

Jordan University of Science and Technology
Faculty of Medicine
2018-2019

COURSE TITLE: Orthopedics/Traumatology
COURSE CODE: MED 553
CREDIT HOURS: 4.5
CALENDER DESCRIPTION: 4 Weeks
COURSE COORDINATOR: Dr. Ziyad Mohaidat

GENERAL OBJECTIVES:

By the end of this course, students are expected to:

- 1. To take proper history and perform physical examination.**
- 2. To investigate patients with orthopedic disorders.**
- 3. To know types of fractures, their classifications, and complications.**
- 4. To know a wide spectrum of orthopedic diseases.**

METHODS OF INSTRUCTION:

- _ Lectures.**
- _ Seminars.**
- _ Bed-side teaching.**

Course Description:

This is a student's Trauma and Orthopedics' Undergraduate Curriculum. It is an introductory course given as 4 weeks' clinical rotation offered to fifth year medical students. It describes the skills and objectives that should be achieved as an orthopedics student.

This curriculum aims to provide the students with a comprehensive overview of the specialty of orthopedics. They will gain a better understanding of orthopedics as a surgical specialty and learn about patient care they will encounter in general practice, especially as a primary care physician as many outpatient visits include orthopedics concerns.

The learning priorities for this clinical rotation are to gain insight and understanding of the most common presentations and conditions of the orthopedics cases to make the student more competent to recognize these common orthopedics conditions through an excellent clinical exposure by joining the highly qualified physicians in their clinics, as well as the orthopedics senior residents.

It is anticipated that all students will have opportunities to enhance their skills in history taking and clinical examination. This will improve their recognition of symptoms and signs and formulation of an accurate differential diagnosis which is important to focus on the primary care management of common conditions and to understand when a patient should be referred to secondary care.

The students are also required to present seminars that cover most of the orthopedics clinical conditions; these seminars are supervised by the consultants and the students should be actively involved in these clinical discussions, as part of their evaluation is based on these seminars presentation and discussion. The students are anticipated to participate actively in the morning report and bedside teaching.

The end rotation exam is every two weeks for each group.

Course Learning Outcomes:

- 1. To gain more clinical knowledge, and better understanding of common orthopedics conditions**
- 2. To acquire further learning experience in history taking in orthopedics and performing proper, specific orthopedics examination.**

- 3. Correctly know the investigation of patients with orthopedics disorders based on a focused exam.**
- 4. To properly assess of medical symptoms and signs and apply clinical reasoning to formulate a clear differential diagnosis and management plan.**
- 5. To understand the pharmacological, medical and surgical management of orthopedics patients.**
- 6. To identify the serious orthopedics diseases requiring urgent intervention**

RECOMMENDED TEXT BOOKS:

- 1- Adam's: Outline of orthopedics.**
- 2- Adam's: Outline of fractures.**
- 3- Apply's: System of orthopedics.**
- 4- MacRae's: Clinical evaluation.**
- 5- Miller's Review of Orthopaedics**

Seminars and Objectives

| Title | Objectives |
|---|--|
| Introduction to Orthopedic Surgery and Fractures | <ol style="list-style-type: none">1. Classify orthopedic disorders2. Taking proper history.3. Perform clinical examination.4. Investigate orthopedic disorders5. Classify fractures.6. Define treatment modalities. |
| Common Fractures and Fracture Complications | <ol style="list-style-type: none">1. Identify common fractures2. Describe different clinical and radiological aspects of common fractures3. Plan the different treatment options4. Recognize the life threatening complications of fractures5. Understand the different complications of fractures6. Learn the preventive measures and plan the treatment for fracture complications. |
| Orthopedic Oncology | <ol style="list-style-type: none">1. Define soft tissue and bone tumors.2. Define the clinical approach to both soft tissue and bone tumors.3. Know the proper imaging modalities and diagnostic approach.4. Recognize the different treatment modalities.5. Define metastatic bone disease.6. Recognize the orthopedic approach to metastatic bone disease. |

