



وزارة التعليم العالي والبحث العلمي  
جهاز الإشراف والتقويم العلمي  
دائرة ضمان الجودة والاعتماد الأكاديمي

## استماره وصف البرنامج الأكاديمي للكليات والمعاهد

الجامعة: وارت الانبياء (ع)

الكلية/ المعهد: كلية الطب

الكلية/المعهد: كلية الطب  
القسم العلمي: وحدة التعليم لغير المولدة، سالة  
العام الدراسي: 2025-2026

لعام دراسي 2025-2026:

تاریخ ملأ الملف: 2025/12/23

### التوقيع:

المعاون العلمي: أ.م.د علي عبد الرضا الغرة

التاريخ : 2025 \ 12 \ 23

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ريخ : 2025 \ 12 \ 23

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دفق الملف من قبل  
مدير شعبة ضمان الجودة والأداء الجامعي  
أ.د. علي موسى مهدي  
٢٥١٢

الاستاذ الدكتور  
علي عبد سعدون  
2025 \ 12 \ 23





وزارة التعليم العالي والبحث العلمي  
جامعة وارث الأنبياء عليه السلام  
كلية الطب

## دليل البرنامج الأكاديمي ووصف المقررات الدراسية

2026

## نموذج وصف المقرر الدراسي

اسم المقرر الدراسي: الوحدة **السلطنة**: وحدة جهاز العضلي والحركي

رمز المقرر  
**Medu202**

الفصل الدراسي / السنة:

**2025-2026**

تاريخ إعداد الوصف:  
**2025**

أشكال الحضور المتاحة:

عدد ساعات الاعتماد (الإجمالي) / عدد الوحدات (الإجمالي):

**120** ساعة

أسماء مسؤولي المقرر:

أهداف المقرر:

- وصف التشريح الكلي للعظام والمقاييس والعضلات مع ترويبيتها الدموية والتعصيب •
- D. شرح فسيولوجيا انقباض العضلات ودور الكالسيوم وفيتامين •
  - فهم نمو العظام وتطورها وإعادة تشكيلها •
- ، التقرس، وهشاشة (OA) ، الروماتويد (RA) التعرف على الأضطرابات التنكسيّة والالتهابية مثل الفصال العظمي العظام •
- التعرف على الأورام الشائعة للعظام والأشعة الرخوة •

- والتهاب المفاصل الإنترى (osteomyelitis) مناقشة الأمراض المعدية للعظام والمفاصل مثل التهاب العظام والنقرى مع ذكر مسبباتها الدقيقة (septic arthritis).
- DMARDs، الكورتيكosteroids، (NSAIDs) توضيح علم الأدوية لمضادات التهاب غير الستيرويدية وليسيفسونات (آلية العمل، الاستخدامات، والأثار الجانبية).
- ممارسة المهارات السريرية:أخذ التاريخ المرضي، فحص الجهاز العضلى الهيكلى، وتقدير الحركة.
- دمج العلوم الأساسية مع الخصائص السريرية لتشخيص وإدارة الحالات.

استراتيجيات التدريس والتعلم :-

المحاضرات النظرية

التدريب العملى ومخبر المهارات

الندوات والمناقشات الجماعية

(PBL) التعلم القائم على حل المشكلات

هيكل المقرر:

أ. خريطة المنهج الدراسي

week s	discipline	objectives	hours	Practical sessions & hours
<b>1</b>	<u>Anatomy</u>	1. Anatomy of shoulder region & joint 2. Axilla: walls & contents 3. Anatomy of the brachial plexus & its lesions	2	<u>Practical lab</u> <b>Lab 1- anatomy (2 Hrs)</b> Anatomy of shoulder region & joint
	<u>Pathology</u>	1- understand the Definition and types of cell injury. 2- recognize the causes and mechanisms of cell injury	4	<u>Practical lab</u> <b>Lab- pathology (2 Hrs)</b> 1. Identify the morphological changes encountered in acute and

