

Course Title	MUSCULOSKELETAL AND SPORTS SCIENCES III
Course Code	PT702
Course Credit	Lecture: 4
	Practical/Clinical Training: 2
	Total: 6

Course Objective	
<ol style="list-style-type: none"> 1. Understand clinical aspects of various conditions of lumbo-sacral spine and lower limb 2. Assess and manage various cases of lumbo-sacral spine and lower limb. 3. Evaluate and manage various sports injuries related to lumbo sacral spine and lower limb. 	

Detailed Syllabus

Sr. No.	Name of chapter & details	Hours Allotted
Section – I		
1	Introduction to Musculoskeletal and Sports science in Lumbosacral, sacroiliac and Lower limb	4
2	Musculoskeletal conditions Lumbosacral spine : Definition, classification, aetiology, pathogenesis, clinical features, clinical investigation and complications of the following conditions medical, surgical and physiotherapy management (assessment and treatment) of	
	Vertebral fractures,	4
	Arthropathies,	5
	Bone tumours,	2
	Ankylosing spondylitis	3
	Infectious disorders of bones and joints like TB of spine,	3
	Scoliosis, Flat back, Lordosis etc...	6
	Regional conditions of lower back	
	Low back pain	6
	lower cross syndrome,	4
	Prolapsed of intervertebral disc and Sciatica,	6

	Lumbar canal stenosis,	4
	Lumbarisation , sacralisation etc.	4
3	Musculoskeletal conditions of Pelvis: definition, classification, aetiology, pathogenesis, clinical features, clinical investigation and complications of the following conditions medical, surgical and physiotherapy management (assessment and treatment) of...	
	Fracture of Pelvic bone and Disruption of the ring	4
	Fracture of iliac crest	2
	Pelvic floor muscle weakness and training	3
	Injuries of coccyx	2
	Pelvic floor dysfunction	2
	Hernias in brief	1
	Soft tissue injury and pathology around pelvis	2
	Section II	
4	Definition, classification, aetiology, pathogenesis, clinical features, clinical investigation and complications of the following conditions medical, surgical and physiotherapy management (assessment and treatment) of...	
5	Musculoskeletal conditions of Hip joint and upper leg component :	
	Fracture of neck of Femur, intertrochanteric fracture, shaft femur, lower end and condylar fractures	2
	Slipped Capital Femoral Epiphysis, Perthes' disease, AVN of femur,	3
	Dislocation of the Hip joint, Congenital dislocation of Hip, MeralgiaParesthetica	3
	Amputations – Hip Disarticulation, above knee amputation	2
	Arthroplasty – Hemi replacement, Total Hip replacement, Girdle stone Arthroplasty	3
	Orthosis and prosthesis used for Musculoskeletal conditions of pelvis and thigh	2
	Bone tumours in and around hip joint	2

6	Musculoskeletal conditions of Knee and Lower leg component :	
	Fracture and Dislocation at and around knee joint.	3
	Knee Menisci injuries around the knee joint, Ligamentous injury around the knee joint,	2
	Backer's Cyst, Chondromalacia patellae,	2
	Amputations - Below knee amputation, Knee disarticulation	3
	Deformities – Genu varum, Genu Valgum, Genu recurvatum	2
	Arthritic and Degenerative conditions of Knee joint Osteoarthritis of knee joint,	4
	Infective conditions of Knee joint	1
	Total Knee replacement	2
	Orthosis and prosthesis used for Musculoskeletal conditions of Knee joint and lower leg	1
	Bone tumours	1
7	Musculoskeletal conditions of Ankle and Foot complex	
	Fracture around Ankle and Foot,	4
	Ankle Sprain and Strain	4
	Metatarsalgia, Morton's Neuroma	2
	Planter fasciitis, Calcaneum Spur	4
	Deformities : Pes cavus , Pes planus, CTEV, Congenital vertical talus, Hallux Valgus, Hallux Rigidus	2
	Arthritis and degenerative Conditions : Gout, Ankle osteoarthritis	2
	Infective conditions of Ankle : TB of Ankle etc...	1
	Amputations – Ankle disarticulation, Syme's Amputation etc.....	3
	Tumours around ankle and foot	1
8	Recent advances in Musculoskeletal and Sports science Basic of Orthosis and Prosthesis used in Rehabilitation of Musculoskeletal conditions Brief on Disability evaluation	3

Instructional Method:

1. Teaching and training sessions will be carried out through active learning. Active participation and contribution in group discussion and seminars are mandatory for students
2. Lectures to be conducted with the help of black board and/or audio-visual aids that includes multi-media projector, OHP, etc.
3. Problem based and/or case based assignments based on course content will be given to the students at the end of each unit/topic and will be evaluated at regular interval.
4. The course includes a laboratory where the students have an opportunity to build and appreciation for the concepts being taught in lectures.
5. Instruction method will be integrated with clinical training, bedside / class room teaching and tutorials as necessary.

Text Books:

1. Essential Orthopaedics – Maheshwari, 3rd edition, Mehta Publishers
2. Essential of Orthopaedics for Physiotherapists. 2nd edition. John Ebnezar, Jaypee publications

Reference Books:

1. Outline of Orthopaedics. 13th edition. Adams and Hamblen. Churchill Livingstone
2. Outline of fractures. 11th edition. Adams and Hamblen. Churchill Livingstone
3. Apley's System of Orthopaedics and Fractures – 9th edition. Solomon L; Warwick D; nayagam S.CRC Press 2013
4. Textbook of Orthopedics and Trauma- Kotwal and Natarajan, Elsevier