

Washtenaw Community College Comprehensive Report

RAD 262 Principles of Computed Tomography (CT) Effective Term: Fall 2012

Course Cover

Division: Health Sciences

Department: Allied Health

Discipline: Radiography

Course Number: 262

Org Number: 15600

Full Course Title: Principles of Computed Tomography (CT)

Transcript Title: Principles of CT

Is Consultation with other department(s) required: No

Publish in the Following: College Catalog , Time Schedule , Web Page

Reason for Submission: New Course

Change Information:

Rationale: This is a required course for the computed tomography certificate.

Proposed Start Semester: Fall 2012

Course Description: This is a course for certified technologists, ARRT (R), ARRT (N), ARRT (T), and (CNMT), who are admitted to the computed tomography (CT) program. The history of computed tomography, equipment design and function, and the basic fundamentals of CT scanning will be presented.

Course Credit Hours

Variable hours: No

Credits: 2

Lecture Hours: Instructor: 30 **Student:** 30

Lab: Instructor: 0 **Student:** 0

Clinical: Instructor: 0 **Student:** 0

Total Contact Hours: Instructor: 30 **Student:** 30

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 Computed Tomography (CT) program

General Education

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Recognize the historical events that lead to the development of computed tomography (CT).

Assessment 1

Assessment Tool: Embedded questions on the multiple choice final exam

Assessment Date: Fall 2015

Assessment Cycle: Every Three Years

Course section(s)/other population: All sections

Number students to be assessed: All students (maximum admission to Computed Tomography (CT) program is 12 students)

How the assessment will be scored: Blind-scored with an answer key.

Standard of success to be used for this assessment: 90% of the students will score 75% or higher on the outcome related questions.

Who will score and analyze the data: Faculty

2. Correlate the design and operation of a computed tomography (CT) system.

Assessment 1

Assessment Tool: Embedded questions on the multiple choice final exam

Assessment Date: Fall 2015

Assessment Cycle: Every Three Years

Course section(s)/other population: All sections

Number students to be assessed: All students (maximum admission to Computed Tomography (CT) program is 12 students)

How the assessment will be scored: Blind-scored with an answer key.

Standard of success to be used for this assessment: 90% of the students will score 75% or higher on the outcome related questions.

Who will score and analyze the data: Faculty

3. Apply the basic fundamentals of computed tomography (CT) scanning.

Assessment 1

Assessment Tool: Embedded questions on the multiple choice final exam

Assessment Date: Fall 2015

Assessment Cycle: Every Three Years

Course section(s)/other population: All sections

Number students to be assessed: All students (maximum admission to Computed Tomography (CT) program is 12 students)

How the assessment will be scored: Blind-scored with an answer key.

Standard of success to be used for this assessment: 90% of the students will score 75% or higher on the outcome related questions.

Who will score and analyze the data: Faculty

Course Objectives

1. Identify the events that lead to the evolution of computed tomography (CT).
2. Identify the pioneers in computed tomography (CT) and state their contributions.
3. List and describe the various generations of computed tomography (CT) imaging systems.
4. Identify the components of a computed tomography (CT) system and explain their function.
5. Discuss quality control and quality assurance measurements in computed tomography (CT).
6. Compare and contrast vendor specific terminology regarding computed tomography (CT) equipment.
7. Develop strategies for the development and implementation of a computed tomography (CT) scan protocol management system.
8. List and explain radiation dose management techniques for computed tomography (CT).

9. Identify cross-sectional anatomy of the head, neck, spine, thorax, abdomen, pelvis, and upper and lower extremities in the coronal, sagittal, and transverse planes.

New Resources for Course

There are no new resources required for this course.

Course Textbooks/Resources

Textbooks

Kelley, Lorrie & Petersen, Connie. *Sectional Anatomy for Imaging Professionals*, 2nd ed.

Elsevier/Mosby, 2007, ISBN: 0-323-02003-8.

Romans, Lois. *Computed Tomography for Technologists A Comprehensive Text*, 1st ed. Wolters

Kluwer Health/Lippincott Williams & Wilkins, 2011, ISBN: 0781777518.

Manuals

Periodicals

Software

Equipment/Facilities

Level III classroom

Testing Center

Other: OE 121 Radiography Laboratory

<u>Reviewer</u>	<u>Action</u>	<u>Date</u>
Faculty Preparer: <i>Connie Foster</i>	<i>Faculty Preparer</i>	<i>Jan 26, 2012</i>
Department Chair/Area Director: <i>Connie Foster</i>	<i>Recommend Approval</i>	<i>Jan 26, 2012</i>
Dean: <i>Martha Showalter</i>	<i>Recommend Approval</i>	<i>Feb 14, 2012</i>
Curriculum Committee Chair: <i>Kelley Gottschang</i>	<i>Recommend Approval</i>	<i>Mar 20, 2012</i>
Assessment Committee Chair: <i>Rosemary Rader</i>	<i>Recommend Approval</i>	<i>Mar 20, 2012</i>
Vice President for Instruction: <i>Stuart Blacklaw</i>	<i>Approve</i>	<i>Mar 26, 2012</i>