

**Competency-Based Dynamic Curriculum for MD/MS SIDDHA
(PRESCRIBED BY NCISM)**

தொட்டனைத் தூறும் மணற்கேணி மாந்தர்க்குக் கற்றனைத் தூறும் அறிவு

**Semester III-VI
Varma Maruthuvam
(Varma Medicine)
(SUBJECT CODE : SIDPG-VM)**

(Applicable from 2024-25 batch, from the academic year 2025-26 onwards until further notification by NCISM)



**BOARD OF UNANI, SIDDHA AND SOWA-RIGPA
NATIONAL COMMISSION FOR INDIAN SYSTEM OF MEDICINE
NEW DELHI-110026**

PREFACE

"MD Varma Maruthuvam: Unveiling the Science of Traditional Tamil Medicine"

Varma Maruthuvam, an ancient Tamil tradition, has been a cornerstone of healthcare in southern India for centuries. This postgraduate program, MD Varma Maruthuvam, embodies the synergy of traditional wisdom and modern medical sciences. Our mission is to cultivate expertise in Varma therapy, integrating the principles of Siddha medicine with contemporary healthcare needs. This comprehensive program is designed to foster clinical excellence, research acumen, and academic rigor. Through a rich curriculum, hands-on training, and interdisciplinary collaborations, we aim to produce specialists who can harmonize traditional and modern medical approaches.

Varma Maruthuvam, a branch of Siddha medicine, is rooted in the concept of vital energy flowing throughout the body. Any disruption in this energy flow can lead to illness, which is treated through therapeutic manipulation of varmam points, complemented by internal and external medications, to restore equilibrium. Varmam points are anatomical locations where life energy converges, serving as nodal points for channeling vital energy to various body parts, maintaining homeostasis. These points are situated at intersections of nerves, muscles, bones, and joints. According to varma manuscripts, 108 primary Varmam points exist, categorized into:

- 12 Paduvarmam points, concentrating high levels of pranic energy
- 96 Thoduvarmam points, containing lower levels of pranic energy

Varma maruthuvam involves the manipulation of Varmam points to release obstructed pranic energy, caused by trauma or other factors. Specific pressure is applied to these points to restore energy flow. The primary objective of Varma Maruthuvam is to reestablish the body's energy flow. This is achieved through:

- Manipulation of Varmam points
- Internal medications
- External medications

Revamped syllabus aims to nurture each student into a multifaceted expert, a successful Varmam specialist, academician, researcher, and clinician. Empowering the next generation of Varmam practitioners to integrate traditional wisdom with modern medical knowledge, fostering a harmonious blend of ancient and contemporary approaches to healthcare system.

This programme provides evidence-based Varmam therapy, Integrate Siddha principles with modern medical practices, conduct research and contribute to the scientific community, Promote healthcare accessibility and affordability and aims to develop expertise in Varma therapy and Siddha medicine, foster research and innovation in traditional medicine, enhance clinical skills and interdisciplinary task, Promote leadership and entrepreneurship in healthcare.

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We want that education by
which character is formed,
strength of mind is increased,
the intellect is expanded, and by
which one can stand on one's
own feet.

-Swami Vivekananda

NCISM

(NATIONAL COMMISSION FOR INDIAN SYSTEM OF MEDICINE)

Competency-Based Dynamic Curriculum MD/ MS SIDDHA

Varma Maruthuvam (SIDPG-VM)

Summary & Credit Framework

Semester III-VI

Module Number & Name	Credits	Notional Learning Hours	Maximum Marks of assessment of modules (Formative Assessment)
Semester No : 3			
Paper No : 1 (PRINCIPLES AND PRACTICES OF VARMAM MARUTHUVAM)			
M1 Methods of locating varmam points	1	30	25
M2 Varmam points in the head	3	90	75
Paper No : 2 (VARMAM THERAPEUTIC TECHNIQUES)			
M9 Varmam aga marundhu (Varmam internal medicine)	2	60	50
M10 Varmam Pura Marundhu (Varmam External Medicine)	2	60	50
Paper No : 3 (VARMA KAAYA MARUTHUVA IYAL(MANAGEMENT OF SIDDHA VARMAM TRAUMATOLOGY)			
M17 Introduction to varmam injuries & medicines used in varmam injuries	2	60	50
M18 Injuries of head & face and its varmam management	2	60	50
Paper No : 4 (ESSENTIALS IN TRAUMATOLOGY AND ORTHOPEDICS)			
M25 General principles of traumatology - Part1	2	60	50
M26 General principles of Traumatology -part 2	2	60	50
Total	16	480	400
Semester No : 4			
Paper No : 1 (PRINCIPLES AND PRACTICES OF VARMAM MARUTHUVAM)			
M3 Varmam points in the neck and chest	2	60	50
	2	60	50