		<p>3- explain the various mechanisms of cell adaptation to injury.</p> <p>4- Discuss necrosis and its types.</p> <p>5- Discuss apoptosis and its mechanism.</p> <p>6- Recognize the mechanism of acute inflammation.</p> <p>7- Understand the chemical and cellular mediators of inflammation.</p> <p>8- Understand the Sequence of events in acute inflammation.</p> <p>9- Recognize morphological patterns of acute inflammation.</p> <p>10- recognize the systemic effect of inflammation</p>		<p>chronic inflammatory states.</p> <p>2. Recognize the morphological changes in different patterns of acute inflammation</p>
	<u>Biochemistry</u>	Eicosanoid metabolism: Phospholipases, cyclo-oxygenases & peroxidases	1	
	<u>Pharmacology</u>	<p>Pharmacology of NSAIDs</p> <p>1. Eicosanoids, synthesis and pharmacological effects</p> <p>2. General pharmacology of NSAIDs</p> <p>3. Pharmacology of aspirin &amp; paracetamol</p> <p>4. Pharmacology of other members</p>	2	
	<u>Radiology</u>	<p>Shoulder impingement syndrome</p> <p>1. Basic imaging modalities</p> <p>2. Basic imaging modalities of MSK system</p> <p>3. Imaging modalities of shoulder region</p>	1	
	<u>Clinical</u>	Shoulder pain	2	

<b>2</b>	<b><u>Anatomy</u></b>	<ol style="list-style-type: none"> <li>1. Ant. &amp; post. Compartments of the arm</li> <li>2. Gross &amp; micro structure of bone tissue &amp; growth</li> <li>3. Muscles of the back working on upper limb</li> </ol>	<b>4</b>	<b><u>Practical lab</u></b> <b>Lab 1- Anatomy (2 Hrs)</b>
	<b><u>Physiology</u></b>	<ol style="list-style-type: none"> <li>1. Sensory receptors</li> <li>2. Classification of Sensory receptors</li> <li>3. Pathway and Cortical Representation</li> <li>4. Type of sensation</li> <li>5. Touch and pressure</li> <li>6. Proprioceptive</li> <li>7. Synthetic Senses, Two-Point Discrimination, Stereognosis, Vibratory Sensibility</li> </ol>		<b>2</b>
	<b><u>Pathology</u></b>	<ol style="list-style-type: none"> <li>1- Definition and causes of chronic inflammation</li> <li>2- Identify the cells of chronic inflammation</li> <li>3- Understand the etiology and main features of granulomatous inflammation</li> <li>4- Understand the mechanism of tissue healing (regeneration and repair).</li> <li>5- Recognize the sequence of events in tissue repair.</li> <li>6- Recognize the differences between primary and secondary intention healing.</li> <li>7- Factors that could affect healing process.</li> </ol> <p>Understand the healing process of bone fracture</p>		<b>3</b>

	<u>Pharmacology</u>	<b>Pain management, pharmacology of Narcotic Analgesics</b> <ol style="list-style-type: none"> <li>1. General pharmacology of narcotic analgesics</li> <li>2. Pharmacology of morphine</li> <li>3. Opioids dependence (review)</li> <li>4. Opioids poisoning</li> <li>5. Pharmacology of other members</li> <li>6. Opioids antagonists</li> </ol>	2	
	<u>Radiology</u>	fracture in the arm with nerve injury Radiological identification of fractures	1	
	<u>Clinical</u>	Radial nerve Injury Fracture proximal humerus Axillary nerve injury	2	
3	<u>Anatomy</u>	1. Cubital fossa & elbow J. 2. Ant. & posterior compartments of forearm 3. Dorsum of hand 4. Sensory tracts of spinal cord 5. Dermatomes of upper limb	4	<b>Practical lab</b> <b>Lab 1-anatomy (2 Hrs)</b>
	<u>Physiology</u>	Definition of pain. Pain Receptors & pathway. Classification and Types of pain. Referred pain. Physiological inhibitor of pain and the mechanisms of analgesia. Management of neuropathic pain	2	
	<u>Clinical</u>	Herpes zoster	2	

