this week, students will be able to:

1. Demonstrate the ability to competently obtain temperature, pulse, blood pressure, and respiratory vital signs; evaluate normal and abnormal values. (CG 15, GE 1, A, B, F)

Week 6- Ethical Principles in Health Care:

By the end of this week, students will be able to:

1. Explain the concepts of honesty, integrity, accountability, competence, and compassion as ethical imperatives in health care. (CG 1,5; GE 1,5,7,8,9; CS A,B,C,G)
2. Explore how religious, societal, and institutional values impact individuals and patient care. (CG 1,5; GE 1,5,7,8,9; CS A,B,C,G)
3. Discuss the radiographer's responsibility to demonstrate ethical behavior. (CG 1,5; GE 1,5,7,8,9; CS A,B,C,G)
4. Discuss how to identify and resolve ethical dilemmas in order to deliver safe, timely, and appropriate patient care. (CG 1,5; GE 1,5,7,8,9; CS A,B,C,G)
5. Identify the legal consequences of unethical behavior. (CG 1,5; GE 1,5,8,9; CS A,B,C,G)

Week 7- Legal Responsibilities:

By the end of this week, students will be able to:

1. Identify legal and professional standards in health care. (CG 1,5; GE 1,5,6,7,8,9; CS A,B,C,F,G)
2. Define legal terms used in medical litigation. (CG 1,5; GE 1,5,7,8,9; CS A,B,C,G)
3. Discuss the radiographer's role as they pertain to the patients' Bill of Rights, informed consent, documentation, and privacy. (CG 1,5; GE 1,5,7,8,9; CS A,B,C,G)
4. Explain the legal considerations and procedures for reporting an accident or incident. (CG 1,5; GE 1,5,7,8,9; CS A,B,C,G)

Week 9-Infection Control:

By the end of this week, students will be able to:

1. Define terms related to infection control. (CG 1,5; GE 1,3; CS A,B)
2. Discuss strategies utilized to prevent the spread of infections. (CG 1,5; GE 1,3; CS A)
3. Identify infectious agents and their unique characteristics. (CG 1,2; GE 3,4,7,8; CS A,B)
4. Describe the proper method for hand hygiene. (CG 1,2; GE 3,4,7,8; CS A,B)
5. Recognize the importance of preventing nosocomial infections. (CG 1,2; GE 3,4,7,8; CS A,B)

Week 9-10 (LAB) - Aseptic Techniques:

By the end of this week, students will be able to:

1. Differentiate medical vs surgical asepsis. (CG 1,2,5,6 ; GE 1,3,4; CS, A,C)
2. List the chemical and physical methods of asepsis. (CG 1,5,6 ; GE 1,3,4; CS A)

3. Describe personal and environmental aspects of sterile technique. (CG 1,5,6; GE 1,3,4; CS A,C)
4. Describe how to care for patient with invasive tubes and devices. (CG 1,2,3; GE 1,3,4; CS A,B)
5. Identify the radiographer's role during procedures with a C arm. (CG 1,2,5; GE 1,3,4; CS A)

Week 11- Non-Aseptic Techniques:

By the end of this week, students will be able to:

1. Describe the proper use of suction equipment. (CG 1,2,3,5; GE 1,2,4; CS A)
2. Identify precautions while caring for patients with a tube, drain, or catheter. (CG 1,2,3,5; GE 1,4,9; CS A,B,G)
3. Discuss the radiographer's role in toileting patients. (CG 1,2,3,5; GE 1,4,9; CS A,B,G)
4. Describe the procedure for performing contrast studies via the stomach, rectum, and colostomy. (CG 1,2,3,5; GE 1,4,9; CS A,B,G)
5. Discuss the importance of proper patient teaching prior to a study of the GI tract. (CG 1,2,3,5; GE 1,4,9; CS A,B,G)

Week 10- Medical Emergencies:

By the end of this week, students will be able to:

1. Describe the radiographer's role during a medical emergency. (CG 1,5; GE 1,3; CS A)
2. Learn how to identify and respond to common medical emergencies in the radiology department. (CG 1,2,5; GE 1,3; CS A)
3. Describe necessary precautions and assessment skills when caring for a patient with a traumatic injury. (CG 1,2,5; GE 1,3; CS A,B,F)

Week 11- Pharmacology:

By the end of this week, students will be able to:

1. Discuss the radiographer's role in administering medications and monitoring patients during invasive procedures. (CG 1,4,5; GE 1,5,8,9; CS A,B,C)
2. Describe pharmacological properties of drugs commonly used in the radiology department. (CG 4; GE 3)
3. Identify drugs according to classification, including trade vs generics. (CG 4; GE 3)
4. Identify and describe common reactions from medications used in radiography. (CG 4)
5. List the 'rights of medication administration.' (CG 1,4,5; GE 1,5; CS A,B,C,G)

Week 12- Contrast Studies and Invasive Procedures:

By the end of this week, students will be able to:

1. Explain the rationale and procedure for informed consent during an invasive procedure. (CG 1,5; GE 1,5,7,8,9; CS A,B,C,G)
2. Describe the radiographer's role in caring for patients undergoing invasive procedures. (CG 1,4,5; GE 1,5,8,9; CS A,B,C)
3. Discuss the importance of patient education and communication when caring for a patient undergoing invasive procedures. (CG 1,4,5; GE 1,2,8; CS A,B,D)
4. Identify different categories of contrast agents. (CG 4; GE 3)

Week 13- Mobile and Surgical Radiography:

By the end of this week, students will be able to:

1. Describe how to safely and legally perform a mobile radiographic examination. (CG 1,2,3,5; GE 1,8; CS A,G)
2. List special considerations when performing mobile procedures on special populations. (CG 1,5,6; GE 1,5,8; CS A,D,F,G)
3. Identify appropriate professional behavior when performing radiographic procedures on a patient in the Operating Room. (CG 1,5,6; GE 1,5,8; CS A,D,F,G)
4. Explain the appropriate radiation protection required when performing mobile/surgical radiography. (CG 1,2,5,6; GE 1,4,8; CS A,G)

Week 12-13 (Lab)- Venipuncture

1. Demonstrate the ability to competently perform venipuncture under simulated conditions. (CG 15, GE 1, A, B, F)

Evaluation of Student Learning:

The student must receive a grade of “C” (75%) or higher in the course in order to advance to RAD 128 Radiographic Procedures II and co-requisite courses. The following grading policy will be employed:

Ethical Dilemma Presentation (CG 1 and 6)	20%
Lab	10%
Midterm Exam (Testing Center) (CG 1, 2, 3, 5, 6)	30%
Final Exam (Classroom) (CG 1, 2, 3, 4, 5, 6)	40%

Grading Scale	Minimum Percent
A	93 – 100
A-	90 - 92
B+	87 – 89
B	83 – 86
B-	80 – 82
C+	77 – 79
C	75 – 76
D	60 – 74
F	0 - 59

Attendance Policy:

1. Students are expected to be in attendance at the scheduled start time of all class and laboratory sessions; late arrival is disruptive to the class and instructor. Attendance will be taken for all lectures. The following grading system will be recorded for late arrival and absences:

A. Lecture:

1. Three points will be deducted from the final lecture grade for each late arrival to a scheduled lecture.
 2. Five points will be deducted from the final lecture grade for each absence from a scheduled lecture.
2. Make-up examinations are not permitted. Students who miss an examination must provide a valid, documented excuse the next class session. Valid excuses include emergent situations that arose unexpectedly and could not be mitigated at the time of the exam. Examples include but are not limited to death in family, illness, vehicular repair with supporting documentation from the respective agency. Planned vacations, events, advanced request for time away are not considered valid excuses. If determined valid by the instructor, the final exam weight will be calculated with the additional missed exam weight. This will serve as verification of material comprehension covered on the missed examination. A grade of zero will be recorded for invalid excuses and the final exam will be calculated as listed in the course outline.
 3. Students who miss the final examination must contact the instructor by email or phone by the start of the examination administration. A valid, documented excuse must be submitted within two days of the final exam administration date. Valid excuses include emergent situations that arose unexpectedly and could not be mitigated at the time of the final exam. Examples include but are not limited to death in family, illness, vehicular repair with supporting documentation from the respective agency. Planned vacations, events, advanced request for time away are not considered valid excuses.