M4 Varmam points in the upper limb			
Paper No : 2 (VARMAM THERAPEUTIC TECHNIQUES)			
M11 Therapeutic Application of Varmam Points	2	60	50
M12 Varmam Clinical Protocol	2	60	50
Paper No : 3 (VARMA KAAYA MARUTHUVA IYAL(MANAGEMENT OF SIDDHA VARMAM TRAUMATOLOGY)			
M19 Atchu-Elumbu Kaayangal (Injuries of the Axial Skeleton)	2	60	50
M20 Varmam Management For Regional Injuries – Part -I Upper limb injuries	2	60	50
Paper No : 4 (ESSENTIALS IN TRAUMATOLOGY AND ORTHOPEDICS)			
M27 Regional Traumatology part I injuries of the Upper limb	2	60	50
M28 Regional Traumatology Part II Injuries of the lower limb	2	60	50
Total	16	480	400
Semester No : 5			
Paper No : 1 (PRINCIPLES AND PRACTICES OF VARMAM MARUTHUVAM)			
M5 Varmam points in the Abdomen	2	60	50
M6 Varmam points in the Pelvis and Back	2	60	50
Paper No : 2 (VARMAM THERAPEUTIC TECHNIQUES)			
M13 Therapeutic application of adangal	2	60	50
M14 Therapeutic Application of Ilakku Murai and Thiravukol (Varmam Retrieving Techniques)	2	60	50
Paper No : 3 (VARMA KAAYA MARUTHUVA IYAL(MANAGEMENT OF SIDDHA VARMAM TRAUMATOLOGY)			
M21 Varmam Management For Regional Injuries –Part II- Lower limb injuries	2	60	50
M22 Varmam management for soft tissue injuries	2	60	50
Paper No : 4 (ESSENTIALS IN TRAUMATOLOGY AND ORTHOPEDICS)			
M29 General orthopedics-part I	2	60	50
M30 General orthopedics- part-2 and sports medicine	2	60	50
Total	16	480	400
Semester No : 6			
Paper No : 1 (PRINCIPLES AND PRACTICES OF VARMAM MARUTHUVAM)			
M7 Varmam points in the Lower limb	2	60	50

M8 Varmam therapies for various Diseases	2	60	50
Paper No : 2 (VARMAM THERAPEUTIC TECHNIQUES)			
M15 Varmam Thadaval Parigaram (Varmam Massage Techniques)	2	60	50
M16 Iluvai Parigaram (Traction Methods)	2	60	50
Paper No : 3 (VARMA KAAYA MARUTHUVA IYAL(MANAGEMENT OF SIDDHA VARMAM TRAUMATOLOGY)			
M23 Varmam management for nerve injuries	2	60	50
M24 Varmam management for Sports injuries	2	60	50
Paper No : 4 (ESSENTIALS IN TRAUMATOLOGY AND ORTHOPEDICS)			
M31 Non-traumatic orthopaedic disorders.	2	60	50
M32 Physical medicine	2	60	50
Total	16	480	400
Grand Total	64	1920	1600

Credit frame work

SIDPG-VM consists of 32 modules totaling 64 credits, which correspond to 1920 Notional Learning Hours. Each credit comprises 30 hours of learner engagement, distributed across teaching, practical, and experiential learning in the ratio of 1:2:3. Accordingly, one credit includes 5 hours of teaching, 10 hours of practical training, 13 hours of experiential learning, and 2 hours allocated for modular assessment, which carries 25 marks.

Important Note: The User Manual MD/MS Siddha is a valuable resource that provides comprehensive details about the curriculum file. It will help you understand and implement the curriculum. Please read the User Manual before reading this curriculum file. The curriculum file has been thoroughly reviewed and verified for accuracy. However, if you find any discrepancies, please note that the contents related to the MSE should be considered authentic. Each paper has 16 credits and each semester covers 16 credits across 4 papers. In case of difficulty and questions regarding the curriculum, write to syllabus24sid@ncismindia.org.

