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**ISTANBUL MEDIPOL UNIVERSITY**

**INTERNATIONAL SCHOOL OF MEDICINE**



**MUSCULOSKELETAL BLOCK CLERKSHIP GUIDE**

**2021- 2022**

**MUSCULOSKELETAL BLOCK CLERKSHIP GUIDE**

**CLERKSHIP DESCRIPTION**

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| **Education Period** | Year V |
| **Clerkship Duration** | 4 Weeks |
| **Training Place** | Medipol Mega University Hospital |
| **Instrructors** | * Prof. Dr. Gülseren AKYÜZ * Prof. Dr. Ibrahim AZBOY * Prof. Dr. Ahmet Salim GÖKTEPE * Prof. Dr. Aylin REZVANİ * Assoc. Prof. Dr. Cem Coskun AVCI * Assoc. Prof. Dr. Sena TOLU * Assoc. Prof. Dr. Mehmet AĞIRMAN * Assis. Prof. Dr. Didem Sezgin ÖZCAN * Assis. Prof. Dr. Bilgehan ÇATAL * Assis. Prof. Dr. Mehmet Akif ÇAÇAN * Assis. Prof. Dr. Kadir UZEL * Assis. Prof. Dr. Aybars TEKCAN * Assis. Prof. Dr. Sadiye SARATAŞ * Assis. Prof. Dr. Member İlknur CAN * Assis. Prof. Dr. Caglayan ASLANBAŞ |
| **The Head Instructor** | * Prof. Dr. Aylin REZVANI * Prof. Dr. İbrahim AZBOY * Assis. Prof. Dr. Bilgehan ÇATAL |

**THE AIM OF MUSCULOSKELETAL BLOCK CLERKSHIP**

The musculoskeletal block, which consists of the department of orthopedics and traumatology and the department of physical medicine and rehabilitation, was created to clearly shape in the student's mind the areas where the two branches meet and separate. In this clerkship the evaluation, diagnosis, conservative treatment, rehabilitation and surgical treatment of muscles, nerves, bones, cartilage, other connective tissues, and joint diseases are discussed.

1- to provide the ability to take a pertinent history and perform a systematic physical exam with emphasis on the musculoskeletal and neurological exams

2- to recognize the significance of acute orthopedic injuries, including initial open fracture management, evaluation for compartment syndrome, precautions to be taken in the management of trauma patients, including those of the spine, and to be proficient in the initial management of appropriate splinting for the above-described injuries

3- to discuss the painful musculoskeletal diseases, bone and soft tissue tumors, fractures, dislocations and muscle, nerve, tendon, and soft tissue injuries, polytraumas, as well as other congenital or acquired physical insufficiency and disability conditions, which are common in pediatric and adulthood and cause significant morbidity and mortality.

4- to diagnose and treat the patients by creating a comprehensive rehabilitation program to restore maximum function lost throuMS injury, illness or disabling conditions.

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**Learning Methods:**

* Theoretical lectures;

