**NMT 2723C Nuclear Medicine Methodology 2**

Course Description: A continuation of Nuclear Medicine Procedures 1, students will learn the imaging parameters necessary to obtain images as well as the use of instrumentation necessary to produce the required images performed in a nuclear medicine department. Exposure to patient management during the procedures will also be addressed. Prerequisites: NMT 1713C, NMT 2102, NMT 2534C, NMT 2804C; Corequisite: NMT 2130C, NMT 2814C. (1 hr. lecture, 3 hr. clinical)

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<th>Course Competency</th>
<th>Learning Outcomes</th>
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| **Competency 1:** Students will be able to accurately describe all aspects of cardiac procedures performed in nuclear medicine by: | • Communication  
• Numbers / Data  
• Critical thinking  
• Information Literacy  
• Computer / Technology Usage |
| 1. Utilizing gated blood pool imaging, myocardial perfusion imaging, PET or PET/CT imaging: | |
|   A. Instrumentation - detector system, data acquisition, data analysis, ancillary equipment, and computer processing | |
|   B. Radiopharmaceuticals - type, dosage, administration, biodistribution, dosimetry and if applicable, pharmaceutical intervention | |
|   C. Patient Preparation, Monitoring, and Education - indications and contraindications, pregnancy, nursing, dietary restrictions, adverse reactions, medications, age specific considerations | |
|   D. Imaging Techniques - views performed and patient-detector orientation | |
|   E. Interpretation of images - normal and abnormal variants, artifacts, and correlative tests. | |
|   F. Anatomy and Pathophysiology | |
| **Competency 2:** The student will accurately describe all aspects of endocrine procedures performed in nuclear medicine by: | |
1. Utilizing parathyroid imaging; neuroendocrine imaging; adrenal imaging:
   A. Instrumentation - detector system, data acquisition, data analysis, ancillary equipment, and computer processing
   B. Radiopharmaceuticals - type, dosage, administration, biodistribution, dosimetry and if applicable, pharmaceutical intervention
   C. Patient Preparation, Monitoring, and Education - indications and contraindications, pregnancy, nursing, dietary restrictions, adverse reactions, medications, age specific considerations
   D. Imaging Techniques - views performed and patient-detector orientation
   E. Interpretation of images - normal and abnormal variants, artifacts, and correlative tests.
   F. Anatomy and Pathophysiology

**Competency 3:** The student will be able to demonstrate an understanding of all aspects of central nervous system procedures performed in nuclear medicine by:

- Communication
- Numbers / Data
- Critical thinking
- Information Literacy
- Computer / Technology Usage

1. Utilizing Brain death, Brain SPECT, Brain PET or PET/CT, and Cisternography/CSF leak:
   A. Instrumentation - detector system, data acquisition, data analysis, ancillary equipment, and computer processing.
   B. Radiopharmaceuticals - type, dosage, administration, biodistribution, dosimetry and if applicable, pharmaceutical intervention.
   C. Patient Preparation, Monitoring, and Education - indications and contraindications, pregnancy, nursing, dietary restrictions, adverse reactions, medications, age specific considerations.
   D. Imaging Techniques - views performed and patient-detector orientation.
   E. Interpretation of images - normal and abnormal variants, artifacts, and correlative tests.
   F. Anatomy and Pathophysiology