Credit Analysis Overview					
Sem/Paper	Paper No 1	Paper No 2	Paper No 3	Paper No 4	Credits
Semester 3	M-1 1 Crs M-2 3 Crs	M-9 2 Crs M-10 2 Crs	M-17 2 Crs M-18 2 Crs	M-25 2 Crs M-26 2 Crs	16
Semester 4	M-3 2 Crs M-4 2 Crs	M-11 2 Crs M-12 2 Crs	M-19 2 Crs M-20 2 Crs	M-27 2 Crs M-28 2 Crs	16
Semester 5	M-5 2 Crs M-6 2 Crs	M-13 2 Crs M-14 2 Crs	M-21 2 Crs M-22 2 Crs	M-29 2 Crs M-30 2 Crs	16
Semester 6	M-7 2 Crs M-8 2 Crs	M-15 2 Crs M-16 2 Crs	M-23 2 Crs M-24 2 Crs	M-31 2 Crs M-32 2 Crs	16

Credits	16	16	16	16	64
Semester VI University examination					
Theory			Practical*		
Paper	Marks	Total	Practical Heads	Marks	Total
Paper -1	100	400	Long case or procedure/Major practical as applicable	100	400
			Short case or procedure/Minor practical	50	
Paper -2	100		Spotters	50	
			Assessing teaching ability	25	
Paper -3	100		Assessing presentation skills	25	
			# Viva (4 examiners: 25 marks/each examiner)	100	
Paper -4	100		Logbook (Activity record)	25	
			Practical/Clinical Record	25	
Semester VI University examination – 800 Marks					

* Details in 6H table, #No separate marks for dissertation viva.

Course Code and Name of Course

Course code	Name of Course
SIDPG-VM	Varma Maruthuvam (Varma Medicine)

Table 1 : Course learning outcomes and mapped Program learning outcomes

CO No	A1 Course learning Outcomes (CO) SIDPG-VM At the end of the course SIDPG-VM, the students should be able to-	B1 Course learning Outcomes mapped with program learning outcomes.
CO1	Explore the fundamental principles of udal koorugal, udal thathuvam, bio mechanism of vaasi (life energy) and naadis (channels) in varmam	PO1
CO2	Document and validate the traditional ethnovarmam practices & medicines for therapeutic application & managing various diseases	PO2,PO6
CO3	Acquire comprehensive and wholesome knowledge of varmam points, their indications and contraindications & non-invasive or non instrumental methods of varmakalari and their importance in health promotion and therapeutic application	PO1,PO2,PO3,PO6
CO4	Analyze the various siddha varmam literatures and develop expertise in management of acute and chronic diseases, sports injuries, emergency situations and varmam injuries including fractures, and formulate standard operating procedures for varmam management	PO2,PO4,PO6,PO8
CO5	Develop competency in creating evidence-based approach towards varmam concepts and become skillful at conducting experimental studies in varmam therapeutic techniques and varmam medicine	PO1,PO7
CO6	Correlate varmam principles with modern medical concepts and recent scientific advancements and apply this integrated expertise to treat various disorders effectively and innovatively	PO2,PO4,PO6
CO7	Develop holistic based varmam treatment protocol for Lifestyle disorders, Geriatrics, Metabolic, Communicable & Non communicable diseases, hereditary & Congenital disorders	PO3,PO5
CO8	Emerge into a successful varmam clinical specialist, academician, researcher, entrepreneur, and practitioner trained in ethical principles of varmam	PO6,PO7,PO8

Table 2 : Course contents (Modules- Credits and Notional Learning Hours)

Paper No : 1 (PRINCIPLES AND PRACTICES OF VARMAM MARUTHUVAM)						
Semester No : 3						
2A Modu le Nu mber	2B Modules & units	2C Num ber of Credi ts	Notional Learning hours			
			2D Lectures	2E Practical Training	2F Experiential Learning including Modular Assessment	2G Total
1	M-1 Methods of locating varmam points This module encompasses diverse techniques such as anatomical landmark method, proportional measurement method, body planes and nomenclature method, graphical measurement method & locating by reference to adjacent varmam point method for precisely locating the varmam points • M1U1 Anatomical landmarks methods 1.1.1.Head 1.1.2. Neck 1.1.3. Chest 1.1.4. Upper limb 1.1.5. Abdomen 1.1.6. Pelvis & back 1.1.7. Lower limb • M1U2 Proportional measurement a) Finger breadth measurement method b) Thread measurement method 1.2.1 Head	1	5	10	15	30