1. Face-to-face lecture presentations
2. Case-based learning
3. Case studies

* **Practical Applications in;**

1. Services
2. Polyclinic rooms
3. Rehabilitation halls
4. Operating room
5. Plaster and dressing room
6. Emergency room

**MUSCULOSKELETAL BLOCK** **CLERKSHIP** **LEARNING GOALS**

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| **Course Name** | **Learning Objective of the Course / Application** | **Course Time / Application Time** |
| Physical Medicine and Rehabilitation; Introduction and Entrance | Comprehend the importance of PM&R as a medical brach | 1 |
| Have an idea about the working area and related diseases in PM&R |
| Understand the terminology of physical medicine, rehabilitation, physiatrist and other members of team in PM&R |
| Explain the agents and methods using in the treatment and in the rehabilitation of the diseases |
| The Evaluation of Patients with Musculoskeletal Diseases | Counts the regions to be examined in line with the patient's complaints | 1 |
| Explains evaluation by joint mobility, sensory/motor examination, pathological reflexes and special tests related to the region |
| Making the differential diagnosis of inflammatory and non-inflammatory diseases |
| Evaluates and analysis the physical examination, laboratory and x-rays |
| Lists the pre-diagnosis based on examination findings |
| Physical TheraPQ Agents | Counts the names of physical agents used in physical theraPQ | 1 |
| Lists the mechanisms of action of physical agents used in physical theraPQ |
| Explains the indications and contraindications of physical agents used in physical theraPQ |
| Osteoarthritis | Defining the osteoarthritis disease | 1 |
| Explains the etiology of osteoarthritis |
| Counts the risk factors of osteoarthritis |
| Counts the clinical characteristics and symptoms of osteoarthritis |
| Describes the typical physical examination findings in osteoarthritis |
| Counts laboratory and radiographic findings in osteoarthritis |
| Manage the pharmacologic and non-pharmacologic treatment of osteoarthritis |
| Rheumatoid Arthritis | Defining the rheumatoid arthritis | 1 |
| Counts the risk factors for rheumatoid arthritis |
| Outlines the clinical signs and symptoms of rheumatoid arthritis |
| Counts the laboratory examinations that should be requested in patients with suspected rheumatoid arthritis |
| Explains the pre-treatment options of the patient with rheumatoid arthritis. |
| Refers the patient to specialists |
| Neck and Upper  back pains | Counts the etiology of neck and back pain under the main headings. | 2 |
| Describes the clinical signs and symptoms of the neck and back pain |
| Counts the diagnostic methods used in the neck and back pain |
| Makes the differential diagnosis in neck and back pain |
| Plans the treatment and preventive treatment of the patient who comes with neck and milking |
| Spinal Cord Injury Rehabilitation | Describes the spinal cord anatomical structure | 1 |
| Explains how to detect key muscles, neurological level, sensory and motor level in examining a patient with spinal cord injury |
| Explains the complications of spinal cord injury |
| Defines the functional targets related to the level of injury |

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| **Course Name** | **Learning Objective of the Course / Application** | **Course Time / Application Time** |
| Shoulder Pains | Counts the etiological factors of shoulder pain | 2 |
| Outlines the clinical signs and symptoms of shoulder pain |
| Makes differential diagnosis in shoulder pain |
| Counts the diagnostic methods used in shoulder pain. |
| Manage the treatment and preventive treatment of the patient who comes with shoulder pain. |
| Soft Tissue Rheumatism | Explains the identification and mechanism of different soft tissue rheumatisms (bursitis, tendinitis, fibromyalgia, myophasial pain syndrome). | 1 |
| Outlines the clinical signs and symptoms of different soft tissue rheumatisms. |
| Manage the treatments of soft tissue rheumatism. |
| Mechanical Low Back Pain and Lumbar Disc Herniation | Counts the etiology of low back pain and disc herniation | 2 |
| Describes the clinical signs and symptoms of tlow back pain and disc herniation |
| Counts the diagnostic methods used in low back pain and disc herniation |
| Makes the differential diagnosis in low back pain |
| Plans the treatment and preventive treatment of the patient who comes with low back pain and disc herniation |
| Spondyloarthritis | Make the classification of spondyloarthritis. | 1 |
| Counts clinical signs and symptoms of spondyloarthritis. |
| Describe the classification criteria of ankylosing spondylitis |
| Informs the patient about spondyloarthritis and ankylosing spondylitis disease. |
| Refers the patient to a specialist |
| Chronic Pain Syndrome | Describes the definition of pain | 1 |
| Describes physiological processes in the perception of pain. |
| Distinguishes acute/chronic pain./ Outlines the steps in pain treatment. |
| Describes common medications and side effects in the treatment of pain. |
| Cerebral Palsy (SP) | Counts the risk factors for development of SP / Defines SP | 1 |
| Describes the signs and symptoms that suggest the diagnosis of SP |
| Defines the types of SP |
| Describes the treatment target of SP patient and counts the treatment methods in headings |
| Neurological Rehabilitation | Identifies the terminology of disorder, disability and handicape | 1 |
| Describes the main aim of neurological rehabilitation |
| Lists the treatment methods used in neurological rehabilitation |
| Osteoporosis | Defines the metabolic bone diseases. | 1 |
| Counts the risk factors in osteoporosis |
| Lists the laboratory and clinical findings of metabolic bone diseases and osteoporosis. |
| Describes the diagnosis of metabolic bone diseases and osteoporosis. |
| Describes the prevention method of osteoporosis. |
| Complex Regional Pain Syndrome (KBAS) | Identifies the KBAS | 1 |
| Outlines the KBAS's risk factors |
| Counts the clinical signs and symptoms of KBAS |
| Describes the stages of KBAS |
| Explains ways to protect against KBAS |
| Lymphedema and Lipedema | Remind lymphedema and lipedema in a patient who presented with edema | 1 |
| Counts the causes of lymphedema and lipedema under the main headings |
| Counts the clinical signs and symptoms of lymphedema and lipedema |
| Counts the diagnostic methods in lymphedema and lipedema |

