

<b>Specialization</b>	<b>Radiologic Technology</b>
<b>Course Number</b>	<b>020810122</b>
<b>Course Title</b>	<b>Contrast Media Procedures</b>
<b>Credit Hours</b>	<b>(3)</b>
<b>Theoretical Hours</b>	<b>(2)</b>
<b>Practical Hours</b>	<b>(3)</b>

**Brief Course Description:**

- The course is concentrating on radiographic Procedures that need contrast media and special preparation & techniques.
- It provides the Students with knowledge of various types of contrast media used in radiology department, and the adverse reaction of all types of contrast media with special preparation for each radiographic procedure, indication and contraindications of each procedure and taking care of the patient after the end of the procedure.

**Course Objectives:**

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

1. Know all type of contrast media available in radiology department & the required dosage for each radiographic examination.
2. Deal with effectively & deficiently with adverse reaction of contrast media.
3. Assist perfectly the radiologist during special procedure examinations.
4. Perform all the basic radiographic projections associated with these special examinations.
5. Take care of patient after the examination with contrast media.
6. Can apply practical skills related to theoretical material.

<b>Unit number</b>	<b>Unit name</b>	<b>Unit content</b>	<b>Time needed</b>
1	<b>Introduction</b>	<ul style="list-style-type: none"> <li>• Definition of Special Procedures</li> <li>• Contra indications of special procedures due to radiation or due to contrast media or due to technique.</li> <li>• Complication of contrast media examination.</li> </ul>	
2	<b>Contrast Media</b>	<ul style="list-style-type: none"> <li>• Intravascular contrast media.</li> <li>• Non vascular contrast media.</li> <li>• Pharmacological agents.</li> </ul>	
3	<b>Gastro intestinal tract</b>	<ul style="list-style-type: none"> <li>• Barium swallow.</li> <li>• Barium meal.</li> <li>• Barium follow through.</li> <li>• Small bowel enema.</li> <li>• Barium enema.</li> </ul>	
4	<b>Biliary tract</b>	<ul style="list-style-type: none"> <li>• Oral cholecystography.</li> <li>• Intravenous cholecystography.</li> <li>• Post-operative T- tube Cholangiopancreatography.</li> <li>• Endoscopic Retrograde Cholangiopancreatography (ERCP).</li> <li>• PTC Percutaneous Transhepatic Cholangiography.</li> </ul>	
5	<b>Urinary Tract</b>	<ul style="list-style-type: none"> <li>• Excretion urography.</li> <li>• Micturating cystourethrography (M.C.U.G) .</li> <li>• Ascending Urethrography.</li> <li>• Retrograde Pyeloureterography.</li> <li>• Percutaneous renal puncture.</li> </ul>	
6	<b>Reproductive System</b>	<ul style="list-style-type: none"> <li>• Hysterosalpingography (H.S.G) .</li> </ul>	
7	<b>Respiratory Tract</b>	<ul style="list-style-type: none"> <li>• Bronchography.</li> </ul>	
8	<b>Lacrimal System</b>	<ul style="list-style-type: none"> <li>• Dacryocystography.</li> </ul>	
9	<b>Sialography</b>	<ul style="list-style-type: none"> <li>• Parotid Sialography.</li> <li>• Submandibular Sialography.</li> </ul>	
10	<b>Arteriography</b>	<ul style="list-style-type: none"> <li>• Introduction to catheter technique.</li> <li>• Head &amp; Neck Arteriography.</li> <li>• Ascending aortography.</li> <li>• Trans-lumbar Aortography.</li> <li>• Arteriography of Lower Limb.</li> <li>• Coeliac axis arteriography.</li> <li>• Renal Arteriography.</li> </ul>	
11	<b>Venography</b>	<ul style="list-style-type: none"> <li>• Peripheral Venography.</li> </ul>	

		<ul style="list-style-type: none"> <li>• Central Venography.</li> <li>• Selective retrograde venography.</li> </ul>	
12	<b>Arthrography</b>	<ul style="list-style-type: none"> <li>• Knee arthrography.</li> <li>• Hip Arthrography.</li> </ul>	
13	<b>Miscellaneous procedures</b>	<ul style="list-style-type: none"> <li>• Sinogram</li> <li>• Fistulogram.</li> <li>• Nasogram</li> </ul>	

**Teaching Methodology:**

1. Lectures.
2. Demonstrations & Home works.
3. Discussion & Quizzes.

**Text Books & References:**

1. Contrast Media: Safety Issues and ESUR Guidelines (Medical Radiology) 3rd ed. 2014 Edition by Henrik S. Thomsen (Editor), Judith A. W. Webb (Editor).
2. Contrast Media Sep 1, 2002 by Robert Older and William Bush.
3. Text Book Of Contrast Media, Peter Dawson, David O, Cosgrove and Ronald G Grainger, 1999.
4. Trends in Contrast Media (Medical Radiology) Softcover reprint of the original 1st ed. 1999 Edition by Henrik S. Thomsen (Editor), Robert N. Muller (Editor), Robert F. Mattrey (Editor), A.L. Baert (Foreword)
5. Clark's Positioning in Radiography 12Ed -A. Stewart Whitley, Charles Sloane, Graham Hoadley, Adrian D. Moore.
6. Chapman & Nakielny's Guide to Radiological Procedures: Expert Consult - Online and Print, 6e 6th Edition by Nick Watson MBChB MRCP FRCR (Editor).
7. Merrill's Atlas of Radiographic Positioning and Procedures: 3-Volume Set, 12e Hardcover – 28 Mar 2011 by Eugene D. Frank MA RT(R) FASRT FAEIRS (Author), Bruce W. Long MS RT(R)(CV) FASRT (Author)