	1.2.2. Neck 1.2.3. Chest 1.2.4. Upper limb 1.2.5. Abdomen 1.2.6. Pelvis & back 1.2.7. Lower limb • M1U3 Graphical measurement method 1.3.1 Head 1.3.2. Neck 1.3.3. Chest 1.3.4. Upper limb 1.3.5. Abdomen 1.3.6. Pelvis & back 1.3.7.Lower limb • M1U4 Body planes and Nomenclature method 1.4.1. Head 1.4.2. Neck 1.4.3. Chest 1.4.4. Upper limb 1.4.5. Abdomen 1.4.6. Pelvis & back 1.4.7. Lower limb • M1U5 Locating by reference to adjacent varmam points 1.5.1. Head 1.5.2. Neck 1.5.3. Chest 1.5.4. Upper limb 1.5.5. Abdomen 1.5.6. Pelvis & back 1.5.7. Lower limb					
2	M-2 Varmam points in the head	3	15	30	45	90

This module contains a detailed study of *varmam* points of the head, focusing on the location of *varmam* points, actions, principles, relationship with *athaaragal*, *mudicchugal*, *naadigal* and *vaayukkal*, stimulation techniques, signs and symptoms of injuries to *varmam* points, specific *ilakku muraigal*, treatments & dietary regimen for the injuries

• M2U1 Varmam points on the anterior & lateral aspect of the Head-Physiological Aspects

2.1.1 Location

2.1.2 Actions

2.1.3 Principles

2.1.4 Relationship with *aatharangal*, *mudicchugal*, *naadigal* & *vaayukkal*

2.1.5 Stimulation methods

2.1.6 Physiological indications

• M2U2 Varmam points in the anterior & lateral aspects of the Head-pathological aspects

2.2.1 Signs and symptoms of injury

2.2.2 Specific *ilakkumuraigal* & Treatments

2.2.3 Dietary regimen

• M2U3 Varmam points in the superior and posterior aspect of Head-physiological aspects

2.3.1 Location

2.3.2 Actions

2.3.3 Principles

2.3.4 Relationship with *aatharangal*, *mudicchugal*, *naadigal* & *vaayukkal*

2.3.5 Stimulation methods

2.3.6. Physiological indications

• M2U4 Varmam points in superior and posterior aspects oh Head-pathological aspects

2.4.1 Signs and symptoms of injury

	2.4.2 Specific <i>ilakkumuraigal</i> & Treatments 2.4.3 Dietary regimen					
		4	20	40	60	120
Semester No : 4						
2A Modu le Nu mber	2B Modules & units	2C Num ber of Credi ts	Notional Learning hours			
			2D Lectures	2E Practical Training	2F Experiential Learning including Modular Assessment	2G Total
3	M-3 Varmam points in the neck and chest This module contains detailed study of <i>varmam</i> points in the neck & chest focusing on location of <i>varmam</i> points, actions, principles, relationship with <i>athaaragal</i>, <i>mudicchugal</i>, <i>nadigal</i> and <i>vaayukkal</i> stimulation techniques, signs and symptoms of injuries to <i>varmam</i> points, specific <i>ilakku muraigal</i>, treatments & dietary regimen for the injuries • M3U1 Physiological Aspects 3.1.1 Location 3.1.2 Actions 3.1.3 Principles 3.1.4 Relationship with <i>aatharangal</i> , <i>mudicchugal</i> , <i>naadigal</i> & <i>vaayukkal</i> 3.1.5 Stimulation methods 3.1.6 Therapeutic indications • M3U2 Pathological Aspects	2	10	20	30	60