**ASSOCIATION OF LEARNING OBJECTIVES WITH PROGRAM COMPETENCIES AND KEY ROLES**

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| **LEARNING GOAL** | **RELATED PROGRAM QUALIFICATIONS** | **BASIC ROLE** | **MEDICAL SKILLS** |
| **R1- Medical Expert**  **R2-Collaborator**  **R3-Communicator**  **R4-Leader**  **R5-Health Advocate**  **R6-Scholar**  **R7-Professional** | **MS1- Analytical and Critical Thinking**  **MS2-Clinical Questioning-Reasoning**  **MS3-Problem Solving**  **MS4-Accessing and Using Information**  **MS5-Lifelong Learning**  **MS6-Communication and Teamwork** |
| Remembers anatomy and physiology information about the musculoskeletal system and nervous system. | PQ1 | R1 |  |
| Using effective communication routes, creates a list of differential diagnoses in musculoskeletal and nervous system diseases throuMS patient history, anamnesis, physical examinations and laboratory tests | PQ1, PQ6, PQ11, PQ14 | RI, R3, R7, | MS1, MS2, MS3, MS6 |
| With taking a proper patient anamnesis and physical examination findings, makes a pre-diagnosis of rheumatoid arthritis, spondyloarthritis and osteoporosis and explain the referral criteria | PQ1, PQ2, PQ5, PQ6 | R1 | MS1, MS2, MS3 |
| By interpreting the results of diagnostic tests, makes the diagnosis of osteoarthritis, disc herniation, low back pain, neck and upper back pain and related diseases. Explain the risk factors, follows, monitors, and explain the ways to reduce their frequency. | PQ1, PQ2, PQ5,PQ6, PQ7, PQ14 | R1, R2,R7 | MS1, MS2, MS3, MS6 |
| Monitors and follows the certain musculoskeletal diseases such as osteoarthritis, back and neck pain. | PQ2, PQ3, PQ4, PQ14 | R1, R2 | MS4, MS6 |
| Selectively diagnoses diseases such as soft tissue rheumatism and explains the principles of treatment within the scope of rational drug use principles. | PQ1, PQ2, PQ3, PQ6, PQ7, PQ11, PQ14, PQ18 | R1, R5, R7 | MS1, MS2, MS3, MS6 |
| Explains the principles to be considered when providing consultancy services related to osteoporosis for the community with presentations or panel arrangements made in small groups. | PQ4, PQ12, PQ13, PQ14, PQ15, PQ16, PQ17 | R1, R2, R4, R5, R7 | MS6 |