If determined valid, the make-up final exam date will be determined by the course instructor in consultation with the student. The final exam must be taken prior to the start of the spring term to be eligible for the spring term radiography courses.

4. Cell phones and other electronic devices must be OFF or in vibration mode upon entering the classroom. Students may not receive a call in vibration mode, send or receive a text message during lecture without permission from the instructor. Permission will be granted for lecture only on an individual basis for emergency purposes. Cell phones and all electronic devices must be OFF during examinations and placed at the front of the classroom with personal belongings. Items may be retrieved at the conclusion of the examination.

Academic Integrity:

Mercer County Community College is committed to Academic Integrity -- the honest, fair and continuing pursuit of knowledge, free from fraud or deception. This implies that students are expected to be responsible for their own work.

Academic Integrity is violated whenever a student:

- A. Uses or obtains unauthorized assistance in any academic work.
- B. Gives fraudulent assistance to another student.
- C. Knowingly represents the work of others as his/her own, or represents previously completed academic work as current.
- D. Fabricates data in support of an academic assignment.
- E. Inappropriately or unethically uses technological means to gain academic advantage.

For any academic integrity violation, the faculty member will determine the penalty and shall notify the chairperson of the Academic Integrity Committee of the violation and the penalty imposed. Students should refer to the MCCC Student Calendar/Handbook for the complete policy and OMB210 (http://www.mccc.edu/academic_policies_integrity.shtml).

Accessibility:

Mercer County Community College is committed to ensuring the full participation of all students in its programs. If you have a documented differing ability or think that you may have a differing ability that is protected under the ADA or Section 504 of the Rehabilitation Act, please contact Arlene Stinson in LB216 (stinsona@mccc.edu) for information regarding support services

Ethical Dilemma Presentation: (20% of final grade)

- 1) Present a Power Point Presentation and give an example of an ethical dilemma scenario for a radiographer. Explain why the situation presents a dilemma. What ethical behavior skill should be demonstrated? Describe your strengths and weaknesses associated with outcome. Describe a possible unfavorable outcome. Describe how the situation should be handled to promote a positive outcome. This presentation should be between 7-10 minutes in length and accompanied by a reflection paper 3-4 pages in length, double spaced in Times New Roman, font 12, with references. Include a title and reference slide with proper formatting. Use the following rubric to guide your presentation.

OR

- 2) Present a role playing scenario (2-3 individuals) that gives an example of an ethical dilemma scenario for a radiographer. Explain why the situation presents a dilemma. What ethical behavior skill should be demonstrated? Describe your strengths and weaknesses associated with outcome. Describe a possible unfavorable outcome. Describe how the situation should be handled to promote a positive outcome. This role playing scenario should be 10-15 minutes in length and accompanied by a reflection paper 3-4 pages in length, double spaced in Times New Roman, font 12, with references. Use the following rubric to guide your role playing scenario.

Grading Rubric: (100 points possible)

