

# Course Competency

## NMT 2932 Nuclear Medicine Seminar

### Course Description

The student will learn to incorporate all theory related to the production of a nuclear medicine image. The student will also learn about radiation protection, instrumentation, physics, pharmacology, and Quality Assurance/Quality Control.

Course Competency	Learning Outcomes
<b>Competency 1:</b> demonstrate an understanding of basic RADIATION PROTECTION	1. Critical thinking
<ol style="list-style-type: none"> <li>1. Listing and describing the need for patient and personnel protection.</li> <li>2. Discussing the need for area/facilities monitoring.</li> <li>3. Discussing the importance of proper handling of radioactive materials.</li> </ol>	
<b>Competency 2:</b> demonstrate knowledge of RADIONUCLIDES AND RADIOPHARMACEUTICALS	
<ol style="list-style-type: none"> <li>1. Discussing the physical properties of radioactive materials.</li> <li>2. Discussing the characteristics of Radiopharmaceutical.</li> <li>3. Listing the appropriate steps for preparation and administration of radiopharmaceuticals.</li> </ol>	
<b>Competency 3:</b> demonstrate knowledge of INSTRUMENTATION AND QUALITY CONTROL	
<ol style="list-style-type: none"> <li>1. Applying the various techniques used in instrumentation and quality control:</li> <li>2. Survey Meter.</li> <li>3. Dose Calibrator</li> </ol>	

<ol style="list-style-type: none"> <li>4. Scintillation Detector System.</li> <li>5. Gamma Camera</li> <li>6. PET Scanner.</li> <li>7. Gas and Aerosol Delivery Systems.</li> <li>8. Image Acquisition</li> <li>9. Data Processing</li> </ol>	
<p><b>Competency 4:</b>demonstrate knowledge of DIAGNOSTIC AND THERAPEUTIC PROCEDURES</p>	
<ol style="list-style-type: none"> <li>1. Listing the steps in patient positioning</li> <li>2. Describing the factors affecting image quality</li> <li>3. Analyzing the various procedures for specific diagnostic and therapeutic procedures</li> </ol>	
<p><b>Competency 5:</b>demonstrate knowledge of PATIENT CARE AND EDUCATION</p>	<ol style="list-style-type: none"> <li>1. Ethical Issues</li> </ol>
<ol style="list-style-type: none"> <li>1. Discussing the importance of ethical and legal aspects of patient care</li> <li>2. Describing various principles of interpersonal communication</li> <li>3. Describing various techniques of maintaining infection control</li> <li>4. Describing principles and methods of physical assistance and transfers of patients</li> <li>5. Describing and recognizing medical emergencies</li> </ol>	

Updated: FALL TERM 2013