	3.2.1 Signs and symptoms of injury 3.2.2 Specific <i>ilakkumuraigal</i> & Treatment 3.2.3 Dietary Regimen					
4	M-4 Varmam points in the upper limb This module contains detailed study of <i>varmam</i> points in the upper limb focusing on location of <i>varmam</i> points, actions, principles, relationship with <i>athaaragal</i>, <i>mudicchugal</i>, <i>nadigal</i> and <i>vaayukkal</i> stimulation techniques, signs and symptoms of injuries to <i>varmam</i> points, specific <i>ilakku muraigal</i>, treatments & dietary regimen for the injuries • M4U1 Physiological Aspects 4.1.1 Location 4.1.2 Actions 4.1.3 Principles 4.1.4 Relationship with <i>aatharangal</i> , <i>mudicchugal</i> , <i>naadigal</i> & <i>vaayukkal</i> 4.1.5 Stimulation methods 4.1.6 Therapeutic indications • M4U2 Pathological Aspects 4.2.1 Signs and symptoms of injury 4.2.2 Specific <i>ilakkumuraigal</i> & Treatment 4.2.3 Dietary Regimen	2	10	20	30	60
		4	20	40	60	120
Semester No : 5						
2A Module Number	2B Modules & units	2C Number of Credi	Notional Learning hours			

		ts	2D Lectures	2E Practical Training	2F Experiential Learning including Modular Assessment	2G Total
5	M-5 Varmam points in the Abdomen This module contains detailed study of <i>varmam</i> points in the abdomen focusing on location of <i>varmam</i> points, actions, principles, relationship with <i>athaaragal</i>, <i>mudicchugal</i>, <i>nadigal</i> and <i>vaayukkal</i> stimulation techniques, signs and symptoms of injuries to <i>varmam</i> points, specific <i>ilakku muraigal</i>, treatments & dietary regimen for the injuries. • M5U1 Physiological Aspects 5.1.1 Location 5.1.2 Actions 5.1.3 Principles 5.1.4 Relationship with <i>aatharangal</i>, <i>mudicchugal</i>, <i>naadigal</i> & <i>vaayukkal</i> 5.1.5 Stimulation methods 5.1.6 Therapeutic indications • M5U2 Pathological Aspects 5.2.1 Signs and symptoms of injury 5.2.2 Specific <i>ilakkumuraigal</i> & Treatment 5.2.3 Dietary Regimen	2	10	20	30	60
6	M-6 Varmam points in the Pelvis and Back This module contains detailed study of <i>varmam</i> points in the pelvis & back	2	10	20	30	60

	focusing on location of <i>varmam</i> points, actions, principles, relationship with <i>athaaragal</i>, <i>mudicchugal</i>, <i>nadigal</i> and <i>vaayukkal</i> stimulation techniques, signs and symptoms of injuries to <i>varmam</i> points, specific <i>ilakku muraigal</i>, treatments & dietary regimen for the injuries • M6U1 Physiological Aspects 6.1.1 Location 6.1.2 Actions 6.1.3 Principles 6.1.4 Relationship with <i>aatharangal</i>, <i>mudicchugal</i>, <i>naadigal</i> & <i>vaayukkal</i> 6.1.5 Stimulation methods 6.1.6 Therapeutic indications • M6U2 Pathological Aspects 6.2.1 Signs and symptoms of injury 6.2.2 Specific <i>ilakkumuraigal</i> & Treatments 6.2.3 Dietary regimen					
		4	20	40	60	120
Semester No : 6						
2A Modu le Nu mber	2B Modules & units	2C Num ber of Credi ts	Notional Learning hours			
			2D Lectures	2E Practical Training	2F Experiential Learning including Modular Assessment	2G Total
7	M-7 Varmam points in the Lower limb	2	10	20	30	60

	This module contains detailed study of <i>varmam</i> points in the lower limb focusing on location of <i>varmam</i> points, actions, principles, relationship with <i>athaaragal</i>, <i>mudicchugal</i>, <i>nadigal</i> and <i>vaayukkal</i> stimulation techniques, signs and symptoms of injuries to <i>varmam</i> points, specific <i>ilakku muraigal</i>, treatments & dietary regimen for the injuries • M7U1 Physiological Aspects 7.1.1 Location 7.1.2 Actions 7.1.3 Principles 7.1.4 Relationship with <i>aatharangal</i>, <i>mudicchugal</i>, <i>naadigal</i> & <i>vaayukkal</i> 7.1.5 Stimulation methods 7.1.6 Therapeutic indications • M7U2 Pathological Aspects 7.2.1 Signs and symptoms of injury 7.2.2 Specific <i>ilakkumuraigal</i> & Treatment 7.2.3 Dietary Regimen					
8	M-8 Varmam therapies for various Diseases This module covers therapy for Neurological disorders, Psychiatric disorders, Cardiovascular disorders, Respiratory disorders, Gastro intestinal disorders & Genito urinary disorders, Endocrine disorders, Haematological disorders, Geriatric disorders, Paediatric diseases Congenital diseases & ENT diseases by <i>varmam</i> points stimulation techniques. • M8U1 Varmam for Neurological disorders & Psychiatric disorders. 8.1.1 <i>Pakkavaatham</i> (Hemiplegia) 8.1.2 <i>Mugavaatham</i> (Facial paralysis) 8.1.3 <i>Nadukku vaatham</i> (Parkinsonism) 8.1.4 <i>Valippu</i> (Seizure disorders)	2	10	20	30	60

