

Title of the Programme: Amrita Post Degree Fellowship in Musculoskeletal and Pain Rehabilitation

Course by course Curriculum:

Module 1 (mandatory)	Introduction	Dr Ravi Sankaran
SDL (notebook)	SGT (PPT for MD students)	AP (MD PMR, MBBS)
<p>Define Basic structure of Rehabilitation team</p> <p>Describe Goal Setting and Ethical Issues</p> <p>Describe Research Methodology (PICO model)</p> <p>Describe the process of goal setting and goal monitoring</p> <p>Describe ICF/ framing pain management using a bio psychosocial model</p> <p>Describe gender and ethical issues</p> <p>Describe building of a set up and team</p> <p>Describe pain measurement and pain scales</p> <p>Describe procedure documentation and coding</p>	<p>PPT 1: Talk about structure of a multidisciplinary pain clinic, metrics, goals, outcomes</p> <p>Basic Pain Management using a bio psychosocial model</p> <p>PPT 2: Know anatomy physiology Cellular mechanics in chronic pain and pharmacology relevant to chronic pain as well as to common categories of pain conditions.</p> <p>PPT 3 Journal Club Guidelines/ SR/ MA therapy modalities in overall care</p> <p>PPT 4 Journal Club Guidelines/ SR/ MA back pain</p>	<p>Extra-corporeal Shock Wave therapy</p> <p>Therapeutic exercises</p> <p>Cold laser therapy</p> <p>Neural therapy</p> <p>Therapeutic exercise</p> <p>Mechanism of action, recent guidelines, and EBM</p> <p>The processes of interaction with patients and their relatives</p>

Pain Medicine- Just the facts

Module 2 (mandatory)	Kinesiology	Dr Ravi Sankaran
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SDL (notebook)	SGT (PPT for MD students)	DOAP (posture chart, kinetic chain map, and pain charts to be shown to faculty)
<p>Detail Indication, contraindication and procedure for the following. add drawings for each</p> <p>Somatic dysfunction nomenclature</p> <p>Pelvic torsion</p> <p>Treatment</p>	<p>PPT 1: Posture types (Kendall)</p> <p>Kinect chains (Busquet) Phasic and tonic muscles with crossed syndromes (Janda)</p> <p>Muscle slings (Janda)</p> <p>PPT 2: Linked pathologies</p> <p>Localizing pathology</p> <p>Therapeutic exercise type</p> <p>PPT 3: Therapeutic exercise per posture type</p> <p>PPT 4: Exercise guidelines</p>	<p>assess 50 patients correctly, make and teach correct treatment plan</p>

Musculoskeletal Diagnosis and Management Janda

Muscles testing, Kendall

Musculoskeletal Medicine, Dvorak

Travel and Simons trigger point flipbook

Musculoskeletal medicine, Greenman

Module 3 (mandatory)	Ergonomics	Dr Ravi Sankaran/ Dr Anand Raja
_(Notebook)	T (PPT for MD students)	AP

<p>Ergonomics: design, assessment, interventions Ergonomic workplace assessment</p>	<p>PPT 1: REBA, RULA, workstation assessment</p> <p>PPT 2: job assessment- repeated sustained exertions forceful exertions localized contact stress posture stress vibration and cold material handling and effect on shoulders and back</p>	<p>Perform 50 worksite inspections correctly</p>
	<p>PPT 3: total office ergonomics and wearable sensors</p> <p>PPT 4: interventions for the workplace and job</p>	

UMich Ergonomics manual

<p>Module 4 (elective)</p>	<p>EMG and NCS</p>	<p>Dr Ravi Sankaran/ Dr Siby Gopinath/ Dr Gopikrishnan</p>
<p>SDL</p>	<p>SGT</p>	<p>DOAP (do NCS/ EMG)</p>

<p>Electroneuromyography Nerve Conduction studies EMG studies of Neurological illness</p>	<p>PPT 1: Review of the basic anatomy and Neurophysiology, Fundamentals of nerve Conductions, including motor, Sensory, and mixed nerve studies</p> <p>PPT 2: Important technical factors and artifacts, including Anomalous innervations, late responses, blink Reflexes, and repetitive nerve Stimulation</p> <p>PPT 3: The approach to the needle EMG examination, including the Assessment of spontaneous activity and the analysis of motor Unit action potentials.</p>	<p>Perform 10 each upper and lower limb conductions</p>
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Shapiro

<p>Module 5 (elective)</p>	<p>BASICS OF Diagnostic ULTRASOUND MSK</p>	<p>Dr Ravi Sankaran/ Dr Anand Raja</p>
<p>SDL</p>	<p>SGT (PPT for MD PMR)</p>	<p>DOAP (teach PMR PGs, MBBS, other rotation students)</p>