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| **LEARNING GOAL** | **RELATED PROGRAM QUALIFICATIONS** | **BASIC ROLE** | **MEDICAL SKILLS** |
| **R1- Medical Expert**  **R2-Collaborator**  **R3-Communicator**  **R4-Leader**  **R5-Health Advocate**  **R6-Scholar**  **R7-Professional** | **MS1- Analytical and Critical Thinking**  **MS2-Clinical Questioning-Reasoning**  **MS3-Problem Solving**  **MS4-Accessing and Using Information**  **MS5-Lifelong Learning**  **MS6-Communication and Teamwork** |
| Understands the importance of multidisciplinary approach in diagnosis and treatment of diseases such as joint pain and swelling/arthritis, osteoarthritis, low back, neck and upper back pain. | PQ12, PQ14, PQ20 | R2, R4, R7 |  |
| Explains the basic principles of rehabilitation of congenital and acquired neurological and orthopedic diseases seen in adult and pediatrics. | PQ4, PQ12, PQ13, PQ14, PQ15, PQ16, PQ17 | R1, R2, R4, R5, R7 | MS6 |
| Listens to the patient's complaint and makes the necessary inquiry in order to make a pre-diagnosis. | PQ1, PQ6, PQ7 | R1, R3, R7 | MS2, MS6 |
| Performs the physical examination of musculoskeletal system (posture, walking) and evaluate the joints range of motion | PQ1, PQ6, PQ7 | R1, R3, R7 | MS2, MS6 |
| Applies the most commonly used special tests in musculoskeletal exam. | PQ1, PQ6, PQ7 | R1, R3, R7 | MS2, MS6 |
| Makes the peripheral nervous system examination. | PQ1, PQ6, PQ7 | R1, R3, R7 | MS2, MS6 |
| Understands the importance of using diagnostic methods from simple to complex by steps. | PQ1, PQ2, PQ7, PQ8, PQ18 | RI, R5, R7 | MS1, MS2, MS3 |
| Observes human and patient riMSts when providing medical services and adopts the principles of protection of personal data. | PQ18, PQ19 | R1, R3, R7 | MS6 |
| Defines the concepts of health, disease, quality of life and counts the sociocultural determinants of health and disease. | PQ1, PQ2, PQ7, PQ8, PQ18 | RI, R5, R7 | MS1, MS2, MS3 |

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| **LEARNING GOAL** | **RELATED PROGRAM QUALIFICATIONS** | **BASIC ROLE** | **MEDICAL SKILLS** |
| **R1- Medical Expert**  **R2-Collaborator**  **R3-Communicator**  **R4-Leader**  **R5-Health Advocate**  **R6-Scholar**  **R7-Professional** | **MS1- Analytical and Critical Thinking**  **MS2-Clinical Questioning-Reasoning**  **MS3-Problem Solving**  **MS4-Accessing and Using Information**  **MS5-Lifelong Learning**  **MS6-Communication and Teamwork** |
| Recalls knowledge of anatomy, bone and muscle physiology and histology related to the locomotor system. | PQ1 | R1 |  |
| Explains and interprets common clinical, laboratory and pathological findings of locomotor system diseases. | PQ1, PQ2, PQ14 | RI, R7 | MS1, MS2, MS3, |
| Explains and applies the measures to reduce the frequency of developmental hip dysplasia diseases in the community. | PQ1, PQ3, PQ14 | R1, R3, R5 | MS4, MS5 |
| Considers diseases such as tenosynovitis, spinal cord compression syndrome, myopathies, spondyloarthropathies as a preliminary diagnosis with anamnesis and physical examination findings. | PQ1, PQ2, PQ5, PQ6, PQ7, PQ14, PQ21 | R1 | MS1, MS2, MS3 |
| Explains the advanced examination and referral criteria of osteomyelitis, compartment syndrome and septic arthritis. | PQ1, PQ2, PQ5,PQ6, PQ7, PQ14 | R1,R7 | MS1, MS2, MS3, MS6 |
| Diagnoses diseases such as osteoarthritis and tenosynovitis by interpreting the results of diagnostic tests, provides counseling and follow-up by explaining the risk factors, and explains the measures to reduce their frequency. | PQI, PQ2, PQ3, PQ4, PQ6, PQ7, PQ8, PQ14, PQ21 | R1, R3, R7 | MS1, MS2, MS3, MS6 |
| Diagnoses dislocations, fractures, etc. by choosing appropriate physical examination and appropriate diagnostic tests. | PQ1, PQ2, PQ3, PQ5, PQ6, PQ7, PQ11, PQ14 | R1 | MS1, MS2, MS3 |
| **LEARNING GOAL** | **RELATED PROGRAM QUALIFICATIONS** | **BASIC ROLE** | **MEDICAL SKILLS** |
| **R1- Medical Expert**  **R2-Collaborator**  **R3-Communicator**  **R4-Leader**  **R5-Health Advocate**  **R6-Scholar**  **R7-Professional** | **MS1- Analytical and Critical Thinking**  **MS2-Clinical Questioning-Reasoning**  **MS3-Problem Solving**  **MS4-Accessing and Using Information**  **MS5-Lifelong Learning**  **MS6-Communication and Teamwork** |
| Manages diseases such as developmental hip dysplasia and osteoarthritis. | PQ1, PQ2, PQ3, PQ6, PQ7, PQ8, PQ14 | R1,R5 | MS1, MS2, MS3, MS6 |
| Performs locomotor system inspection. | PQ1, PQ6, PQ7 | R1, R3, R7 | MS2, MS6 |
| Performs splint, cast and collar. Carries the amputate. | PQ1, PQ6, PQ7 | R1,R7 | MS2, MS6 |
| Uses diagnostic methods in fractures and dislocations step by step from simple to complex. | PQ1, PQ2, PQ7 | RI, R5, R7 | MS1, MS2, MS3 |
| Communicates effectively with patients, their relatives, and colleagues, both verbally and in writing. | PQ14 | R1, R3, R7 | MS6 |
| Explains what should be done in basic orthopedic health service delivery in mass disasters such as earthquakes. | PQ2, PQ3, PQ5, PQ14 | R1, R2, R3, R4, R7 | MS1, MS2, MS3,MS6 |
| Follows the current literature while practicing medicine. | PQ1, PQ9, PQ14, PQ16,PQ17,PQ20 | R1, R3, R7 | MS4, MS5 |
| While providing medical services, observes human and patient riMSts and adopts the principles of protection of personal data. | PQ18, PQ19 | R1, R3, R7 | MS6 |
| Understands the importance of a multidisciplinary approach in the diagnosis and treatment of diseases such as fractures, dislocations, compartment syndrome, septic arthritis, and osteomyelitis. | PQ14, PQ20 | R2, R4, R7 | MS6 |
| Explains the legal responsibilities in case of child abuse. | PQ11, PQ14 | R1,R7 | MS6 |

