## RADT1140 - Radiographic Imaging

Credits:	4 (2/2/0)
Description:	This course is designed to establish a knowledge base of factors that govern and influence the production and recording of radiographic images as well as provide a basis for analyzing those images. Film and electronic imaging with related accessories will be emphasized. Included are the importance of minimum imaging standards, discussion of problem-solving techniques for image evaluation and the factors that can affect image quality. Class demonstrations/labs are used to demonstrate application. Actual images will be included for analysis.
Prerequisites:	• RADT1112 • RADT1116 • RADT1124
Corequisites:	• RADT1132 • RADT1146
Pre/Corequisites*:	
Competencies:	<ol> <li>Determine practical considerations in setting standards for acceptable image quality.</li> <li>Assess radiographic brightness on radiographic images.</li> <li>Assess radiographic contrast/gray scale on radiographic images.</li> <li>Analyze the relationship of factors that control and affect image brightness.</li> <li>Analyze the relationship of factors that control and affect image contrast/gray scale.</li> <li>Critique recorded detail/spatial resolution on various radiographic images.</li> <li>Analyze the relationship of factors that control and affect recorded detail/spatial resolution.</li> <li>Assess degrees of distortion on radiographic images.</li> <li>Analyze the relationship of factors that control and affect distortion.</li> <li>Examine uses of automatic exposure control (AEC) and how it affects the quality of images.</li> <li>Recognize the types, functions and applications of beam limiting devices.</li> <li>Recognize the composition and types of beam filtration devices as they relate to image quality and patient exposure.</li> <li>Define the factors that affect the production of scattered and secondary radiation.</li> <li>Recognize the types, functions and limitations of grids.</li> <li>Formulate radiographic techniques to achieve optimal radiographic images.</li> <li>Recognize the impact relationships of factors have on radiographic images.</li> <li>Investigate key elements in digital image processing.</li> <li>Examine digital imaging characteristics.</li> <li>Investigate key elements of digital image processing.</li> <li>Examine the qualities needed for digital image display and workflow.</li> <li>Discuss the primary components of digital image processing, including malfunctions that can occur.</li> <li>Determine the types, causes and effects of artifacts on a radiographic image.</li> <li>Critique radiographic images.</li> </ol>

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MnTC goal areas: None

\**Can be taking as a Prerequisite or Corequisite.* 