8.1.5 Motor neuron Disorders (<i>Narrambu Vila noikal</i>) 8.1.6 <i>Manachorvu</i> (Depression) 8.1.7 <i>Mana irukkam</i> (Mental tension) 8.1.8 <i>Kirigai</i> (Scizophernia) etc • M8U2 Varmam for Musculoskeletal disorders 8.2.1 <i>Keel vaatha noigal</i> (All types of Arthritis including cervical & lumbar spondylosis) 8.2.2 <i>Sprains & Strains</i> (Sulukku & Pidippu) • M8U3 Varmam for Cardiovascular disorders 8.3.1 <i>Padapadappu</i> (Palpitation) 8.3.2 <i>kaba thamaraga noi</i> (<i>Angina pectoris</i>) • M8U4 Varmam for Respiratory disorders 8.4.1 <i>Erumal</i> (Cough) 8.4.2 <i>Eraippu</i> (Bronchial Asthma) • M8U5 Varmam for Digestive disorders and Genito urinary disorders 8.5.1 <i>Seriyamai</i> (Indigestion) 8.5.2 <i>Gunmam</i> (Peptic ulcer,Gastro Esophageal Reflux Disorder) 8.5.3 <i>Vaitrupokku</i> (Diarrhoea) 8.5.4 <i>Malachikkal</i> (Constipation) 8.5.5 <i>Moolam</i> (Haemorrhoids) 8.5.6 <i>Maneeral noigal</i> (Spleen disorders) 8.5.7 <i>Kaleeral noigal</i> (Liver disorders) 8.5.8 <i>Malattu noigal</i> (Male & Female infertiliy) 8.5.9 <i>Soothaga thadai</i> (Amenorrhoea) 8.5.10 <i>Soothagavali</i> (Dysmenorrhoea) 8.5.11 <i>Perumpadu</i> (Menorrhagia) 8.5.12 <i>Karuppai velithallal</i> (Utreus prolapse) etc.. • M8U6 Varmam for Endocrine disorders 8.6.1 Pitutary disorders 8.6.2 Pineal disorders 8.6.3 Thyroid disorders etc					
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	• M8U7 Varmam for Hematological disorders 8.7.1 <i>Paandu noigal</i> (all types of anemia) 8.7.2 Thrombocytopenia etc. • M8U8 Varmam for ENT diseases 8.8.1 <i>Kaathu iraichal</i> (Tinnitus) 8.8.2 <i>Sevidu</i> (Hearing loss) 8.8.3 <i>Nasikapeedam</i> (Nasal polyp) 8.8.4 <i>Mooku neer paichal</i> (Rhinorrhoea) 8.8.5 <i>Kuaral kammal</i> (Sore throat) 8.8.6 <i>Peenisam</i> (Sinusitis) • M8U9 Varmam for Pediatric diseases 8.9.1 <i>Sirakambavatham</i> (Cerebral palsy) 8.9.2 Autism 8.9.3 <i>Moolaivalarchi kuraivu</i> (Mental retardation) • M8U10 Varmam for Geriatric diseases 8.10.1 <i>Thookam inmai</i> (Insomnia) 8.10.2 <i>Marathi noi</i> (Dementia) 8.10.3 <i>Keel vayu</i> (Degenerative arthritis) etc..					
		4	20	40	60	120
		16	80	160	240	480
Paper No : 2 (VARMAM THERAPEUTIC TECHNIQUES)						
Semester No : 3						
2A Module Number	2B Modules & units	2C Number of Credits	Notional Learning hours			
			2D Lectures	2E Practical Training	2F Experiential Learning including	2G Total