<p>Understanding MusculoSkeletal Ultrasound and sonoanatomy Basic Principles of B-Mode US Ultrasound and Tissue interaction Generation of Ultrasound Pulses Ultrasound Wavelength and Frequency Essential Knobology for Ultrasound-Guided Interventional pain management Enhancement and Techniques to Improve Procedure needle localization</p>	<p>PPT 1: Spine Sonoanatomy  PPT 2: Ultrasound of Shoulder Ultrasound of Elbow, Wrist, and Hand  PPT 3: Ultrasound of Hip, Knee, Ankle and Foot.  PPT 4: Ultrasound examination of muscles, tendons, and nerves of upper and lower extremity</p>	<p>Spine Sonoanatomy  Ultrasound of Shoulder, Elbow, Wrist, and Hand  Ultrasound of Hip,Knee, Ankle and Foot</p>
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Jacobson Ultrasound Anatomy

<p>Module 6 (elective)</p>	<p>FLUROSCOPIC GUIDED INTERVENTIONS</p>	<p>Dr Ravi Sankaran/ Dr Sajesh Menon/ Dr Sreehari NR</p>
<p>SDL</p>	<p>SGT</p>	<p>DOAP (observe, do injections with above faculty)</p>

<p>Understanding relevant MRI and CT                  Peripheral joint injections in upper limb                  Peripheral joint injections in lower limb                  Radiation                  Safety                  Indications/                  Contraindications/ procedure with diagrams for each SGT</p>	<p>PPT 1: Fluoroscopic Cervical, Thoracic, Lumbar Epidural Injections                   PPT 2: Cervical, Thoracic, Lumbar Selective Nerve injection                   PPT 3: Cervical, Thoracic, Lumbar Facet Injections                   PPT 4: Cervical, Thoracic, Lumbar Medial Branch Block, Sacroiliac Joint Injections</p>	<p>Zygapophysial joint injections                  Interspinous spacer                  Minimally Invasive Lumbar Decompression – Removal of thickened ligamentum flavum                  Facet joint nerve ablation                  Sacroiliac joint injection                  Epidural injections</p>
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Waldman textbook of pain interventions

<p>Module 7(elective)</p>	<p>ULTRASOUND GUIDED INTERVENTIONS</p>	<p>Dr Ravi Sankaran/ Dr Anand Raja</p>
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<p><b>SDL</b> Understanding Ultrasound guided interventional procedures. Ultrasound guided injections of joints</p> <p>Indications/ Contraindications/ procedure with diagrams for each SGT</p> <p>Nerve blocks: suprascapular, subscapular nerve, Iliohipogastric, Ilioinguinal, lateral femoral cutaneous, obturator, femoral and Inferior gluteal nerve block, tibial, common peroneal, ankle, Posterior Tibial, Deep</p>	<p><b>SGT</b> PPT1: Cervical &amp; Lumbar Zygapophyseal(facet) joint injections, Cervical &amp; lumbar nerve root block, Caudal, ganglion impar and sacroiliac joint injections</p> <p>PPT 2: Sympathetic and Peripheral nerve blocks and Neurolysis Shoulder joint and Bursal injections. Wrist, hand and elbow Injections. PPT 3: Hip injections Knee injection Trigger Point and Muscular Injections</p>	<p>DOAP (observe, do injections with above faculty)</p>
<p>peroneal, Sural, Saphenous, superficial peroneal &amp; plantar nerve</p>		

Physiatric Procedures in Clinical practice by Ted A Lennard 1995 edition

Pain Procedures in Clinical Practice by Ted a Lennard 3<sup>rd</sup> edition 2019.

Pain Procedures Waldman

<p>Module 8 (elective)</p>	<p>Regenerative Medicine</p>	<p>Dr Ravi Sankaran/ Dr Sasikumar NP</p>
<p><b>SDL</b></p>	<p><b>SGT</b></p>	<p>DOAP (observe, do injections with above faculty)</p>

<p>Management and Rehabilitation of:                  Degenerative disc diseases,                  Osteoarthritis of major joints,                  Neuropathy and myopathy,                  soft tissue injuries,                  Cumulative trauma Disorders,                  Hand and foot disorders,                  Osteoporosis</p> <p>Rehabilitation of patient with Rheumatologic conditions                  Treatment and Rehabilitation of patients with functional inactivity                  Regenerative Medicine. PRP injections with and without ultrasound guidance                  Peri-neural D5 injections                  Prolotherapy with Dextrose with and without US guidance</p>	<p>PPT 1: PRP                  PPT 2: BM stem cell injections,                  PPT 3: Prolotherapy                  PPT 4: Ozone</p>	
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Evidence based medicine guideline

Module 9 (elective)	Neural therapy	Dr Ravi Sankaran
SDL	SGT	DOAP
Cervical sympathetic blockade Stellate ganglion block Thoracic and Lumbar sympathetic blockade Acupuncture meridians and symptomatology	PPT: History of life Autonomic reflex testing Stellate ganglion block Anterior tonsils Pelvic plexus Inferior hypogastric plexus Otic	

Local Anesthetic Injection Manual Barop Manual  
 of Neural therapy Huneke



Module 10 (elective)	Pelvic floor pain and rehabilitation	Dr Ravi Sankaran
SDL	SGT	DOAP
Common causes of Pelvic floor pain Laycock exam Therapeutic exercise EMG biofeedback interventions	Common causes of Pelvic floor pain Laycock exam Therapeutic exercise EMG biofeedback interventions	Perform and report 20 Laycock exams Make 20 correct treatment plans

Chronic pelvic pain, Saunders