4	<u>Anatomy</u>	Anatomy of wrist joint & palm of hand	4	<u>Practical lab</u> <b>Lab 1- anatomy (2 Hrs)</b>
	<u>Physiology</u>	<ol style="list-style-type: none"> <li>1. The basic unit of reflexes and the Basic Neural Circuits</li> <li>2. Type of reflexes</li> <li>3. THE STRETCH REFLEX</li> <li>4. Muscle Spindles</li> <li>5. <math>\alpha</math>-<math>\gamma</math> linkage</li> <li>6. Reciprocal Innervation</li> <li>7. Inverse Stretch Reflex</li> <li>8. The withdrawal reflex</li> <li>9. Property of reflexes</li> <li>10. Factor affected in reflexes</li> </ol>	2	
	<u>Pathology</u>	<ol style="list-style-type: none"> <li>1- Understand the pathological changes of joints in Rheumatoid arthritis.</li> <li>2- Understand the Pathological changes of joints in other types of arthritis</li> </ol>	1	
	<u>Pharmacology</u>	<ol style="list-style-type: none"> <li>1. Pharmacology of Immunosuppressant drugs</li> <li>2. Pharmacology of DMARDs</li> </ol>	2	
	<u>Radiology</u>	<p>pain and swelling of the hand joints (rheumatoid arthritis)</p> <ol style="list-style-type: none"> <li>1. Basic principles of ultrasonography</li> <li>2. Imaging modalities of the wrist and hand</li> </ol>	1	
5	<u>Anatomy</u>	<ol style="list-style-type: none"> <li>1. The structure and function of the vertebral column &amp; IV disc</li> <li>2. Dermatomes of the lower limb</li> </ol>	2	<u>Practical lab</u> <b>Lab 1- anatomy (2 Hrs)</b>

	<p><b>Physiology</b></p> <ol style="list-style-type: none"> <li>1. Nerve conduction studies</li> <li>2. types of nerve fibers</li> <li>3. Electrical changes in skeletal muscles</li> <li>4. The sarcotubular system</li> <li>5. The E-C coupling &amp; mechanism of muscle contraction</li> <li>6. Mechanisms of muscle contraction &amp; cross-bridge function</li> <li>7. Types of contraction</li> <li>8. The oxygen debt mechanism</li> <li>9. Muscle fiber types and motor unit type</li> </ol>	<b>4</b>	
	<p><b>Pharmacology</b></p> <p>Local anesthesia</p>	<b>1</b>	
	<p><b>Radiology</b></p> <p>low back pain radiating to the leg (sciatica)</p> <ol style="list-style-type: none"> <li>1. Imaging modalities of the spine.</li> </ol>	<b>1</b>	
	<p><b>Clinical</b></p> <p>SCIATICA , cervical</p>	<b>2</b>	
<b>6</b>	<p><b>Anatomy</b></p> <ol style="list-style-type: none"> <li>1. Hip J. &amp; blood supply of upper femur</li> <li>2. Femoral region</li> <li>3. Gluteal region</li> </ol> <p><b>Pathology</b></p> <p><b>Metabolic bone disorders</b></p> <ol style="list-style-type: none"> <li>1. Understand the definition and types of osteoporosis.</li> <li>2. Recognize the pathogenesis of osteoporosis.</li> </ol>	<b>4</b> <b>Practical lab</b> <b>Lab 1- anatomy (2 Hrs)</b>	

