

LAST REVIEW: 2010-2011

NEXT REVIEW: 2015-2016

STATUS: A

COURSE TITLE: Clinical Education II

COMMON COURSE NUMBER: NMT 1814

CREDIT HOURS: 2

CONTACT HOUR BREAKDOWN

CLOCK HOURS:

Lecture:

Lab:

Clinic: 256

Other:

PREREQUISITE(S): NMT 1804, NMT 1630, 1714

COREQUISITE(S): None

COURSE DESCRIPTION:

Second in a five-course sequence of supervised clinical instruction in nuclear medicine technology. In addition to topics covered in Clinical Education I, the student is expected to perform routine quality control and some imaging procedures. Students must successfully complete a required number of competencies as stated in the clinical handbook for the respective semester.

UNIT TITLES

- 1.0 Orientation
- 2.0 Patient Care
- 3.0 Clinical Demeanor
- 4.0 Radiation Safety
- 5.0 Clinical Set-Up
- 6.0 Quality Control Procedures
- 7.0 Imaging Procedures

ASSESSMENT:

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

1. **Announced and unannounced quizzes and Unit examinations:**
2. **Midterm and/or Final Exam (cumulative/comprehensive);**
3. **Assessment of reading and online assignments via submission of homework projects;**
4. **Participation in Discussion Forums on the e-learning site**
5. **Completion of group and individual projects as assigned**

Common Course Number: NMT 1814

Unit 1 Introduction to the Nuclear Medicine Facility

General Outcome:

- 1.0 The student shall be able to demonstrate an understanding of the basic operations of the nuclear medicine department and facility's rules and regulations through an orienting process.

Specific Learning Outcomes

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

- 1.1 Demonstrate an understanding of the clinical student handbook.
- 1.2 Describe the institution's personnel policies which are applicable to students.
- 1.3 State the nuclear medicine department's expectations of the student's responsibilities.
- 1.4 Locate each major division within the nuclear medicine department such as the stress lab, hot lab, and injection room.
- 1.5 Describe the function of each major division within the nuclear medicine department.
- 1.6 List and define all the "code" numbers used in the hospital.
- 1.7 State the protocol for the emergency dialing procedure.
- 1.8 Locate and explain the operation of emergency equipment within the nuclear medicine department.
- 1.9 Understand departmental procedures for patient scheduling, dose administration, room assignments, image processing, and transportation system.
- 1.10 Demonstrate how to use the telephone and intercom system within the department.
- 1.11 Demonstrate proper utilization of gurneys and wheelchairs.
- 1.12 Describe the physical layout of the entire hospital and the system used to locate patient rooms, wards, offices and patient holding areas.
- 1.13 Understand the facility's day to day operations
- 1.14 State the Health Insurance Portability and Accountability Act and state its objective.

Common Course Number: NMT 1814**Unit 2 Patient Care*****General Outcome:***

2.0 The student shall be able to demonstrate an understanding of patient care.

Specific Learning Outcomes

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

- 2.1 Use correct body mechanics and support holds when moving or assisting patients.
- 2.2 Demonstrate use of side rails on stretchers and straps on wheelchairs.
- 2.3 Provide for patient comfort before, during and after the nuclear medicine procedure.
- 2.4 Identify location of patient care equipment such as emesis basins, urinals, bedpans, and oxygen tanks.
- 2.5 Demonstrate correct medical asepsis techniques during venipuncture procedures.
- 2.6 Determine vital signs as needed, including blood pressure, pulse, respiratory rate and temperature.
- 2.7 Demonstrate an understanding of proper infection control techniques.
- 2.8 Provide appropriate action and care in response to emergency patient conditions.

Common Course Number: NMT 1814**Unit 3 Clinical Demeanor****General Outcome:**

- 3.0 The student shall be able to demonstrate an understanding of professional behavior in the healthcare field.

Specific Learning Outcomes

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

- 3.1 Demonstrate proper etiquette when greeting the patient and state appropriate patient identifiers.
- 3.2 Demonstrate how to suitably address patients, families, co-workers and hospital personnel by appropriate names or titles.
- 3.3 Demonstrate no ridiculing, degrading, or discriminatory attitudes, comments or behaviors in the clinical facility.
- 3.4 Demonstrate professional emotional behavior by avoiding the display of emotional reactions such as distaste, disgust and/or surprise.
- 3.5 Demonstrate patient confidentiality and refrain from discussion of patients with colleagues in patient areas and/or in any way that is not pertinent for relevant to the procedure or patient care.
- 3.6 Prevent unnecessary exposure of the patient's body.
- 3.7 Maintain inventory supplies and determine when to restock routine items.