Performance Element	Exceeds Standards (100)	Meets Standards (80-99)	Meets Standards Minimally (75-80)	Unsatisfactory (0-74)	Score
Nonverbal Skills					
Eye Contact	Holds attention of entire audience with the use of direct eye contact, seldom looking at notes.	Consistent use of direct eye contact with audience, but still returns to notes.	Displays minimal eye contact with audience, while reading mostly from the notes.	No eye contact with the audience, as entire report is read from notes.	/10
Body Language	Movements seem fluid and help the audience visualize.	Makes movements or gestures that enhance articulation.	Very little movement or descriptive gestures.	No movement or descriptive gestures.	/10
Poise	Student displays relaxed, self-confident nature about self, with no mistakes.	Makes minor mistakes, but quickly recovers from them; displays little or no tension.	Displays mild tension; has trouble recovering from mistakes.	Tension and nervousness is obvious; has trouble recovering from mistakes.	/10
Verbal Skills					
Enthusiasm	Demonstrates a strong positive feeling about the topic.	Occasionally shows positive feelings about topic.	Shows some negativity toward topic presented.	Shows absolutely no interest in topic presented.	/10
Elocution	Student uses a clear voice and correct, precise pronunciation of terms so that all audience members can hear presentation.	Student's voice is clear. Student pronounces most words correctly. Most audience members can hear presentation.	Student's voice is low. Student incorrectly pronounces terms. Audience members have difficulty hearing presentation.	Student mumbles, incorrectly pronounces terms, and speaks too quietly for majority of audience members to hear.	/10
Content					
Subject Knowledge	Student demonstrates full knowledge by providing explanations, elaboration, and visual aids.	Student demonstrates knowledge and provides explanations without elaboration and/or visual aids.	Student is uncomfortable with information and is able to answer only rudimentary questions.	Student does not have a grasp on information; student cannot answer questions about the subject.	/10

Organization	Student presents information in logical, interesting sequence which audience can follow.	Student presents information in a logical sequence which the audience can follow.	Audience has difficulty following presentation because student jumps around.	Audience cannot understand presentation because there is no sequence of information.	/10
Mechanics	Presentation has no misspellings or grammatical errors.	Presentation has a few misspellings and/or grammatical errors.	Presentation has many misspellings and/or grammatical errors.	The majority of the presentation has spelling and/or grammatical errors.	/10
Completeness	Addresses all elements contained within the stated objective(s) of assignment and extends beyond.	Addresses all elements contained within the stated objective(s) of assignment.	Fails to address all the elements contained within the stated objective(s) of assignment.	Addresses none of the elements stated in the objectives of the assignment	/10
Reflection	Shows strong evidence of reasoned reflection and depth.	Shows evidence of reasoned reflection.	Lacks reflection and depth.	Shows no evidence of reflection	/10
Final Score					/100

Name: _____ Date: _____

Radiography Program RAD 102 Tentative Schedule

Week 1 9/10/2018	Hospitals and the Health Care Team Chapters: 1 & 6	Professional Communication/Diversity Chapters: 10 & 11
Week 2 9/17/2018	Education/Professional Development Chapters: 2 & 3	Professional Communication/Diversity Lab Simulations
Week 3 9/24/2018	Clinical Competency Chapters: 4 & 5	Safety and Patient Transfer Chapter: 13 & 14
Week 4 10/1/2018	Patient History Chapter: 12 & 25	Safety and Patient Transfer Assessment
Week 5 10/8/2018	Patient Assessment Chapters: 15 & 16	Vital signs Chapter: 15
Week 6 10/15/2018	Ethics Chapters: 24	Vital Signs Assessment
Week 7 10/22/2018	Legal Responsibilities ** Ethical Dilemma Paper Due** Chapter: 26	Ethical Dilemma Presentations
Week 8 10/29/2018	Midterm	Ethical Dilemma Presentations
Week 9 11/5/2018	Infection Control Chapter: 17	Aseptic Techniques Chapter: 18
Week 10 11/12/2018	Medical Emergencies Chapter: 20	Aseptic Techniques Lab Simulations
Week 11 11/19/2018	Pharmacology Chapter: 21 & 22	Non-Aseptic Techniques Chapter: 19
Week 12 11/26/2018	Contrast Studies Chapter: 23	Venipuncture Chapter: 15
Week 13 12/3/2018	Mobile and Surgical Radiography	Venipuncture Assessment
Week 14 12/10/2018	Review for Final Exam	
12/17/2018	Final Exam 9AM-11AM	