	<u>Biochemistry</u>	3. Recognize the other forms of acquired developmental bone diseases  Calcium homeostasis Metabolic bone diseases	3	
	<u>Pharmacology</u>	Treatment of osteoporosis	1	
	<u>Radiology</u>	-osteoporosis + femoral neck fracture 1. Imaging modalities of the hip joint	1	
	<u>Clinical</u>	Osteoporosis	2	
7	<u>Anatomy</u>	1.Ant. & medial compartments of thigh 2.Back of thigh & popliteal fossa 3.Developmental anomalies of MSK system	4	<b>Practical lab</b> <b>Lab 1- anatomy (2 Hrs)</b>
	<u>Pathology</u>	<b>Pathological changes of bone neoplasm</b> 1- revise the nomenclature of various types of tumors 2- revise the characteristics of neoplastic proliferation and the differences between benign and malignant tumors. 3- Understand the etiology of cancer (carcinogenic agents). 4- Identify the preneoplastic disorders. 5- understand the molecular bases of cancer. 6- recognize the general principles in cancer grading and staging. 7- Understand different modalities of cancer diagnosis.	5	<b>Practical lab</b> <b>Lab - pathology (2 Hrs)</b>  Recognize the gross and morphological changes in different types of benign and malignant tumors.

		8- recognize the generalized effect of cancer on the body with emphasis on the paraneoplastic syndromes. understand the types of benign and malignant tumours of the bone		
	<u>Pharmacology</u>	Anti cancer drugs: classification, mechanism of action, therapeutic uses, side effects	2	
8	<u>Anatomy</u>	1. Knee joint 2. Anatomy of the compartments of leg 3. Micro- & molecular structure & function of cartilage tissue	4	<u>Practical lab</u> <u>Lab 1- anatomy (2 Hrs)</u>
	<u>Physiology</u>	Physiology of the joint	1	
	<u>Pathology</u>	1- understand the pathological mechanism and morphological changes in osteoarthritis. 2- recognize the other forms of arthritis.	1	
	<u>Pharmacology</u>	Steroid drugs 1. Synthesis and regulation of adrenocorticosteroids 2. Pharmacology of glucocorticoids 3. Pharmacology of mineralocorticoids 4. Side effects of corticosteroid therapy 5. Inhibitors of adrenocorticoid biosynthesis or function	2	

	<b>Radiology</b>	-OA of the knee joint 1. Imaging modalities of knee joint	<b>1</b>	
	<b>Clinical</b>	Knee OA	<b>2</b>	
<b>9</b>	<b>Anatomy</b>	1.Normal gait cycle & disorders 2.Anatomy of foot and ankle 3.Motor tracts of spinal cord	<b>4</b>	<b>Practical lab</b> <b>Lab 1- anatomy (2 Hrs)</b>
	<b>Physiology</b>	Grading and strength of muscle contraction Muscle power and strength Factors responsible for grading muscular activity grading of muscle power gait cycle	<b>2</b>	
	<b>Biochemistry</b>	-Biochemistry of uric acid and its relation to gout	<b>2</b>	
	<b>Radiology</b>	Duchene muscular dystrophy. 1.imaging modalities of ankle and foot joints	<b>1</b>	
	<b>Clinical</b>	Myopathies	<b>2</b>	

## Clinical skill theme

Week	Clinical skill	Clinical skill objectives
1	History	General History Taking ( SOCRATES )
2	Examination	MSK ( shoulder ) exam & neuro exam
3	History & Exam	Elbow exam
4	History & Exam	Hand exam ( radial , ulnar & median )
5	History & Exam	Spine exam
6	History & Exam	Hip and thigh exam
7	History & Exam	Knee exam
8	History & Exam	Leg and foot exam
9	History & Exam	Gait exam

## Small Group PBL Tutorials:

Every week, students study a problem in a small group in the presence of a tutor. Students meet with the tutor on Sunday (first session) and Thursday (second session) every week. In the first PBL tutorial session, students: a) Read and interpret the case scenario (triggers) and define technical terms. b) Identify the key issues of the problem. c) Brainstorm, ask questions and generate hypotheses (possible causes and consequences). d) Indicate additional information, procedures, required to sort through the hypotheses and what you expect to learn from the additional information. e) Identify their learning needs i.e. objectives. 10 In between the first and second sessions, students follow a self-directed learning approach, using the relevant learning resources in studying the identified learning needs. In the second PBL tutorial session, students: - Present the newly gathered knowledge. - Relate it to the context of the problem. - Integrate the physical, biological and behavioral components in every problem. - Evaluate their tutorial performance

