

## Course Description Form

1. Course Name: Rheumatology	
2. Course Code: MEDRhe-52	
3. Semester / Year: 2 <sup>nd</sup> semester/ 5 <sup>th</sup> year	
4. Description Preparation Date: 1/3/2024	
5. Available Attendance Forms: Physical (mandatory ) and Virtual( complementary)	
6. Number of Credit Hours (Total) / Number of Units (Total)	
1 credit/ hour: 15 hours in total	
7. Course administrator's name (mention all, if more than one name)	
Name: Yasameen Abbas Humadi	
Email: jasmine86abbss@nahrainuniv.edu.iq	
8. Course Objectives	
	Knowledge
<b>Course Objectives</b>	<ol style="list-style-type: none"> <li>1. Demonstrate knowledge in the basic sciences pertinent to connective tissues and joints.</li> <li>2. Explain the signs and symptoms of common regional and rheumatic presentations in terms of their underlying scientific principles.</li> <li>3. Explain the scientific principles of common autoimmune and imaging investigative techniques, and critique their appropriateness and results.</li> <li>4. Explain the scientific principles of common approaches to the management of patients with autoimmune rheumatic diseases and regional complaints.</li> </ol>
	<b>Skills</b>

	<ol style="list-style-type: none"> <li>1. Apply acquired knowledge to identify and interpret signs and symptoms associated with connective tissue and joint disorders.</li> <li>2. Utilize scientific principles to analyze and interpret imaging and investigative techniques commonly used in diagnosing autoimmune and rheumatic diseases.</li> <li>3. Develop critical thinking skills to assess the appropriateness of investigative techniques and management approaches for patients with autoimmune rheumatic diseases.</li> <li>4. Demonstrate effective communication skills in explaining complex scientific principles related to autoimmune and rheumatic diseases to patients and colleagues.</li> </ol>
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**Ethics**

<ol style="list-style-type: none"> <li>1. Uphold ethical standards in the application of diagnostic and investigative techniques, ensuring patient well-being and autonomy.</li> <li>2. Respect patient confidentiality and privacy in the management of autoimmune rheumatic diseases and regional complaints.</li> <li>3. Recognize and address potential biases in the evaluation and management of patients with autoimmune rheumatic diseases, ensuring equitable care for all.</li> <li>4. Demonstrate integrity and honesty in critiquing investigative techniques and management approaches, prioritizing patient welfare above all else.</li> </ol>
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**9. Teaching and Learning Strategies**

<b>Strategy</b>	<ol style="list-style-type: none"> <li>1. Interactive Lectures: Physical attendance</li> <li>2. Problem-Based Learning (PBL): Via the Google Classroom</li> </ol>
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3. Small Group Discussions
4. Hands-on Workshops ( selected students: optional)
5. Case-Based Learning (CBL): integrated within the lectures
6. Self-Directed Learning
7. Assessment Strategies
  1. Continuous Assessment:
    - Regular quizzes and assignments.
    - Participation in interactive sessions.
  2. Case Presentations:
    - Students present clinical cases.
    - Evaluation based on diagnosis and management.
  3. Group Participation:
    - Active involvement in group discussions.
    - Criteria include contribution and engagement.
  4. Skills Assessment:
    - Practical assessments of clinical skills.
    - Evaluation of proficiency in interventions.
  5. Case Analysis:
    - Analysis of written or virtual case studies.
    - Focus on clinical reasoning and management.
  6. Self-Assessment:
    - Online quizzes and reflective exercises.
    - Students evaluate understanding and set goals.
  7. Comprehensive Examinations:
    - End-of-course MCQs and case-based assays.
    - Assess overall comprehension and application.

