

# ORTHOPAEDICS

## Objectives

At the end of the course, the learner should be able to:

1. Acquire knowledge about etiopathogenesis, diagnosis & management of common orthopaedics disorders, musculoskeletal trauma and orthopedic emergencies.
2. Perform skills which are enumerated.

## KNOWLEDGE

### Course content

	Topics	Must know	Desirable to know
1	General principles of diagnosis, management and complications of musculoskeletal injuries	✓	
2	Diagnosis & management of fractures of		
	(i) Clavicle	✓	
	(ii) Supracondylar humerus	✓	
	(iii) Distal radius	✓	
	(iv) Proximal femur	✓	
	(v) Shaft of femur	✓	
	(vi) Both bones of leg	✓	
	(vii) Ankle Joint	✓	
	(viii) Spine	✓	
	(ix) Pelvis	✓	
	(x) Proximal Humerus		✓
	(xi) Shaft & Inter Condylar Humerus		✓
	(xii) Monteggia & Galeazzi's fractures		✓
	(xiii) Scaphoid & Bennett's		✓
	(xiv) Acetabulum		✓
	(xv) Distal femur & proximal tibia		✓
	(xvi) Patella		✓
	(xvii) Talus and calcaneum		✓
3	Diagnosis & management of dislocations of		
	(i) Shoulder	✓	
	(ii) Hip	✓	
	(iii) Elbow	✓	
4	Diagnosis & management of		
	(i) Peripheral nerves	✓	
	(ii) Brachial plexus	✓	

	Subject	Must know	Desirable to know
5	Diagnosis & management of (i) Pyogenic infections of bones & joints (ii) Spine /hip & knee	✓ ✓	
6	Classification of general principles of management of bone tumours and tumor like conditions	✓	
7	Diagnosis & management of (i) Benign bone tumours (bone cyst/osteochondroma/multiple exostosis / osteoid osteoma /enchondroma/giant cell tumour) (ii) Malignant bone tumors (Metastatic bone tumors / Osteosarcome/Ewings Sarcoma/Chondro sarcoma/Multiple Myeloma	✓ ✓	
8	Diagnosis & management of (i) Rickets & Ostomalacia (ii) Scurvy (iii) Osteoporosis	✓ ✓ ✓	
9	Diagnosis and management of osteoarthritis of (i) Knee joint (ii) Hip Joint	✓ ✓	
10	Diagnosis & management of (i) Cervical and lumbar spondylosis (ii) Spinal canal stenosis (iii) Disc disorders		✓ ✓ ✓
11	Diagnosis & management of (i) Rheumatoid arthritis (ii) Ankylosing spondylitis (iii) Seronegative arthritides	✓ ✓	✓
12	Diagnosis & management of repetitive stresses injuries around shoulder/elbow/wrist/ankle and spine		✓
13	Diagnosis & management of (i) CTEV (ii) Congenital hip dislocation (iii) Torticollis/congenital vertical talus/AMC/Spine bifida	✓ ✓	✓
14	Diagnosis and management of deformities (i) Genu varum/valgum (ii) Cubitus varus/valgum (iii) Scoliosis	✓ ✓ ✓	✓
15	Diagnosis & management of (i) Perthe's disease (ii) Ostogenesis imperfecta	✓ ✓	

5. Write a complete case record with all necessary details.
6. Write a proper discharge summary with all relevant information
7. Obtain informed consent for any examination/procedure

At the end of the learners should be able to perform:

### Skill

Skill	Perform independently	Perform under supervision	Assist the expert	Observe
(i) Relevant history and through clinical examination	✓			
(ii) Logical working diagnosis	✓			
(iii) Plan a need based and appropriate treatment protocol for common ailments	✓			
(iv) Recognize urgent situations for reference to higher centers	✓			
(v) Order & interpret X rays of fractures and dislocations	✓			
(vi) Splintage & transportation of injured patients	✓			
(vii) Apply skin traction		✓		
(viii) Apply figure of 8 bandage		✓		
(ix) Apply POP slab		✓		
(x) Splintage for long bone fracture		✓		
(xi) Aspiration of major joints			✓	
(xii) Peripheral nerve blocking techniques			✓	
(xiii) Splintage for spinal injuries			✓	
(xiv) Reduction of colle's fracture and cast application			✓	
(xv) Reduction of acute dislocations - hip/shoulder elbow joint				✓

### Assessment methods and tools

Knowledge:

- (i) Summative theory examination (End of IX semester)
- (ii) OSLE & Short cases
- (iii) Internal assessments

**Attitude-** Observation while examining cases (6<sup>th</sup> \* & 8<sup>th</sup> semester) & during internship

**Skills-** OSCE & Viva (IX term) /end of internship posting

### T/L METHODS

Content Cognitive content	Method Didactic Lectures Group discussions Symposia	Time table 20 hrs in 6 <sup>th</sup> semester 40 hrs in 8 <sup>th</sup> & 9 <sup>th</sup> semesters
Skill content	Video-demonstration followed by- Hands on practice on mannequins (Skills lab.) Clinical training	40 hrs  Clinical posting

### **Learning resource materials :**

1. Outline of Orthopaedics, 13th edition by John Crawford Adams , Published by David L Hamblen, Elsevier , Mosby , Saunders.
2. Apleys system of Orthopaedics and fractures , Butterworth-Heinmann Ltd., Oxford.
3. A manual on Clinical surgery, 4 th edition, S. DAS, 13, Old Mayor's Court, Calcutta 5.

### **Topics for e-learning**

- (i) Injuries of shoulder girdle
- (ii) Injuries of elbow
- (iii) Open fractures
- (iv) Spinal injuries
- (v) Complications of fractures
- (vi) Classification and management of bone tumorus
- (vii) Osteoporosis
- (viii) Minimally invasive surgery in orthopaedics
- (ix) Joint replacement surgery
- (x) Surgical procedures for fracture management