Washtenaw Community College Comprehensive Report

RAD 271 Mammography Quality Control (QC)
Effective Term: Fall 2018

Course Cover

Division: Health Sciences
Department: Allied Health
Discipline: Radiography
Course Number: 271
Org Number: 15600
Full Course Title: Mammography Quality Control (QC)
Transcript Title: Mammography Quality Control QC
Is Consultation with other department(s) required: No
Publish in the Following: College Catalog , Time Schedule , Web Page
Reason for Submission: Course Change
Change Information:
Course description
Outcomes/Assessment
Objectives/Evaluation
Rationale: RAD 271 is being revised as a blended course. The course description needs to be revised because we are no long required to teach the concepts of analog imaging. The course objectives also need to be updated.
Proposed Start Semester: Fall 2018
Course Description: This is the second course in the mammography program for certified radiologic technologists. Topics include the Mammography Quality Standards Act (MQSA), mammography equipment, quality assurance/quality control of digital mammography imaging systems, advanced breast imaging modalities, and breast cancer treatment options.

Course Credit Hours

Variable hours: No
Credits: 3
Lecture Hours: Instructor: 45 **Student:** 45
Lab: Instructor: 0 **Student:** 0
Clinical: Instructor: 0 **Student:** 0

Total Contact Hours: Instructor: 45 **Student:** 45
Repeatable for Credit: NO
Grading Methods: Letter Grades
Audit
Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

College-level Reading & Writing

College-Level Math

Requisites

Enrollment Restrictions
Admission to the Mammography program

and
Prerequisite
RAD 270 minimum grade "C"; may enroll concurrently
and
Corequisite
RAD 273

General Education

Request Course Transfer
Proposed For:

Student Learning Outcomes

1. Correlate the design features and operation of dedicated mammography equipment.
   Assessment 1
   Assessment Tool: Embedded questions on the final examination
   Assessment Date: Winter 2020
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All sections
   Number students to be assessed: All students (maximum admission to the Mammography Program is 12 students)
   How the assessment will be scored: Answer key
   Standard of success to be used for this assessment: 80% of the students will score 75% or higher on the outcome-related questions
   Who will score and analyze the data: Faculty

2. Compare and contrast current advanced breast imaging modalities.
   Assessment 1
   Assessment Tool: Embedded questions on the final examination
   Assessment Date: Winter 2020
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All sections
   Number students to be assessed: All students (maximum admission to the Mammography Program is 12 students)
   How the assessment will be scored: Answer key
   Standard of success to be used for this assessment: 80% of the students will score 75% or higher on the outcome-related questions
   Who will score and analyze the data: Faculty

3. Evaulate quality control/quality assurance measurements in mammography.
   Assessment 1
   Assessment Tool: Embedded multiple-choice questions on the final examination.
   Assessment Date: Winter 2020
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All sections/All students.
   Number students to be assessed: All students (maximum admission to the Mammography Program is 12 students)
   How the assessment will be scored: Answer key
   Standard of success to be used for this assessment: 80% of the students will score 75% or higher on the outcome-related questions
   Who will score and analyze the data: Faculty

4. Compare and contrast current breast cancer treatment options.

Assessment 1

Assessment Tool: Embedded questions on the final examination
Assessment Date: Winter 2020
Assessment Cycle: Every Three Years
Course section(s)/other population: All sections
Number students to be assessed: All students (maximum admission to the Mammography Program is 12 students)
How the assessment will be scored: Answer key
Standard of success to be used for this assessment: 80% of the students will score 75% or higher on the outcome-related questions
Who will score and analyze the data: Faculty

Course Objectives

1. Discuss the significance of quality control in mammography.
2. Identify the components of a dedicated mammography unit and state their function.
3. State the x-ray tube filtration requirements for a dedicated mammography unit.
4. List and explain the quality control test requirements for a dedicated mammography unit.
5. List and explain the image artifacts that result from improperly maintained mammography equipment.
6. List the mandated mammography quality control (QC) test performed by technologist.
7. List the mandated mammography quality control (QC) test performed by medical physicist.
8. Identify the maximum permissible dose per mammography exam based on MQSA (Mammography Quality Standards Act).
9. Identify types, causes, and correction techniques of common mammography artifacts.
10. Discuss reconstruction, reformatting, and advanced post-processing techniques of digital mammographic images.
11. Discuss MQSA (Mammography Quality Standards Act) and its effect on mammographic image quality and dose.
12. Identify the personnel and reporting requirements listed in MQSA (Mammography Quality Standards Act).
13. State the MQSA (Mammography Quality Standards Act) training requirements for radiologists, technologists, and physicists.
14. Differentiate between accreditation and certification under MQSA (Mammography Quality Standard Act).
15. Identify quality control (QC) testing requirements for digital mammography.
16. List the surgical treatment options for breast cancer.
17. Recognize the advantages and disadvantages of surgical breast cancer treatment options.
18. List the nonsurgical treatment options for breast cancer.
19. Identify the clinical indications and contraindications for radiation therapy in the treatment of breast cancer.
20. List the pros and cons of hormonal therapy after breast cancer.
21. Discuss the clinical indications, contraindications and complications of breast implant reconstruction after breast cancer surgery.
22. Recognize the acute and late side effects of the various breast cancer treatments.
23. Identify the recommended treatment options for different stages of breast cancer.
24. Categorize the factors that are used to determine the breast cancer treatment plan for a patient.

New Resources for Course

No new resources are required for this course.

Course Textbooks/Resources

Textbooks

Andolina, Valerie, Lille, Shelly. *Mammographic Imaging: A Practical Guide*, 3rd ed. Lippincott Williams & Wilkins, 2007, ISBN: 1605470317.

Manuals
Periodicals
Software

Equipment/Facilities

Level III classroom
Testing Center
Other: OE 121 Radiography Laboratory

Reviewer	Action	Date
Faculty Preparer:		
Connie Foster	*Faculty Preparer*	*Oct 24, 2017*
Department Chair/Area Director:		
Connie Foster	*Recommend Approval*	*Oct 24, 2017*
Dean:		
Valerie Greaves	*Recommend Approval*	*Nov 02, 2017*
Curriculum Committee Chair:		
David Wooten	*Recommend Approval*	*Feb 26, 2018*
Assessment Committee Chair:		
Michelle Garey	*Recommend Approval*	*Feb 27, 2018*
Vice President for Instruction:		
Kimberly Hurns	*Approve*	*Feb 28, 2018*