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10. Course Structure

<b>Week</b>	<b>Hours</b>	<b>Required Learning Outcomes</b>	<b>Unit or subject name</b>	<b>Learning method</b>	<b>Evaluation method</b>
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1	1	<ol style="list-style-type: none"> <li>1. Understand the fundamental anatomical structures of the back, neck, and joints, including their interrelationships and functions.</li> <li>2. Utilize comprehensive knowledge of the physiological mechanisms underlying degenerative and inflammatory diseases to effectively assess patient complaints related to these conditions.</li> <li>3. Identify and enumerate the diverse causes of back pain, encompassing both common etiologies and less frequent but potentially serious factors.</li> <li>4. Demonstrate proficiency in recognizing "red flags" associated with back pain, indicative of underlying pathologies requiring urgent evaluation and intervention.</li> <li>5. Familiarize oneself with a range of management strategies for back pain, spanning from simple interventions to mitigate symptoms to protocols for addressing life-threatening situations.</li> <li>6. Develop the ability to discern mimickers of back pain in clinical presentations and radiographic studies, facilitating accurate diagnosis and appropriate treatment planning.</li> </ol>	Back and neck pain	Lecture	MCQ
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2	1	<p>1. Comprehend the underlying etiology and pathophysiology of Rheumatoid Arthritis (RA), elucidating immune-mediated mechanisms and their effects on joint and tissue function.</p> <p>2. Proficiently discern the varied patterns and clinical presentations associated with RA, distinguishing manifestations across different disease stages.</p> <p>3. Recognize and evaluate the broad spectrum of extra-articular manifestations commonly linked to RA, assessing their potential impact on patient prognosis and management.</p> <p>4. Interpret the key laboratory findings characteristic of RA, including serological markers such as rheumatoid factor and anti-cyclic citrullinated peptide (anti-CCP), as well as inflammatory markers like C-reactive protein (CRP) and erythrocyte sedimentation rate (ESR).</p>	RA	Lecture+PBL	
3	1	<p>1. Identify and differentiate the differential diagnosis of Rheumatoid Arthritis (RA) from other rheumatic and autoimmune conditions, utilizing clinical, laboratory, and imaging modalities.</p> <p>2. Develop comprehensive treatment plans for RA patients, employing a stepwise approach</p>	RA part 2	Lecture+case discussion	MCQ+ Formative

		<p>that integrates disease-modifying anti-rheumatic drugs (DMARDs), nonsteroidal anti-inflammatory drugs (NSAIDs), corticosteroids, and biologic agents as appropriate.</p> <p>3. Demonstrate thorough understanding of the primary DMARDs used in the management of RA, including methotrexate, sulfasalazine, hydroxychloroquine, and biologic agents, along with their major contraindications and potential side effects.</p> <p>4. Evaluate and anticipate complications arising from RA, encompassing joint deformities, extra-articular manifestations, cardiovascular disease, and increased susceptibility to infections, while also understanding the leading causes of mortality in RA patients, such as cardiovascular events and infections.</p>			
4	1	<p>1. Distinguish between the various types of Connective Tissue Diseases (CTDs), including systemic lupus erythematosus (SLE), rheumatoid arthritis, systemic sclerosis, Sjögren's syndrome, and others, by analyzing their distinct clinical features and diagnostic criteria.</p> <p>2. Develop a comprehensive</p>	CTD part 1	Lecture+classroom activity	MCQ+ Formative

		<p>understanding of the fundamental etiology and pathophysiology that underlie different presentations of SLE, elucidating the complex interplay of genetic, environmental, and immunological factors contributing to disease development and progression.</p> <p>3. Explain the basic mechanisms of autoimmunity in SLE, including aberrant immune responses targeting self-antigens such as nuclear components, resulting in tissue damage and systemic inflammation characteristic of the disease.</p> <p>4. Familiarize oneself with the various types of lupus, including systemic lupus erythematosus (SLE), cutaneous lupus erythematosus (CLE), and drug-induced lupus, while also understanding the classification criteria established by organizations such as the American College of Rheumatology (ACR) and the Systemic Lupus International Collaborating Clinics (SLICC).</p>				
+6	5	1	<p>1. Recognize and differentiate between the various presentations of Lupus, ranging from mild to severe manifestations, including Lupus nephritis pathology and lupus cerebritis, by evaluating clinical signs and symptoms.</p> <p>2. Recall and identify the potential differential diagnoses (DDX)</p>	SLE	lecture	MCQ+ Formative



		<p>associated with Lupus complaints, utilizing comprehensive knowledge of overlapping symptoms and clinical patterns to facilitate accurate diagnosis.</p> <p>3. Formulate treatment strategies tailored to the different presentations of Lupus, integrating pharmacological interventions, lifestyle modifications, and disease monitoring protocols to optimize patient outcomes.</p> <p>4. Discuss the disease course and potential complications of Lupus, including long-term sequelae such as organ damage, cardiovascular complications, and increased susceptibility to infections, while emphasizing the importance of early intervention and multidisciplinary management approaches.</p>			
7	1	<p>1. Demonstrate proficiency in identifying and categorizing the types of Connective Tissue Diseases (CTDs), including Scleroderma, Autoimmune Myopathies, Sjögren's Syndrome, Overlap Syndromes, and Mixed CTD, by understanding their basic etiologies, clinical characteristics, and pathophysiological mechanisms.</p> <p>2. Analyze the main presentations and distinguish the leading serological markers associated with each type of CTD, utilizing diagnostic criteria and laboratory findings to</p>	CTD part 2	lecture	MCQ+ Formative