## Summary of the Unit Problems

week	Case presentation	Summary
1	A PAINFUL SHOULDER	21-year-old discus thrower with <b>progressive right shoulder pain</b> , worse at night, affecting sleep and throwing performance. Pain occurs with <b>arm elevation and mid-range movement</b> , with a catching sensation; daily activities like combing hair are painful.
2	Swelling in her left arm	Salima, a 65 year old grandmother, her left arm was broken after falling down while she was going to the kitchen to prepare breakfast at morning. The trauma resulted in fracture of the arm bone with possibility of involvement of the soft tissues around the fractured bone. The fracture was diagnosed and correctly managed without apparent complication.
3	PAIN IN THE ARM	68-year-old woman develops <b>severe left arm pain</b> , initially without rash, later accompanied by <b>vesicular rash along C5-C6 dermatomes</b> , after previous chickenpox. Diagnosis: <b>Herpes zoster (shingles)</b> with intense <b>postherpetic neuralgia</b> , causing sleep disturbance and functional impairment. Management: <b>NSAIDs, narcotics, antivirals, antidepressants, sleep aid</b> , but pain persists for weeks, highlighting chronic postherpetic neuralgia and reduced quality of life.
4	Aching pain in wrist	Qesmah is a 45-year-old teacher. She complains of pain and swelling in her hand joints, associated with morning stiffness and altered sensations of the fingers particularly at night. Symptoms have started 2 years ago with exacerbation in the last 3 weeks. Examination and investigations confirmed a chronic disease that might cause her hand disability, threatening her job. Good response has been observed by using anti-rheumatic medication
5	LOW BACK PAIN	Mr. Qasim is a 43-years-old taxi driver. He felt a sudden sharp low back pain after lifting heavy suitcase from the boot of his taxi. The pain spread to the back of his right thigh down to the leg. He was not able to move his body for many days during which his GP described him medications, however his friends advised him to see alternate therapist.
6	MUNA'S SOFT BONES	Muna is a 65-year-old woman with generalized pain in her bones and joints. Her GP discovered a silent generalized bone disease and advised her to take some food supplements. One night, she slipped in her bedroom, and suffered a bone fracture in her left leg. She underwent an operation with screws and plate to fix the fracture
7	SWELLING IN THE LEG	A 13-year-old boy developed a pain and swelling in lower part of his right thigh. He was properly examined by an orthopedist who asked for further investigations for provisional diagnosis. The possible lines of treatment have been explained to his family
8	PAINFUL KNEE	Fatima is a 55-year-old nurse aging with chronic pain in her left knee. Her GP discovers osteoarthritis. Despite medical treatment, the condition progresses until she requires a joint replacement
9	I wish to run	A 5-year-old boy has difficulty in running to catch up with his friends. He has 4/5 muscle strength in his extremities, with more apparent weakness of the proximal muscles. Gower's sign is positive. His muscle biopsy shows deficiency

		of dystrophin and variation in muscle fiber size. By age 9, he requires orthotic braces to assist his walking, and by age 11, he is confined to a wheelchair and undergoes a surgical correction for scoliosis. He also has a learning disability
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### Summary of the Unit Mini-PBLs

week	Case presentation	Summary
2	confirms fracture of the surgical neck of the humerus	72-year-old woman fell on her left side, now unable to move left shoulder with bruising, swelling, and tenderness. Cutaneous anesthesia over upper lateral arm suggests <b>axillary nerve involvement</b> . Radiology confirms <b>fracture of the surgical neck of the humerus</b> ; main concern is nerve injury and pain management
2	confirms fracture of the surgical neck of the humerus	32-year-old woman with gestational diabetes delivered a large (5 kg) baby vaginally with <b>shoulder dystocia</b> . Newborn has a <b>deformed, immobile right arm</b> , but is otherwise vigorous.
3	Fracture in elbow	Wisam a 6-year-old boy referred to orthopedics due to an isolated injury to his left elbow after falling on his outstretched left arm. On examination, the left elbow joint was swollen and clinically deformed with diffuse tenderness. The skin was intact and there was a neurovascular deficit in the left upper limb.
4	CTS	55-year-old painter with diabetes presents with <b>hand and wrist pain, tingling, and shooting pain up the arm</b> , worsened by activity. Examination shows <b>weak grip</b> ,