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Unit 4 Radiation Safety

General Outcome:

- 4.0 The student shall be able to demonstrate an understanding of proper radiation safety techniques.

Specific Learning Outcomes

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

- 4.1 Properly utilize personnel monitoring devices at all time during clinical rotation.
- 4.2 Review the monthly and cumulative personnel exposure records with regard to identifying maximum permissible dose limits.
- 4.3 Recognize and utilize measures to reduce exposure to radiation.
- 4.4 Utilize appropriate protection techniques to keep exposure as low as reasonable achievable.
- 4.5 Demonstrate proper usage of a survey meter.
- 4.6 Apply the concept of “As Low As Reasonably Achievable”.

Common Course Number: NMT 1814**Unit 5 Clinical Set-up****General Outcome:**

- 5.0 The student shall be able to demonstrate an understanding of how to properly set up for an imaging procedure.

Specific Learning Outcomes

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

- 5.1 Perform the following tasks associated with routine imaging procedures:
- a. Properly interpret requisition/prescription and identify the procedure
 - b. Demonstrate ability to obtain appropriate patient identification, conduct patient interview and explain study (obtain formal consent when needed)
 - c. Prepare patient and/or instruct patient to any necessary preparation for the imaging procedure such as EKG set up.
 - d. Calculate the correct radiopharmaceutical dose to be administered and determine appropriate route of administration.
 - e. Determine radiopharmaceutical administration time and time at which imaging should be performed post-administration
 - f. Set up administration tray and prepare the correct radiopharmaceutical in the appropriate dosage.
 - g. Correctly administer the radiopharmaceutical according to procedure protocol where permitted.
 - h. Demonstrate confidence when maneuvering nuclear medicine equipment.

Common Course Number: NMT 1814**Unit 6 Quality Control Procedures****General Outcome:**

- 6.0 The student shall be able to demonstrate an understanding of how to properly perform quality control procedures.

Specific Learning Outcomes

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

- 6.1 Demonstrate an understanding upon the nuclear medicine department's quality control procedures.
- 6.2 Properly perform non-imaging quality control:
- a. Dose Calibrator
 - c. Geiger Muller Counter
- 6.3 Properly perform imaging quality control:
- a. Uniformity
 - b. Resolution
- 6.4 Perform routine methods of radioactive contamination monitoring within the nuclear medicine department.

Common Course Number: NMT 1814**Unit 7 Imaging Procedures****General Outcome:**

7.0 The student shall be able to demonstrate an understanding of how to properly perform imaging procedures.

Specific Learning Outcomes

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

- 7.1 Demonstrate proficiency in Skeletal Imaging Procedures including application in:
- a. Proper instrumentation application and computer set up.
 - b. Proper administration, dosage and choice of radiopharmaceutical.
 - c. Demonstrate correct patient education, preparation, and monitoring.
 - d. Demonstrate correct imaging techniques such as views performed and patient positioning.
 - e. Demonstrate appropriate data processing and image labeling.
 - f. Properly interpret images, identifying normal and abnormal variants.
- 7.2 Demonstrate proficiency in Pulmonary Imaging Procedures including application in:
- a. Proper instrumentation application and computer set up.
 - b. Proper administration, dosage and choice of radiopharmaceutical.
 - c. Demonstrate correct patient education, preparation, and monitoring.
 - d. Demonstrate correct imaging techniques such as views performed and patient positioning.
 - e. Demonstrate appropriate data processing and image labeling.
 - f. Properly interpret images, identifying normal and abnormal variants.
- 7.3 Demonstrate proficiency in Gastrointestinal Imaging Procedures including application in:
- a. Proper instrumentation application and computer set up.
 - b. Proper administration, dosage and choice of radiopharmaceutical.

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- c. Demonstrate correct patient education, preparation, and monitoring.
- d. Demonstrate correct imaging techniques such as views performed and patient positioning.
- e. Demonstrate appropriate data processing and image labeling.
- f. Properly interpret images, identifying normal and abnormal variants.