**MUSCULOSKELETAL BLOCK** **CLERKSHIP CEP TABLE**

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| **SYMPTOMS/CONDITIONS** | **CORE DISEASES / CLINICAL PROBLEMS** | **TERM 5 COURSE NAME** | **LEVEL OF LEARNING** | **MEASUREMENT EVALUATION METHOD** |
| **JOINT PAIN / SWELLING** | Osteoarthritis | 1. Knee Diseases 2. Hip Diseases 3. Surgical treatment in osteoarthritis | DT P F | Written-Oral |
| Tenosynovitis | 1. Hand and Wrist Diseases 2. Foot and Ankle Diseases 3. Surgical treatment of tenosynovitis | DT | Written-Oral |
| Dislocation | Dislocations and complications | D E P | Written-Oral |
| Extremity Trauma | 1. Upper extremity fractures 2. Lower extremity fractures 3. Childhood fractures 4. Approach to multiple trauma patients 5. Spinal Traumas | D E | Written-Oral |
| Arthritis | 1. Knee Diseases 2. Hip Diseases 3. Surgical treatment in osteoarthritis | D | Written-Oral |
| **RESTRICTED RANGE OF MOTION IN JOINTS** | Osteoarthritis | 1. Knee Diseases 2. Hip Diseases 3. Surgical treatment in osteoarthritis | DT P F İ | Written-Oral |
| Tenosynovitis | 1. Hand and Wrist Diseases 2. Foot and Ankle Diseases 3. Surgical treatment of tenosynovitis | DT | Written-Oral |
| Dislocation | Dislocations and complications | D E P | Written-Oral |
| Arthritis | 1. Knee Diseases 2. Hip Diseases 3. Surgical treatment in osteoarthritis | D | Written-Oral |
| Developmental Dysplasia of Hip (Hip Dislocation) | Developmental Dysplasia of Hip | PrD P | Written-Oral |

