Course Description Form

1. Course Name:
Clinical Radiology
2. Course Code:
3. Semester / Year:
1st and 2nd semester /2023−2024
4. Description Preparation Date:
13−3−2024
5. Available Attendance Forms:
Large halls for lectures Classrooms for small groups clinical training
6. Number of Credit Hours (Total) / Number of Units (Total)
Credit hours: 26 hours as lectures (repeated twice) 30 hours of clinical training for each subgroup. Number of Units: 3
7. Course administrator's name (mention all, if more than one name)
Name: Dr. Aseel Riade Issa Email: aseel.issa@uobasrah.edu.iq Name: Dr. Marwa Majid Aladhab Email: Marwa.majid@uobasrah.edu.iq
8. Course Objectives

Course Objectives	• General objectives: Prepare the students to be a competent doctor, having a high level of scientific knowledge and a good practical skill in addition to having a good professional behavior that qualifies them to serve the community. Help the students to be competent in conducting clinical researches. • Specific objectives: To help student acquired a good knowledge about different available imaging modalities, their underlying physics, clinical implications and how to use them in clinical practice to assist in diagnosis of different diseases, follow up of patients and monitoring treatment response or assess for complications, in addition to ability to interpret the imaging findings of common diseases and life threating conditions.

9. Teaching and Learning Strategies

Generally, we focus on imparting both theoretical knowledge and practical skills to students through

1. interactive Lectures that encourage active participation from students. Use multimedia presentations, case studies, and real-life examples to illustrate concepts and encourage questions and discussions to promote deeper understanding.
2. Case-Based Learning: Utilize actual radiological cases to teach interpretation skills.
3. Small Group Discussions during clinical sessions to discuss specific radiological cases or topics.
4. Online Resources: provide additional learning opportunities and accommodate different learning styles.
5. Feedback and Assessment (through quizzes and case presentations) to provide timely feedback on student performance.
6. Clinical Correlation: Emphasize the clinical relevance of radiological findings by correlating them with patient history, physical examination, and other diagnostic tests to help student understand the role of radiology in clinical decision-making.
7. Continual Evaluation by formative assessments and periodic evaluations.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1-4	1 hours each week (repeated twice)	*Types of imaging investigations (plain radiography, Ultrasound, doppler imaging, CT scan, MRI *Know their underlying physics *Their clinical applications and indications.	Basics of Imaging _Conventional radiography _CT scan _MRI -Ultrasound	Interactive lectures	Formative assessment, midterm and final written assessment
5	1 hours (repeated twice)	*To know the effects of radiation exposure and its types. *Principles of radiation protection *Hazard of X ray during pregnancy	Radiation protection	Interactive lecture	Formative assessment, midterm and final written assessment

		*Advices concerning the diagnostic radiological examinations in women of reproductive age. *Radiation protection staff and public. *Hazards of contrast media			
6-10	1 hour per week (repeated twice)	*Know the imaging methods *Chest x ray assessme and views *Useful radiological sign *Common imaging findings (consolidation, collapse, pulmonary nodule/mass, interstitial lung diseas pleural disorders (effusion, pneumothorax), mediastinal mass, hilar disorders * Special topic: T.B, carcinoma, bronchiectasis	Chest Imaging	Interactive lecture	Formative assessment, midterm and final written assessment
11-13	1 hour per week (repeated twice)	*To know imaging investigation in acute abdomen setting * Role of plain radiography in acute abdomen. *Imaging findings in common diseases	Acute abdomen and GIT imaging	Interactive lectures	Formative assessment, midterm and final written assessment

		that lead to acute abdomen *Imaging findings in common GIT disease like gastric ulcer and inflammatory bowel diseases			
14-16	1 hour per week (repeated twice)	*To know the imaging methods of investigation in disorders of renal system *Radiological findings common congenital anomalies of renal system *Urinary tract disorders: Urinary calculi, urinary tract obstruction, imaging of renal masses. * Imaging in transitior cell carcinoma, imaging of renal trauma, Imaging of bladder disorders (tumors, diverticula, bladder outlet obstruction) *Imaging in prostatisr	Imaging of renal system	Interactive lecture	Formative assessment, and final written assessment (second semester lectures)
17-18	1 hour per week (repeated twice)	*To know basics of diagnostic and therapeutic nuclear medicine *Common radiopharmaceutical *Application in imagir of endocrine system, skeletal system,	Nuclear Medicine	Interactive lecture (visiti lecturer)	Formative assessment and final written assessment

		genitourinary system, digestive and hepatobiliary system, respiratory and cardiovascular system and CNS. *Basics of PET and theranostic nuclear medicine.			
19-20	1 hour per week (repeated twice)	*Know the imaging modalities used in cardiovascular system *Imaging findings of common diseases like congestive heart failure, pericardial effusion. * Imaging of common congenital heart diseases.	Imaging of cardiovascular system	Interactive lectures	Formative assessment and final written assessment
21-23	1 hour per week (repeated twice)	*To know radiographic anatomy of the bone *Imaging signs of bone disease *Imaging of osteomyelitis and infection of the spine *Imaging approach to bone tumors to differentiate benign from malignant lesion *Imaging of arthritis specifically OA and rheumatoid arthritis.	Imaging of musculoskeletal system	Interactive lectures	Formative assessment m and final writte assessment.
24	1 hour per week	*To know imaging modalities used to	Ultrasound in obstetrics and gynecology	Interactive lecture	Formative assessment and final

	(repeated twice)	assess female genital tract. *Indication of US in pregnancy *US assessment of fetal age			written assessment.
25-26	1 hour per week (repeated twice)	*To know imaging methods of investigation in CNS * Imaging of common neurological emergencies like head trauma, stroke, and intracranial hemorrhage. *Overview on imaging of brain tumors.	Imaging of Central nervous system	Interactive lectures	Formative assessment and final written assessment.
Clinical sessions: 3 weeks fo each subgroup	30 hours	*Practicing clinical reasoning and image interpretation. * Reinforce theoretica information with clinical application.	Clinical training	-Multimedia presentation -Case based learning -Real life examples -Small group discussion -Clinical correlation	Formative clinical exam Quizzes Case presentations

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, formative clinical exam, midterm and final written exams.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Imaging for students by David A. Lisle Diagnostic imaging by Peter Armstrong
Main references (sources)	Grainger and Allison's Diagnostic radiolo textbook
Recommended books and references (scientific journals, reports…)	Medical journals in Google scholar

Electronic References, Websites	https://radiopaedia.org/ https://radiologyassistant.nl/