



# 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:** Quality Assurance and Pharmacology

**COMMON COURSE NUMBER:** RAT2657

**CREDIT HOURS:** 3

**CONTACT HOUR BREAKDOWN**

*(per 16 week term)*

**CLOCK HOURS:**

*(Voc. Course ONLY)*

Lecture: 48

Lab:

Clinic:

Other:

**PREREQUISITE(S):** RAT2021,

**PRE/COREQUISITE(S):** RAT2022

**COURSE DESCRIPTION :** Presents an in-depth study of the principles and concepts of quality assurance and pharmacology to include the history, theory, biological effects and their relationship to Radiation Oncology. □

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. The necessity for quality assurance.
2. Quality assurance in the radiation therapy.
3. Treatment room quality assurance
4. Quality control task
5. Pharmacology

## 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**



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Common Course Number: RAT2657

## UNITS

### Unit 1 The necessity for quality assurance

#### General Outcome:

1.0 The student shall: be able to describe the need for quality assurance programs.

#### Specific Measurable Learning Outcomes:

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

- 1.1 Discuss the outside agencies that suggest and/or regulate quality assurance participation.
- 1.2 Discuss the organizational structure of the quality assurance program within the clinical setting including but not limited to:
  - A. Operations executive committee
  - B. Hospital Q/A committee
  - C. Hospital infection control department
  - D. Medical staff committee
  - E. Risk Management



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**UNITS**

**Unit 2 Quality assurance in the radiation therapy department**

**General Outcome:**

- 2.0 The student shall: be able to discuss the structure of quality assurance within the radiation therapy department.**

**Specific Measurable Learning Outcomes:**

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

- 2.1 Discuss the methods of departmental appraisal.**
- 2.2 Describe the responsibility of each member of the radiation therapy department relating to quality assurance.**
- 2.3 Define the difference between quality assurance and quality control.**



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**UNITS**

**Unit 3 Treatment room quality assurance**

**General Outcome:**

- 3.0 The student shall: be able to discuss the care of ancillary equipment in the treatment room.**

**Specific Measurable Learning Outcomes:**

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

- 3.1 Discuss the daily check list needed to insure that the ancillary equipment is in good condition and safe working order.**



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## **UNITS**

### **Unit 4 Quality control tasks**

#### **General Outcome:**

- 4.0 The student shall: be able to describe the various tasks and the acceptable limits regarding their use in treating patients.**

#### **Specific Measurable Learning Outcomes:**

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

- 4.1 List the acceptable parameters for the following:**
- A. Treatment Charts**
  - B. Treatment Accessories**
  - C. Mechanical and electrical safety devices.**
  - D. The accuracy of beam output of therapy units.**
  - E. The accuracy of beam output of the simulator**
  - F. Film processor performance**
  - G. Image quality constancy.**
  - H. Brachytherapy**
  - I. Personnel monitoring**
- 4.2 Discuss the need to perform the quality control tasks listed in**
- 4.3 Study methods of carrying out quality control tasks**
- 4.4 Study the equipment needed to perform QC tasks.**



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## **UNITS**

### **Unit 5 Pharmacology**

#### **General Outcome:**

- 5.0 The student shall: be able to discuss drug therapy and its relationship to patient care.**

#### **Specific Measurable Learning Outcomes:**

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

- 5.1 Discuss the principles of pharmacology.**
- 5.2 Explain the body process relating to drug intake.**
- 5.3 Discuss the importance of drugs as they relate to radiation therapy.**
- 5.4 Discuss the different contrast materials used for medical imaging.**
- 5.5 Define the steps necessary for drug administration.**
- 5.6 Explain the legal aspects of drug therapy.**