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| **SYMPTOMS/CONDITIONS** | **CORE DISEASES / CLINICAL PROBLEMS** | **TERM 5 COURSE NAME** | **LEVEL OF LEARNING** | **MEASUREMENT EVALUATION** |
| **MUSCULOSKELETAL SYSTEM PAIN (Back, Neck, Back, Hip and Extremity Pain)** | Osteoarthritis | 1. Knee Diseases 2. Hip Diseases 3. Surgical treatment in osteoarthritis | DT P F | Written-Oral |
| Tenosynovitis | 1. Hand and Wrist Diseases 2. Foot and Ankle Diseases 3. Surgical treatment of tenosynovitis | DT | Written-Oral |
| Dislocation | Dislocations and complications | D E P | Written-Oral |
| Arthritis | 1. Knee Diseases 2. Hip Diseases | D | Written-Oral |
| Shoulder pains | Surgical treatment of shoulder and elbow diseases | DT | Written-Oral |
| Lower back pain | Spinal Traumas | D | Written-Oral |
| Bone Tumors | Bone tumors | PrD | Written-Oral |

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| **SYMPTOMS/CONDITIONS** | **CORE DISEASES / CLINICAL PROBLEMS** | **TERM 5 COURSE NAME** | **LEVEL OF LEARNING** | **METHOD OF EXAMINATION** |
| **JOINT PAIN AND SWELLING** | Osteoarthritis | Osteoarthritis | D T P F | Written-Oral |
| Spondyloarthropathies | Seronegative Spondyloarthropathies | PreD | Written-Oral |
| Rheumatoid arthritis | Rheumatoid Arthritis | PreD | Written-Oral |
| Shoulder pains | Osteoarthritis | D T P F | Written-Oral |
| **MOBILITY RESTRICTION IN JOINTS** | Osteoarthritis | Osteoarthritis | D T P F | Written-Oral |
| Tenosynovitis | Soft Tissue Rheumatism | D T | Written-Oral |
| Spondyloarthropathies | spondyloarthropathies | PreD | Written-Oral |
| Rheumatoid arthritis | Rheumatoid arthritis | PreD | Written-Oral |
| **PAINFUL MUSCULOSKELETAL SYSTEM (Upper back, Neck, Lower back, Hip and Extremities)** | Osteoarthritis | Osteoarthritis | D T P F | Written-Oral |
| Tenosynovitis | Soft Tissue Rheumatism | D T | Written-Oral |
| Fibromyalgia | Soft Tissue Rheumatism | D | Written-Oral |
| Rheumatoid Arthritis | Rheumatoid Arthritis | PreD | Written-Oral |
| Spondyloarthropathies | spondyloarthropathies | PreD | Written-Oral |
| Shoulder pains | Shoulder pains | D | Written-Oral |
| Lower back pain | Mechanical lower back pain and lumbar disc hernia | D T | Written-Oral |
| Neck pains | Neck and back pains | D T | Written-Oral |
| **CHRONIC PAIN** | Osteoarthritis | Osteoarthritis | D T P F | Written-Oral |
| Lower back pain | Mechanical lower back pain and lumbar disc hernia | D T | Written-Oral |
| Fibromyalgia | Chronic pain syndromes | D | Written-Oral |
| Neck pains | Neck and back pains | D T | Written-Oral |
| **NEUROPATHIC PAIN** | Lower back pain | Mechanical lower back pain and lumbar disc hernia | D T | Written-Oral |
| Paraplegy, tetraplegia | Spinal cord injuries |  | written |
| Hemiplegia | Neurological rehabilitation |  | written |
| Nerve injuries | Tendon and nerve injuries rehabilitation |  | written |

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| **LEARNING LEVEL** | **EXPLANATION** |
| **E** | Should be able to recognize the emergency and perform emergency treatment, and refer him/her to a specialist when necessary. |
| **PreD** | Should be able to make a preliminary diagnosis and make the necessary preliminary actions and direct them to the specialist. |
| **D** | Should be able to make a diagnosis and have knowledge about the treatment, and should direct them to the specialist by making the necessary preliminary procedures. |
| **DT** | He should be able to diagnose, treat. |
| **F** | Should be able to perform long-term follow-up and control in primary care conditions. |
| **P** | Prevention measures (primary, secondary, tertiary prevention as appropriate/  ones) should be implemented. |

