Course Specifications

General Information

Course name	Principles of Radiology For Physical Therapy
Course number	AMSR2212
Faculty	
Department	
Course type	Major Needs
Course level	2
Credit hours (theoretical)	2
Credit hours (practical)	0
Course Prerequisites	

Course Objectives

1 - To recognize how the study of medical imaging might enhance the patients evaluation.

2 - To analyze the clinical impact of current imaging technologies and image-guided interventional techniques utilized in musculoskeletal, neurological, cardiovascular, and pulmonary imaging.

3 - To identify the critical role of physical therapists in the diagnostic imaging system through their correlation of clinical findings with imaging information.

4 - To describe the radiological evaluation of fractures and the unique patterns of fracture and fracture healing.

5 - To discuss the radiographic assessment of trauma, common damage patterns, degenerative disease processes, and anomalies in the major body regions.

6 - To show the ways in which physical therapists can recommend diagnostic imaging and the problems they face when trying to get diagnostic imaging for their patients.

7 - To apply medical imaging data to the planning of physical therapy interventions.

8 - To distinguishes the major roles of conventional radiography, magnetic resonance imaging, computed tomography, and bone scintigraphy in clinical decision-making.

Intended Learning Outcomes

Knowledge and Understanding	* Evaluating radiological findings and their implications for treatment planning
	* Identify and interpret findings in a radiology report on a variety of diagnostic images.
Intellectual Skills	* Analyzing and interpreting radiographic images in the context of physiotherapy
	* Integrating radiological information into evidence-based practice
Professional Skills	* Describe the terminology utilized in radiology departments.
	* Identify the advantages and disadvantages of each diagnostic imaging method.
General Skill	* Communicating effectively with patients about radiographic procedures and findings
	* Utilizing radiographic imaging to support clinical decision-making in physiotherapy

Course Contents

1 - Introduction to radiographic imaging for physiotherapy
2 - Radiological anatomy of the musculoskeletal systems
3 - Interpretation of radiographic findings in musculoskeletal conditions (bone fractures and joint abnormalities)
4 - Radiological anatomy of the neurological systems
5 - Interpretation of radiographic findings in neurological conditions (e.g., spinal cord injuries, peripheral nerve disorders)
6 - Interpretations of the brain include ischemia, hemorrhage types, and common brain tumors.
7 - Radiological anatomy of chest x-ray and chest CT
8 - Interpretations of a normal chest and common chest pathology
9 - Radiographic evaluation of postoperative rehabilitation cases
10 - Integration of radiological findings into treatment planning and outcome assessment

Teaching and Learning Methods

1 - Lectures by the instructor covering theoretical concepts
2 - Practical demonstrations of radiographic procedures
3 - Case studies and image interpretation exercises
4 - Group discussions and collaborative learning activities
5 - Use of audiovisual aids and technology to enhance learning

Teaching and Learning Methods for the Disabled Students

1 - Providing accessible course materials in alternative formats (e.g., electronic text, large print)
2 - Ensuring classroom and lab facilities are accessible and equipped with appropriate assistive technologies
3 - Offering individualized instruction and support as needed
4 - Collaborating with the institutions disability support services to implement necessary accommodations

Students Assessment

Assessment Method	TIME	MARKS
First Quiz and Assignment	Week 3	10
Second Quiz and Assignment	Week 6	10
Midterm Exam	Week 8	30
Third Quiz and Assignment	Week 10	10
Final Exam	Week 15	40

Books and References

Essential books	Adam, A., Dixon, A. K., Gillard, J. H., & Schaefer-Prokop, C. (2021). Grainger & Allisons Diagnostic Radiology: A textbook of medical imaging. Elsevier. Herring, W. (2020). Learning Radiology: Recognizing the basics. Elsevier.
Recommended books	Sieron? Dominik, Christe, A., & Heverhagen, J. T. (2020). Diagnostic Imaging and Radiology in Physiotherapy. Cambridge Scholars Publishing.