		difficulty grasping small objects, and thenar muscle wasting.
	Mallet finger	Volleyball player injures tip of index finger, with immediate pain, swelling, and inability to fully extend the distal joint. Examination shows <b>drooping fingertip and limited active extension at the distal interphalangeal joint.</b>
5	Cervical spondylosis	45-year-old carpenter with <b>2-month history of neck pain radiating to right shoulder and arm, worsening with movement.</b> Exam shows <b>limited neck flexion/rotation and recent tingling and numbness along right shoulder, arm, and forearm</b>
6	- Ahmad has fracture of femur	12-year-old boy sustained an <b>open mid-shaft femur fracture</b> while playing football, initially managed with wound cleaning and surgery. A week post-discharge, he develops <b>swelling and severe knee pain.</b>
7	SWELLING IN THE LEG	Rana 12-year-old has complained of sudden onset of severe pain in her left knee that has awakened her from sleep on several occasions during the past 6 weeks. For each episode, her mother has given her acetylsalicylic acid (aspirin), and the pain has been relieved. On physical examination, there are no remarkable findings
8	AC; tear	20-year-old footballer sustains <b>acute right knee injury</b> after jump and collision, with swelling, severe pain, and inability to bear weight. Exam: <b>positive anterior drawer test with excessive anterior tibial movement.</b>
	Common peroneal nerve palsy	23-year-old woman develops <b>right foot numbness, weakness, and foot drop</b> after prolonged labor (3

		hours in stirrups). Exam shows <b>sensory loss and inability to dorsiflex foot</b> , without back pain or contralateral symptoms.
9	LGMD)	20-year-old woman with <b>progressive proximal muscle weakness</b> (difficulty rising, climbing stairs, arm elevation) and <b>waddling gait</b> . Muscle biopsy confirmed <b>limb-girdle muscular dystrophy</b> , later complicated by calf wasting and frequent falls. She eventually required a <b>power wheelchair</b> , which improved independence and reduced fatigue
9	Dermatomyositis	43-year-old man with <b>progressive proximal muscle weakness</b> , <b>exercise-induced pain</b> , <b>lilac rash on eyelids</b> , and high CK (3600 IU/L). Muscle biopsy shows <b>perifascicular atrophy with inflammatory changes</b> , EMG confirms <b>myopathic process</b>

### تقييم المقرر الدراسي

تقييم الطلاب في هذه الوحدة يتضمن ما يلى

#### 1. التقييم الخاتمي للوحدة (END OF UNIT SUMMATIVE ASSESSMENT)

- سيفطي الامتحان (MSK) الوحدة الثالثة: الجهاز العضلي الهيكلي
- سلطن التواريخ والجداول لاحظاً
- مكونات الامتحان
- المواد المختبرية + (MCQ) الورقة التحريرية: أسلمة متعددة الاختيارات
- اختبار المهارات العملية (OSCE)

#### 2. تقييم جلسة التعلم القائم على حل المشكلات (ASSESSMENT OF THE PBL SESSION)

- موجود في الملحق PBL نموذج تقييم

#### 3. الملف الشخصي (PORTFOLIO)

- سيتم تسليم المحتوى التفصيلي للملف للطلاب بشكل منفصل

#### 4. مهارات الاتقان (MASTERY SKILLS)

- سيتم تخصيص امتحانات منفصلة لمهارات الاتقان
- ملاحظة مهمة: الطلاب الذين يفشلون في اجتياز امتحان مهارات الاتقان بالكفاية الكاملة لن يسمح لهم بدخول امتحان السنة النهائية