

HAGERSTOWN COMMUNITY COLLEGE
MASTER SYLLABUS

RAD-201 MEDICAL IMAGING I
Fall 2017

COURSE DESCRIPTION:

This course is designed to provide the student with knowledge of the physical principles of digital radiography imaging systems and associated technologies. This course will provide the student opportunities to participate in critical thinking classroom exercises that emphasize radiographic quality and film critique. Total of 45 hours of lecture.
Prerequisite: RAD 200. Three hours of lecture each week.
Semester offered: Fall of sophomore year.

PRIMARY TEXTBOOKS:

Carter, Christi and Veale, Beth; Digital Radiography and PACS; 2nd edition; Elsevier;
ISBN 978-0-323-08644-8

STUDENT LEARNING OUTCOMES:

1. Describe concepts and theories of digital imaging.
2. Relate digital equipment components to the image process.
3. Adapt technical variables to changing conditions such as age, patient size, pathology, and equipment capabilities.
4. Determine the corrective action needed to successfully repeat an inadequate image.

TOTAL HOURS OF COURSEWORK

To earn one academic credit at HCC, students are required to complete a minimum of 37.5 clock hours (45 fifty-minute “academic” hours) of completed coursework per semester. Those hours of coursework may be completed through a combination of hours within the classroom and hours outside the classroom. Certain courses may require more than the 37.5 minimum hours of coursework per credit.

Face-to-Face Class

Assignments/Assessments

Reading/studying for lecture exams	4 exams X 15 hours per exam=60
Reading/studying for quizzes	4 quizzes X 6 hours per quiz=24
One final assessment (comprehensive final)	1 exam X 15 hours=15
Homework and reading	10 hours reading, taking notes, etc.
Discussion questions	15 weeks x 1 question per week = 15 hours
Total out of class time	109 hours

COURSE CONTENT OBJECTIVES

At the completion of this course, the student

1. Describes the components and operation of a conventional radiographic imaging system and a digital imaging system.
2. Given various radiographic situations, equipment and pathologies, selects the correct technique formulas and calculates the solution to the problem.
3. Describes the components and operation of a picture archiving communication system.
4. Describes the components of a quality assurance program specialized imaging system.
5. Critiques radiographic images using an effective film critique method.

SERVICES FOR STUDENTS WITH DISABILITIES: Students may receive reasonable accommodations if they have a diagnosed disability and present appropriate documentation. Students seeking accommodations are required to contact the Disability Support Services (DSS) office as early as possible. Students may contact a DSS staff member for an appointment at dss@hagerstowncc.edu or at 240-500-2530.