



BROWARD COMMUNITY COLLEGE COURSE OUTLINE

LAST REVIEW: 2008-2009 **NEXT REVIEW:** 2013-2014 **STATUS:** A

COURSE TITLE: Nuclear Medicine Lab II

COMMON COURSE NUMBER: NMT 2706L

CREDIT HOURS: 1

CONTACT HOUR BREAKDOWN

(per 16 week term)

CLOCK HOURS:

(Voc. Course ONLY)

Lecture:

Lab:32

Clinic:2

Other:

PREREQUISITE(S): NMT 2130, NMT 2485, NMT 2705L

COREQUISITE(S):

PRE/COREQUISITE(S): NMT 2102, NMT 2844, NMT 2573

COURSE DESCRIPTION *(750 character smaximum)*: Practical hands on approach to Quality Control/Assurance. Student will utilize the instrumentation involved in delivering nuclear medicine services to the patient.

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. Communicating with the Patient
2. Proper Body Mechanics
3. Review of Universal Precautions
4. Gastric & Meckel's Diverticulum Imaging
5. Bone Marrow & Indium-III WBC Imaging
6. Brain Tomography
7. Gated ejection fraction & Wall motion
8. Cardiac perfusion stress and rest
9. Cisternogram and Parathyroid Imaging
10. Cardiac Infarct & whole body-imaging (I-131, Tc99m, & Inc)
11. Testicular (flow & imaging) & renal function Imaging



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ASSESSMENT:

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

Upon successful completion of this course, the students should be able to demonstrate an understanding of procedures.

**** Complete the following only if course is seeking general education status ****

GENERAL EDUCATION Competencies and Skills *:

Please highlight in green font all Competencies/Skills from the list below that apply to this course. In the box to the right of the Competency/Skill, enter all specific learning outcome numbers (i.e. 1.1, 2.7, 5.12) that apply.

1. Read with critical comprehension	
2. Speak and listen effectively	
3. Speak and listen effectively	
4. Think creatively, logically, critically, and reflectively (analyze, synthesize, apply, and evaluate)	
5. Demonstrate and apply literacy in its various forms: <i>(highlight in green ALL that apply)</i> (1. technological, 2. informational, 3. mathematical, 4. scientific, 5. cultural, 6. historical, 7. aesthetic and/or 8. environmental)	
6. Apply problem solving techniques to real-world experiences	
7. Apply methods of scientific inquiry	
8. Demonstrate an understanding of the physical and biological environment and how it is impacted by human beings	
9. Demonstrate an understanding of and appreciation for human diversities and commonalities	
10. Collaborate with others to achieve common goals.	
11. Research, synthesize and produce original work	
12. Practice ethical behavior	
13. Demonstrate self-direction and self motivation	
14. Assume responsibility for and understand the impact of personal behaviors on self and society	
15. Contribute to the welfare of the community	



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* *General Education Competencies and Skills endorsed by '05-'06 General Education Task Force*



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Common Course Number:

UNITS

I. Course Overview:

Upon successful completion of this course, the students should be able to demonstrate an understanding of procedures.

II. Units:

Unit 1. Communicating with the Patient

General Outcome:

1.0 The students should be able to demonstrate an understanding of patient communication.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 1.1 Describe the importance of positive responses to the patient and personal recognition of the patient
- 1.2 Answer common patient questions in a manner understandable to the patient
- 1.3 Demonstrate proper nonverbal language in patient care situations
- 1.4 Communicate with children, the seriously ill and disabled in ways appropriate to those special patient groups



Unit 2. Proper Body Mechanics

General Outcome:

- 2.0 The students should be able to demonstrate an understanding of body mechanics.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 2.1 Demonstrate proper handling and discuss special restrictions when:
- a. raising a patient to a sitting position
 - b. turning a bedridden patient
 - c. transferring a patient to and from a wheelchair, bed and stretcher
- 2.2 Demonstrate proper patient handling and discuss special restrictions when:
- a. patient is in traction or has a cast
 - b. patient has a catheter, IV, or drainage bag in place
 - c. patient is receiving oxygen therapy
 - d. patient is on a respirator
 - e. patient has been restrained
- 2.3 Discuss the concepts of sepsis and asepsis
- 2.4 Describe the responsibilities of disease and infection control programs, including prevention transmission and decontamination on communicable disease
- 2.5 Outline the procedure for cleaning the imaging area after a patient with a communicable disease has been imaged



Unit 3. Review of Universal Precautions

General Outcome:

- 3.0 The students should be able to demonstrate an understanding of universal precaution.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 3.1 Identify the most common reasons for ordering each study (pathology for which nuclear procedures are of diagnostic value)
- 3.2 Name clinical findings that are consistent with the suspected pathology
- 3.3 Describe the historical and current radio-pharmaceutical used for each study, including:
- a. identify
 - b. physical data
 - c. chemical form
 - d. Dose
 - e. mechanism of localization
 - f. bodily distribution
 - g. whole body dose and target organ
- 3.4 Discuss any procedures and/or substances that may interfere with performance of a valid test
- 3.5 Discuss any contraindications or adverse reactions associated with the study
- 3.6 Describe any associated patient preparation, including pre-medications, dietary requirements or restrictions, and/or physical limitations or exertion
- 3.7 List and/or describe equipment required for valid performance of the study, including camera and ancillary equipment



Unit 4. Gastric & Meckel's Diverticulum Imaging

General Outcome:

4.0 The students should be able to demonstrate an understanding of gastric imaging.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

4.1 Gastric and Meckel's Diverticulum Imaging



Unit 5. Bone Marrow & Indium-111 WBC Imaging

General Outcome:

5.0 The students should be able to demonstrate an understanding of Indium-111 imaging.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

5.1 Bone Marrow and In-111 WBC Imaging



Unit 6. Brain Tomography

General Outcome:

6.0 The students should be able to demonstrate an understanding of brain Tomography.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

6.1 Brain Tomography and General SPECT Imaging



Unit 7. Gated ejection fraction & Wall motion

General Outcome:

7.0 The students should be able to demonstrate an understanding of gated injection.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

7.1 Gated Ejection Fraction & Wall Motion



Unit 8. Cardiac perfusion stress and rest

General Outcome:

8.0 The students should be able to demonstrate an understanding of cardiac perfusion.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

8.1 Cardiac Perfusion Stress & Rest



Unit 9. Cisternogram and Parathyroid Imaging

General Outcome:

9.0 The students should be able to demonstrate an understanding of parathyroid imaging.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

9.1 Cisternogram & Parathyroid Imaging



Unit 10.0 Cardiac Infarct & whole-body imaging (I-131, Tc99m, & Inc)

General Outcome:

10.0 The students should be able to demonstrate an understanding of whole body imaging.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

10.1 Cardiac Infarct & Whole-Body Imaging (I-131, Tc99m, & In-111)



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Unit 11.0 Testicular (flow & imaging) & renal function Imaging

General Outcome:

11.0 The students should be able to demonstrate an understanding of renal function imaging.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

11.1 Testicular (Flow & Imaging) & Renal Function Imaging (Captopril, etc.)