



BROWARD COMMUNITY COLLEGE COURSE OUTLINE

LAST REVIEW: 2008-2009

NEXT REVIEW: 2013-2014

STATUS: A

(i.e. 2003-2004)

(i.e. 2008-2009)

(A, I, D)

COURSE TITLE: Introduction to Radiation Therapy Clinical

COMMON COURSE NUMBER: RAT1021C

CREDIT HOURS: 2

CONTACT HOUR BREAKDOWN 3

(per 16 week term)

CLOCK HOURS:

(Voc. Course ONLY)

Lecture: 16

Lab: 32

Clinic:

Other:

PREREQUISITE(S): RAT1001, RAT1614

COREQUISITE(S): RAT1111, RAT1111L

COURSE DESCRIPTION *(750 character maximum)*: **A course designed to provide knowledge and hands-on instruction in the application of radiation therapy procedures with a detailed study of instrumentation prior to actual patient contact.**

General Education Requirements – Associate of Arts Degree (AA), meets Area(s):

Area

General Education Requirements – Associate in Science Degree (AS), meets Area(s):

Area

General Education Requirements – Associate in Applied Science Degree (AAS), meets Area(s):

Area

UNIT TITLES

1. Linear Accelerator
2. Simulator
3. Individualized block fabrication
4. Patient positioners, immobilizers, and accessory equipment
5. Patient communication

ASSESSMENT:

Please provide a brief description *(250 characters maximum)* that details how students will be assessed on the course outcomes.

Assignments, comprehensive/cumulative unit exams, comprehensive/cumulative final exams, competency evaluations in the simulation room, linear accelerator rooms, mold making, and comprehensive final treatment competencies exam



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Common Course Number: RAT1021C

UNITS

Unit 1 Linear Accelerator

General Outcome:

- 1.0 The student shall become familiar with the operation of a linear accelerator under direct supervision

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 1.1 Properly handle the pendant.
- 1.2 Move the PSA (table) in all available motions.
- 1.3 Explain the movements and components of gantry.
- 1.4 Describe and practice proper care of the components of the gantry stand.
- 1.5 Set the machine console properly for treatment.



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UNITS

Unit 2 Simulator

General Outcome:

- 2.0 The student shall: become familiar with the operation of a simulator under direct supervision

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 2.1 Analyze and apply principles of radiation protection standards.
- 2.2 Detect equipment malfunctions and select appropriate action.
- 2.3 Evaluate and differentiate the contrast materials utilized for simulation.
- 2.4 Perform simulation procedures on a radiation therapy phantom.



Common Course Number: RAT1021C

UNITS

Unit 3 Individualized block fabrication

General Outcome:

- 3.0 The student shall: become familiar with the operation of a block cutter under supervision**

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 3.1 Prepare the shielding alloy.**
- 3.2 Accurately cut the Styrofoam utilized in the molding of alloy shields.**
- 3.3 Demonstrate proper techniques for operation of the Styrofoamer.**
- 3.4 Construct the actual alloy shield.**



Common Course Number: RAT1021C

UNITS

Unit 4 Patient positioning aids,, immobilizer, and accessory equipment

General Outcome:

- 4.0 The student shall: be able to evaluate various types of patient positioning and immobilization devices. The student should be familiar with multiple radiation therapy accessories.**

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 4.1 Identify and construct radiation therapy immobilization devices.**
- 4.2 Utilize different patient positioning devices.**
- 4.3 Be familiar with multiple accessories used in the set-up of a radiation therapy patient (calipers, restraints, etc.)**



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UNITS

Unit 5 Patient communication

General Outcome:

5.0 The student shall: be able to develop communication skills necessary to the radiation therapy profession.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 5.1 Develop the proper conversation techniques necessary to reassure individual types of patients.**
- 5.2 Communicate with co-workers to bring about efficiency in patient set-up and treatment.**
- 5.3 Converse professionally with all persons encountered in a radiation oncology department.**