		<p>aid in accurate diagnosis and disease management.</p> <p>3. Develop comprehensive treatment plans tailored to the specific needs of patients with each CTD, integrating pharmacological interventions, immunosuppressive therapies, and supportive measures to address disease activity and minimize complications.</p> <p>4. Recognize and evaluate potential life-threatening presentations of each CTD, including severe organ involvement, vascular complications, and respiratory compromise, while implementing timely interventions to mitigate risks and optimize patient outcomes.</p>			
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MID TERM EXAMS

10	1	<p>1. Understand the classification of vessels and vasculitides, distinguishing between large, medium, and small vessel involvement, while identifying their respective clinical and pathological features.</p> <p>2. Recognize clues suggestive of vasculitides, including characteristic symptoms, laboratory findings, and imaging patterns, to facilitate prompt diagnosis and appropriate management.</p> <p>3. Differentiate the various patterns of presentation observed in vasculitides, such as cutaneous, systemic, and</p>	Vasculitis	lecture	MCQ+ Formative
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		<p>organ-specific manifestations, to guide tailored diagnostic approaches and treatment strategies.</p> <p>4. Implement comprehensive diagnostic approaches for large, medium, and small vessel vasculitides, incorporating clinical assessment, laboratory investigations, imaging studies, and histopathological examination, as necessary, to confirm diagnosis and assess disease severity.</p> <p>5. Develop individualized treatment strategies for large, medium, and small vessel vasculitides, utilizing a combination of immunosuppressive agents, corticosteroids, biologic therapies, and supportive measures to achieve disease control and minimize complications.</p> <p>6. Recognize potential mimickers of vasculitides, including infections, malignancies, and other inflammatory conditions, by utilizing clinical judgment, comprehensive evaluation, and appropriate diagnostic testing to differentiate true vasculitides from other pathologies.</p>			
11	1	1. Understand the spectrum of Spondyloarthropathies (SPA), encompassing Ankylosing Spondylitis (AS), Psoriatic Arthritis (PsA), Reactive Arthritis (ReA), and Enteropathic Arthritis (associated with inflammatory bowel disease), by elucidating their basic etiologies and pathogenic mechanisms.	SPA	lecture	MCQ+ Formative

	<p>2. Identify the common clinical features shared by all SPA, including inflammatory back pain, enthesitis, peripheral arthritis, and extra-articular manifestations such as uveitis and psoriasis, to facilitate recognition and diagnosis.</p> <p>3. Differentiate between specific types of SPA and their characteristic clinical presentations, such as axial involvement predominant in AS, peripheral arthritis and skin involvement in PsA, and the association with preceding infections in ReA.</p> <p>4. Employ a systematic approach to differential diagnosis, considering other rheumatologic conditions, infectious etiologies, and non-inflammatory causes of musculoskeletal symptoms, based on clinical evaluation, laboratory testing, and imaging studies.</p> <p>5. Utilize appropriate diagnostic modalities, including laboratory investigations (such as inflammatory markers, HLA-B27 testing), imaging studies (such as MRI, radiographs), and clinical assessment tools (such as Bath Ankylosing Spondylitis Disease Activity Index), to confirm diagnosis and assess disease activity.</p> <p>6. Establish basic therapeutic targets for SPA management, aiming to reduce inflammation, control symptoms, preserve function, and prevent structural damage, through the use</p>			
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		<p>of nonsteroidal anti-inflammatory drugs (NSAIDs), disease-modifying antirheumatic drugs (DMARDs), biologic agents, and targeted therapies.</p> <p>7. Recognize and manage potential complications of SPA, including spinal deformities, sacroiliitis, peripheral joint damage, uveitis, and inflammatory bowel disease-related complications, through appropriate monitoring and multidisciplinary care.</p>			
12	1	<p>1. Identify the various types of crystals implicated in crystal deposition diseases, including monosodium urate (MSU), calcium pyrophosphate dihydrate (CPPD), and hydroxyapatite crystals, by elucidating their composition and pathophysiological mechanisms of formation.</p> <p>2. Explore the pathophysiology underlying crystal formations, encompassing factors such as supersaturation of bodily fluids, alterations in pH levels, and impaired crystal clearance mechanisms, to comprehend the triggers and mechanisms leading to crystal deposition.</p> <p>3. Recognize the diverse clinical presentations associated with different types of crystals, ranging from acute gouty arthritis in MSU crystal deposition to pseudogout attacks in CPPD crystal deposition, and consider manifestations such as tophaceous deposits and chronic joint damage.</p>	Crystal Arthritis	lecture	MCQ+ Formative