**MUSCULOSKELETAL BLOCK CLERKSHIP BASIC MANAGEMENT PRACTICES**

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| **APPLICATION** | **PRACTICE NAME** | **LECTURE NAME** | **LEVEL OF LEARNING** |
| **GETTING A PATIENT HISTORY** | Getting a General and Problem-Oriented History | 1. Lover extremity examination 2. Upper extremity examination 3. Bone tumors 4. Soft tissue tumors 5. Hip diseases 6. Knee diseases 7. Hand and wrist diseases 8. Foot and ankle diseases | 4 |
| **GENERAL AND PROBLEM- ORIENTED PHYSICAL EXAMINATION** | Muscle-Skeleton System Examination | 1. Lover extremity examination 2. Upper extremity examination 3. Bone tumors 4. Soft tissue tumors 5. Hip diseases 6. Knee diseases 7. Hand and wrist diseases 8. Foot and ankle diseases 9. Spinal trauma 10. Approach to multiple trauma patients 11. Dislocations and complications 12. Surgical treatment of tenosynovitis 13. Pelvic and acetabular fractures 14. Lower extremity fractures 15. Upper extremity fractures 16. Surgical treatment of shoulder and elbow diseases | 3 |
| **RECORD KEEPING, REPORTING AND NOTIFICATION** | Ability to edit prescriptions | 1. Hip diseases 2. Knee diseases 3. Hand and wrist diseases 4. Foot and ankle diseases | 4 |

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| **APPLICATION** | **APPLICATION NAME** | **TERM 5 COURSE NAME** | **LEVEL OF LEARNING** |
| **LABORATORY TESTS AND OTHER RELATED PROCEDURES** | Radiographic evaluation | 1. Bone tumors 2. Soft tissue tumors 3. Hip diseases 4. Knee diseases 5. Hand and wrist diseases 6. Foot and ankle diseases 7. Spinal travma 8. Approach to multiple trauma patients 9. Dislocations and complications 10. Pelvic and acetabular fractures 11. Lower extremity fractures 12. Upper extremity fractures 13. Surgical treatment of shoulder and elbow diseases | 3 |
| **LABORATORY TESTS AND OTHER RELATED PROCEDURES** | Being able to fill out the request form for laboratory tests | 1. Lover extremity examination 2. Upper extremity examination 3. Bone tumors 4. Soft tissue tumors 5. Hip diseases 6. Knee diseases 7. Hand and wrist diseases 8. Foot and ankle diseases 9. Spinal trauma 10. Approach to multiple trauma patients 11. Dislocations and complications 12. Surgical treatment of tenosynovitis 13. Pelvic and acetabular fractures 14. Lower extremity fractures 15. Upper extremity fractures 16. Surgical treatment of shoulder and elbow diseases | 3 |
| **INTERVENTIONAL AND NON- INTERVENTIONAL APPLICATIONS** | Prepare and apply a splint | Applying Splint and Plaster | 3 |
| **INTERVENTIONAL AND NON- INTERVENTIONAL APPLICATIONS** | Cervical Collar Application | Spinal Trauma | 4 |
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| **RECORD KEEPING, REPORTING** | Prescribing | 1. Osteoarthritis  2. Neck and upper back pain  3. Mechanical lower back pain and lumbar disc herniation  4. Soft tissue rheumatism | 4 |

