

## RADT2224 - Imaging Equipment

Credits:	4 (2/2/0)
Description:	This course is designed to establish a knowledge base in radiographic, fluoroscopic, mobile and tomographic equipment (including computed tomography) requirements and design including circuitry of the x-ray machine. The content will also provide a basic knowledge of quality control. Computer applications in the radiologic sciences related to image capture, display, storage and distribution are presented, as well.
Prerequisites:	<ul style="list-style-type: none"> <li>• RADT1180</li> <li>• RADT1190</li> </ul>
Corequisites:	<ul style="list-style-type: none"> <li>• RADT2101</li> <li>• RADT2110</li> </ul>
Pre/Corequisites*:	
Competencies:	<ol style="list-style-type: none"> <li>1. Identify the components of a basic radiographic unit.</li> <li>2. Explain the components of an x-ray tube.</li> <li>3. Identify the components of various generators used in radiographic units.</li> <li>4. Identify the components of digital and conventional fluoroscopic units.</li> <li>5. Identify various types of imaging units and their usage.</li> <li>6. Identify the components of electronic and digital imaging units.</li> <li>7. Explain the various accessories used in radiographic procedures.</li> <li>8. Explain the purpose, principles and applications of linear tomography.</li> <li>9. Perform quality control procedures on various types of radiographic equipment.</li> <li>10. Identify the components of a digital radiographic unit.</li> <li>11. Determine the functions of the components of automatic exposure control (AEC) devices.</li> <li>12. Discuss mobile units in terms of purpose, components, types and applications.</li> <li>13. Identify the components and functions of computed tomography equipment.</li> <li>14. Explain the processing considerations required for digital imaging.</li> <li>15. Explain the components of the electronic image archiving systems.</li> <li>16. Compare and contrast analog and digital imaging systems.</li> <li>17. Explain the components involved in x-ray production.</li> <li>18. Explain the purpose of the components involved in x-ray production.</li> <li>19. Explain the target interactions during x-ray production.</li> <li>20. Discuss the factors that affect x-ray emission spectrum.</li> <li>21. Describe the efficiency of x-ray production.</li> </ol>
MnTC goal areas:	None

\*Can be taking as a Prerequisite or Corequisite.