		<p>4. Employ diagnostic approaches for crystal deposition diseases, utilizing techniques such as joint aspiration with polarized light microscopy to visualize characteristic crystal shapes, alongside laboratory tests to assess inflammatory markers and confirmatory imaging studies.</p> <p>5. Demonstrate proficiency in distinguishing crystal deposition diseases from infectious causes of joint inflammation, through careful clinical evaluation, appropriate laboratory investigations (including synovial fluid analysis), and consideration of risk factors and predisposing conditions.</p> <p>6. Establish therapeutic targets for managing crystal deposition diseases, aiming to alleviate acute symptoms, reduce inflammation, prevent recurrent attacks, and address underlying metabolic abnormalities through lifestyle modifications, pharmacological interventions (such as nonsteroidal anti-inflammatory drugs and colchicine), and targeted therapies.</p>			
13	1	<p>1. Explain the fundamental etiology and pathophysiology underlying Osteoarthritis (OA), elucidating the intricate interplay between mechanical stress, joint inflammation, and cartilage degradation.</p> <p>2. Identify the various types of OA and their diverse clinical</p>	OA	lecture	MCQ+ Formative

	<p>presentations across different joints, considering factors such as age, genetics, and joint biomechanics in disease manifestation.</p> <p>3. Understand the progressive degeneration and eventual fate of joints affected by OA, including cartilage erosion, subchondral bone changes, osteophyte formation, and joint deformity.</p> <p>4. Employ differential diagnosis (DDx) techniques to distinguish OA from other rheumatic and degenerative conditions, utilizing clinical assessment, imaging studies, and laboratory tests as necessary.</p> <p>5. Evaluate therapeutic options for managing OA, including controversial supplements, intra-articular injections (such as corticosteroids, hyaluronic acid), and surgical interventions (such as arthroplasty, osteotomy), considering their efficacy, risks, and patient-specific factors in treatment decision-making.</p>			
14	<p>1. Understand the causes and mechanisms of major Metabolic Bone Diseases (MBD), including osteoporosis, osteomalacia, Paget's disease, and metabolic osteopathies.</p> <p>2. Recognize the clinical types and presentations of MBD, noting characteristic symptoms, signs, and diagnostic findings.</p> <p>3. Identify diverse manifestations of MBD, including fractures, bone</p>	MBD	lecture	MCQ+Formative

		<p>pain, and skeletal deformities.</p> <p>4. Differentiate MBD from other bone disorders through clinical evaluation, lab tests, and imaging.</p> <p>5. Utilize diagnostic methods such as bone density testing and biochemical assays.</p> <p>6. Discuss preventive and therapeutic options for managing MBD, including lifestyle changes and pharmacological interventions tailored to individual needs.</p>			
15	1	<p>1.. Comprehend the fundamentals of Rehabilitation Medicine, encompassing its principles and objectives in restoring function and enhancing quality of life.</p> <p>2. Differentiate between the various types of rehabilitation, including physical, occupational, and speech therapy, tailored to address specific impairments and disabilities.</p> <p>3. Identify and analyze the different physical modalities and exercises utilized in rehabilitation, considering their indications and contraindications for optimal therapeutic outcomes.</p> <p>4. Evaluate the appropriateness of physical modalities and exercises based on individual patient needs, medical conditions, and treatment goals.</p> <p>5. Implement evidence-based rehabilitation interventions, employing a multidisciplinary approach to maximize patient outcomes and</p>	REHAB	lecture	



	facilitate independence in daily activities. 6. Continuously assess and adapt rehabilitation plans based on patient progress, functional goals, and evolving medical requirements, ensuring holistic and patient-centered care.			

**11. Course Evaluation**

1. Continuous Assessment
2. Case Presentations
3. Group Participation
4. Skills Assessment
5. Case Analysis
6. Self-Assessment: Via Google Classroom
7. Comprehensive Examinations (MCQs and Case Based Assays)

**12. Learning and Teaching Resources**

Required textbooks (curricular books, if any)	<ol style="list-style-type: none"> <li>1. Davidson’s Principles and Practice of Medicine</li> <li>2. Bailey and Love’s textbook of surgery</li> <li>3. Harrison’s Principles of Internal Medicine</li> </ol>
Main references (sources)	Kelley and Firestein Textbook of Rheumatology
Recommended books and references (scientific journals, reports...)	UPTODATE
Electronic References, Websites	EULAR/ACR websites: <a href="https://rheumatology.org/">https://rheumatology.org/</a>