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| <p>Hand and Upper limb</p> | <ol style="list-style-type: none"> 1. Understand important anatomical aspects. 2. Demonstrate clinical skills in finding abnormal signs. 3. Classify hand, elbow and shoulder disorders. 4. Investigate different pathologies 5. Outline the treatment principles. |
| <p>Spine</p> | <ol style="list-style-type: none"> 1. Examine the spine. 2. Classify spinal disorders. 3. Highlight the importance of neurological findings. 4. Investigate spinal disorders. 5. Treatment plan for different spinal disorders. |
| <p>Osteomyelitis and Septic Arthritis</p> | <ol style="list-style-type: none"> 1. Define Osteomyelitis and Septic Arthritis 2. Identify the signs and symptoms of bone and joint infections. 3. Understand the pathogenesis. 4. Investigations in use. 5. Outline the treatment modalities |
| <p>Pediatric Orthopedics</p> | <ol style="list-style-type: none"> 1. Identify the common pediatric orthopedic conditions 2. Learn the clinical approach and subsequent radiological evaluation. 3. Recognize the different management modalities of Developmental Dysplasia of the Hip (DDH) and clubfoot. 4. Understand the basics of orthopedic surgical approach to pediatric patients. |

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| Arthritis | <ol style="list-style-type: none"> 1. Define arthritis. 2. Classify different types of arthritis. 3. Identify arthritis complication 4. Investigate patient with arthritis. 5. Recognize the different treatment options for arthritis specially osteoarthritis |
| Sports Medicine | <ol style="list-style-type: none"> 1. Define the common sports related injuries. 2. Classify sports related injuries especially of the knee and shoulder joints. 3. Identify the clinical and radiological approach of sports related injuries. 4. Outline treatment modalities 5. Recognize the different arthroscopic techniques specially of the shoulder and knee joints |

Clinical Rotation Objectives

| Competency | Required Skill(s) |
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| Patient Care: | <ol style="list-style-type: none"> 1. Perform a comprehensive history and physical examination of the pediatric and adult patient. 2. Develop a rational plan of care for patients. 3. Maintain adequate, compassionate communication with the patients and medical staff |

**Medical knowledge:
Develop adequate
knowledge by
observing of the
common disorders of
the orthopedics patient as
managed by board
certified sub specialists
in orthopedics.**

**1. Develop an understanding of
normal anatomy and
physiology as it relates to
the diagnosis and
management of orthopedics
patients.**

**2. Develop an understanding of
the following orthopedics
diseases and disorders
including but not limited to:
1. Fractures**

- 1. Complications of fractures**
- 2. Meniscus injuries**
- 3. Knee ligament injury**
- 4. Osteoarthritis**
- 5. Patellar dislocation**
- 6. Club foot**
- 7. Flat foot**
- 8. DDH**
- 9. Septic arthritis**
- 10. Osteomyelitis**
- 11. Scoliosis**
- 12. Kyphosis**
- 13. Spondylolisthesis**
- 14. Osteochondroma**
- 15. Osteoid osteoma**
- 16. Enchondroma**
- 17. Giant cell tumor**
- 18. Osteblastoma**
- 19. Osteosarcoma**
- 20. Ewing's sarcoma**
- 21. Metastatic bone tumors**
- 22. Rotator cuff disorders**
- 23. Frozen shoulder**
- 24. Shoulder instability**
- 25. Cubitus varus and valgus**
- 26. Lateral and medial
epicondylitis**
- 27. Hand deformities**

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| | 28.Acute hand infections 29.Carpal tunnel syndrome 30.Radial and ulnar nerve palsy 31.Erb's palsy |
| Communication skills | 3. Communicate effectively with patients and their families with the presence of their daily preceptor |

Course assessment

In-course evaluation: 15 marks

End of course exam: 45 marks

Final written exam: 40 marks

Intended Learning Outcomes (ILOS)

In addition to gaining specific skills in orthopedics, at the completion of this rotation, the student should have reached certain goals, including:

- **Demonstrate a sufficient understanding anatomy of the spine and upper and lower limbs.**
- **Understand the physiology of bone formation and healing.**
- **Improve the clinical evaluation, decision making, and management of patients with Orthopaedics problems.**
- **Expand their knowledge of disease processes related to this multi organ specialty.**