

## LSR1120 - Image Production I

Credits:	4 (3/1/0)
Description:	This course is designed to introduce the student to image acquisition techniques. A comprehensive review of technical factors and their impact on image quality will be covered, along with technique charts and their components. Students also will be introduced to x-ray production processes, the fundamental properties of x-rays and the basic components of imaging equipment.
Prerequisites:	<ul style="list-style-type: none"> <li>• BIOL2260</li> <li>• COMM1140</li> <li>• HLTH1116</li> </ul>
Corequisites:	<ul style="list-style-type: none"> <li>• LSR1100</li> <li>• LSR1140</li> <li>• LSR1160</li> </ul>
Pre/Corequisites*:	
Competencies:	<ol style="list-style-type: none"> <li>1. Demonstrate an understanding of the characteristics of each technical factor used in image acquisition.</li> <li>2. Discuss the role of technical factors in x-ray production and image acquisition.</li> <li>3. Explain the impact each technical factor has on x-ray production and image quality.</li> <li>4. Demonstrate how technical factors can be manipulated and interchanged to produce x-rays and a quality image.</li> <li>5. Use mathematical equations related to image acquisition and x-ray production processes.</li> <li>6. Outline the steps of x-ray production.</li> <li>7. Diagram the components of a diagnostic x-ray tube.</li> <li>8. Explain the characteristics of each component of an x-ray tube.</li> <li>9. Describe the fundamental properties of x-rays.</li> <li>10. Discuss the importance of technique charts.</li> <li>11. Exhibit an understanding of each component of a technique chart.</li> <li>12. Differentiate the components of various technique charts.</li> <li>13. Construct a technique chart.</li> <li>14. Identify the basic components of imaging equipment.</li> <li>15. Operate the basic components of imaging equipment.</li> <li>16. Create images in the lab using image acquisition techniques.</li> </ol>
MnTC goal areas:	None

\*Can be taking as a Prerequisite or Corequisite.