

<b>Specialization</b>	<b>Radiologic Technology</b>
<b>Course Number</b>	<b>020810121</b>
<b>Course Title</b>	<b>Radiographic Pathology</b>
<b>Credit Hours</b>	<b>(3)</b>
<b>Theoretical Hours</b>	<b>(3)</b>
<b>Practical Hours</b>	<b>(0)</b>

**Brief Course Description:**

- ❖ This course concentrates on the appearance of pathological effects of anatomical radiology. It Provides students with basic anatomical positions and their normal appearances, also differentiates between structural and abnormal body tissues. It enables students to differentiate between structural and functional aspects of diseases, links anatomical structural and functional aspects of diseases, links anatomical structures with their radiological appearances.

**Course Objectives:**

Upon the completion of the course, the student will be able to:

1. Determine the palpable landmarks of various bodyparts.
2. Know the listed radiographic manifestation of the listed diseases of various body system.
3. Basic idea of normal bodyanatomy.
4. Appreciate the normal radiological appearances of different body organs and its relation to differentdiseases.

Unit number	Unit name	Unit content	Time needed
	<p style="text-align: center;"><b>General Principles Of Pathology</b></p>	<ul style="list-style-type: none"> <li>• Pathology. <ul style="list-style-type: none"> <li>○ The diseaseprocess</li> </ul> </li> <li>• The Effects of injury. <ul style="list-style-type: none"> <li>○ Degeneration and necrosis.</li> <li>○ Acute injury.</li> <li>○ Chronic injury.</li> <li>○ Inflammation.</li> <li>○ Transudates.</li> <li>○ Exudates.</li> <li>○ Inflammatory lesions.</li> <li>○ Repair.</li> </ul> </li> </ul>	
	<p style="text-align: center;"><b>Respiratory System</b></p>	<ul style="list-style-type: none"> <li>• Imaging of the chest</li> <li>• Congenital disorders: <ul style="list-style-type: none"> <li>○ Cystic fibrosis.</li> <li>○ Hyaline membrane disease</li> </ul> </li> <li>• Acute disorders: <ul style="list-style-type: none"> <li>○ Pulmonary edema.</li> <li>○ Pneumonia.</li> <li>○ Pneumothorax.</li> <li>○ Pulmonary embolism.</li> <li>○ Lung abscess.</li> <li>○ Pleural effusion.</li> </ul> </li> <li>• Chronic disorders: <ul style="list-style-type: none"> <li>○ Bronchial asthma.</li> <li>○ Tuberculosis.</li> <li>○ Bronchiectasis</li> </ul> </li> </ul>	
	<p style="text-align: center;"><b>Alimentary Tract</b></p>	<ul style="list-style-type: none"> <li>• Imaging of the alimentary tract</li> <li>• the esophagus: <ul style="list-style-type: none"> <li>○ The normal esophagus.</li> <li>○ Diverticula</li> </ul> </li> <li>• The stomach and duodenum: <ul style="list-style-type: none"> <li>○ Normal stomach and duodenum.</li> <li>○ Congenital disorders.</li> <li>○ Inflammatory disorders</li> </ul> </li> <li>• The small intestine: <ul style="list-style-type: none"> <li>○ Congenital abnormalities.</li> <li>○ Intestinal obstruction</li> </ul> </li> <li>• The large intestine <ul style="list-style-type: none"> <li>○ Normal large intestine.</li> <li>○ Congenital disorders.</li> </ul> </li> </ul>	

		<ul style="list-style-type: none"> <li>○ Mechanical disorders.</li> <li>○ Inflammatory disorders.</li> </ul>	
4.	<b>The Hepatobiliary System</b>	<ul style="list-style-type: none"> <li>● Inflammatory disorders of the liver.</li> <li>● Inflammatory disorders of the gall bladder.</li> <li>● Inflammatory disorders of the pancreas</li> </ul>	
5.	<b>Genitourinary System</b>	<ul style="list-style-type: none"> <li>● Imaging of the urinary system.</li> <li>● Obstructive disorders of the kidneys.</li> <li>● Inflammatory disorders of the kidneys.</li> <li>● Chronic renal failure.</li> <li>● Congenital disorders of the lower urinary tract.</li> <li>● Inflammatory disorders of the lower urinary tract.</li> </ul>	
6.	<b>Osseous System And Joints</b>	<ul style="list-style-type: none"> <li>● Imaging the Osseous system and joints.</li> <li>● Congenital Disorders: <ul style="list-style-type: none"> <li>○ Congenital Hip Dysplasia.</li> <li>○ Achondroplasia.</li> <li>○ Osteoporosis</li> </ul> </li> <li>● Metabolic and Hormonal Disorders: <ul style="list-style-type: none"> <li>○ Hyperparathyroidism.</li> <li>○ Acromegaly.</li> <li>○ Osteoporosis.</li> </ul> </li> <li>● Inflammatory Disorders: <ul style="list-style-type: none"> <li>○ Osteomyelitis.</li> <li>○ Rheumatoid Arthritis.</li> <li>○ Ankylosing spondylitis.</li> <li>○ Osteoarthritis.</li> </ul> </li> <li>● Trauma and Fractures <ul style="list-style-type: none"> <li>○ Classification of Fractures.</li> <li>○ Types of Fractures.</li> <li>○ Dislocation</li> </ul> </li> <li>● Cystic Bone Lesions.</li> <li>● General Information of Bone Tumors</li> </ul>	
7.	<b>Central Nervous System</b>	<ul style="list-style-type: none"> <li>● Central nervous system</li> <li>● Imaging of C.N.S.</li> <li>● Brain:</li> </ul>	

		<ul style="list-style-type: none"> <li>○ Bra Congenitaldisorders.</li> <li>○ Hemorrhage andinfarction.</li> <li>○ Arteriovenousmalformation.</li> <li>○ Contusion.</li> <li>○ Fractures.</li> </ul>	
<b>8.</b>	<b>Neoplasia</b>	<ul style="list-style-type: none"> <li>● Causes of cancer.</li> <li>● Characteristics of cancer.</li> <li>● Types of cancer.</li> <li>● Staging of cancer.</li> <li>● Spread of malignant tumours.</li> <li>● Sites of metastasis.</li> </ul>	

**Teaching Methodology:**

1. Lectures.
2. Group discussion.
3. Videos.
4. Live patterns & samples.
5. Practical applications.
6. Field Visits (Industries).

**Text Books & References: References:**

1. Biology of Disease by Chris Smith, Ed Wood, N. Ahmed, Maureen Dawson, 2006.
2. Essentials of Pathophysiology, Author: Carol Mattson Porth, Rn Publication 3rd Edition, Publisher: Lippincott Williams & Wilkins.
3. Pathophysiology (5<sup>th</sup> edition), by LEE-ELLEN C. COPSTEAD-KIRHORN, Ph.D., Jacquelyn L. Banasik, Publication 2012, Publisher: W B Saunders.
4. Porth's Pathophysiology: Concepts of Altered Health States Hardcover, Lippincott Williams and Wilkins; 9<sup>th</sup> edition–2013
5. Comprehensive Radiographic Pathology by Ronald L. Eisenberg MD JD FACR, Nancy M. Johnson MEd RT(R)(CV)(CT)(QM) FASRT, 6<sup>th</sup> edition 2015.
6. Understanding Pathophysiology, 6th Edition-2016 by Sue E. Huether RN PhD, Kathryn L. McCance RN PhD
7. Radiographic Pathology for Technologists, 6th Edition-2013
8. by Nina Kowalczyk Ph.D. R.T.(R)(CT)(QM) FASRT