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| **APPLICATION** | **APPLICATION NAME** | **TERM 5 COURSE NAME** | **LEVEL OF LEARNING** |
| **GENERAL AND PROBLEM-ORIENTED PHYSICAL EXAMINATION** | Musculoskeletal system examination | 1. Patient evaluation  2. Osteoarthritis  3-Rheumatoid arthritis  4. Mechanical lower back pain and lumbar disc herniation 5.Neck and upper back pain  6. Soft tissue diseases  7.Osteoporosis  8.Lipedema and lymphedema  9.Spondyloarthritis  10.Nerve and tendon injuries  11.Complex regional pain syndrome 12. Cerebral palsy  13. Shoulder pains  14. Chronic pain syndromes | 4 |
| **GENERAL AND PROBLEM-ORIENTED PHYSICAL EXAMINATION** | Neurological examination | 1.Mechanical lower back pain and lumbar disc herniation  2. Neck and upper back pain  3. Spinal Cord Injury Rehabilitation.  4. Nerve and tendon injuries  5. Cerebral palsy  6. Neurological Rehabilitation  7.Complex regional pain syndrome  8.Chronic pain syndrome | 3 |
| **LABORATORY TESTS AND OTHER RELATED PROCEDURES** | Reading and evaluating x-Ray | 1. Osteoarthritis  2. Neck and upper back pain  3. Mechanical lower back pain and lumbar disc herniation  4. Shoulder pain 5. Rheumatoid arthritis  6. Spondyloarthritis  7. Osteoporosis  8. Complex regional pain syndrome | 3 |
| **LABORATORY TESTS AND OTHER RELATED PROCEDURES** | Being able to fill out the request form for laboratory | 1. Osteoarthritis  2. Neck and upper back pain  3. Mechanical lower back pains and lumbar disc herniation  4. Shoulder pain  5. Rheumatoid arthritis  6. Spondyloarthritis  7. Osteoporosis  8. Complex regional pain syndrome | 3 |
| **INTERVENTIONAL AND NON-INTERVENTIONAL APPLICATIONS** | Ability to apply cervical collar | Neck and back pains | 3 |
| **PROTECTIVE MANAGEMENT AND COMMUNITY GOVERNMENT PRACTICES** | Providing health education to the community | 1. Osteoarthritis  2. Rheumatoid Arthritis  3. Mechanical lower back pain and lumbar disc herniation  4. Neck and upper back pains  5. Shoulder pain  5. Soft tissue rheumatism  6. Spondyloarthritis  7. Osteoporosis | 4 |

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| **MUSCULOSKELETAL BLOCK CLERKSHIP MEASUREMENT** **AND EVALUATION METHODS** |
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| After completing a 4-week musculoskeletal block clerkship, students will be subjected to two separate written and oral (practical) exams. |
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| **Written Exam:** |
| * Written exam consists of a total of 50 multiple choice questions with 40 minutes duration |
| * The 10% of questions are very easy, 10% are very difficult and the remaining 80% have a moderate difficulty. |
| * The CORE exam is a written exam system prepared from case-based learning lectures. |
|  |
| **Oral Exam:** |
| * Oral exams are held by two lecturers (a physiatrist and an orthopedist) on the day after the written exam. |
| * Oral exams consist of structured oral exams and physical examinations. |
|  |
| **Exam Scoring:** |
| * The points are; 40% of the written exam and 60% of the oral exam. |
| * Written score: 30% of multiple choice exam + 10% of CORE exam |
| * Oral score: 30% of the structured oral exam of orthopedics + 20% of the structured oral exam of orthopedics + 10% of the physical examination |
|  |
| **Success note;** |
| * The minimum passing grade is 60. Students who receive less than 60 must take the make-up exam |
| * The make-up exam is held every year in a time frame given jointly at the chair committee meeting. |
| * The make-up exam consists of only theoretical questions. Students who score 60 and above in this exam are successful. Students who get a grade below 60 are obliged to repeat the internship the next year. |
|  |

**Calculation of Final Score of Clerkship**

|  |  |
| --- | --- |
| **Exam Type** | **Percentage** |
| **Written** | %40 |
| **Oral (Practical)** | %60 |

**RECOMMENDED RESOURCES FOR PHYSICAL MEDICINE AND REHABILITATION CLERKSHIP**

1. Hasan Oguz (ed), Medical rehabilitation (2015). Nobel Medical Bookstores.
2. Şebnem Ataman and Peyman Yalcin (ed), (2012). Nobel book house
3. David X. Cifu (ed), Braddom’s Physical medicine and rehabilitation (2015). Elsevier