

LSR1120 - Image Production I

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

*Can be taking as a Prerequisite or Corequisite.