					Modular Assessment	
9	M-9 Varmam aga marundhu (Varmam internal medicine) This module describes the usage of <i>maruthuva agarathi</i>, various medicinal preparations and their ingredients, <i>varmam</i> therapeutic techniques, dietary regimens, <i>kuliyal muraigal</i> (bathing techniques), and <i>porridge</i> used in sports conditions • M9U1 Introduction of Varmam Aga Marundhu (Varmam Internal Medicine) 9.1.1. <i>Varmam mooligai agarathi</i> 9.1.2. Definition of <i>varmam aga maruthu</i> (<i>Saaru, Karkam, kudineer/Kudineer, Vaatru/Theeneer, chooranam/Podi, Ilagam, Nei/Kirutham, Ennai/Thylam, Kulikai, Kuzhambu, Panda Puthayal</i>) • M9U2 Varmam medicine Part - I 9.2.1 <i>Saaru</i> (Extract or Juice) 9.2.1.1. <i>Varmam ilakka saaru vagaigal</i> 9.2.1.2. <i>Mayakkam theerkum saaru</i> 9.2.1.3. <i>Ratham uraithalukku saaru</i> 9.2.1.4. <i>Kozhi saaru</i> 9.2.1.5. <i>Murivukku saaru</i> 9.2.2. <i>Karkam</i> (Medicinal paste) 9.2.2.1. <i>Kaduppu karkam</i> 9.2.2.2. <i>Suvasapidippukku karkam</i> 9.2.2.3. <i>Malasuthi karkam</i>	2	10	20	30	60

9.2.2.4. <i>Suvasa pidippu karkam</i>					
9.2.2.5. <i>Mega karkam</i>					
9.2.3. <i>Kudineer (Decoctions)</i>					
9.2.3.1. <i>Anda varma kudineer</i>					
9.2.3.2. <i>Athisara kudineer</i>					
9.2.3.3. <i>Athimathura kudineer</i>					
9.2.3.4. <i>Amirthavalli kudineer</i>					
9.2.3.5. <i>Amukkara kudineer</i>					
9.2.3.6. <i>Adathoadai kudineer</i>					
9.2.3.7. <i>Aattellu kudineer</i>					
9.2.3.8. <i>Aavarai kudineer</i>					
9.2.3.9. <i>Eeral varmam kudineer</i>					
9.2.3.10. <i>Linga varmam kudineer</i>					
9.2.3.11. <i>Uzhinnai kudineer</i>					
9.2.3.12. <i>Ulvarma kudineer</i>					
9.2.3.13. <i>Ruthira varma kudineer</i>					
9.2.3.14. <i>Kandang kathiri kudineer</i>					
9.2.3.15. <i>Kazhuthu varmam kudineer</i>					
9.2.3.16. <i>Kareeral varmam kudineer</i>					
9.2.3.17. <i>Kaal kavuli kudineer</i>					
9.2.3.18. <i>Kukkuda kudineer</i>					
9.2.3.19. <i>Kurunthotti ver kudineer</i>					
9.2.3.20. <i>Kothumalli kudineer</i>					
9.2.3.21. <i>Sirasu varmam kudineer</i>					
9.2.3.22. <i>Siru pancha moola kudineer</i>					
9.2.3.23. <i>Sittramutti kudineer</i>					
9.2.3.24. <i>Chukku kudineer</i>					
9.2.3.25. <i>Ilaneer kudineer</i>					
9.2.3.26. <i>Thasa moola kudineer</i>					
9.2.3.27. <i>Thilartha varmam kudineer</i>					
9.2.3.28. <i>Thoothuvalai ver kudineer</i>					
9.2.3.29. <i>Thevathaara kudineer</i>					

9.2.3.30. <i>Nilavarai Kudineer</i>					
9.2.4. <i>Vaatsu</i> (Distillation Medicine)					
9.2.4.1. <i>Sayakulanthagana vaatsu</i>					
9.2.4.2. <i>Munthiri vaatsu</i>					
9.2.4.3. <i>Valiya Angadi vaatsu</i>					
9.2.4.4. <i>Santhanathi vaatsu</i>					
9.2.4.5. <i>Inji vaatsu</i>					
9.2.4.6. <i>Megarasanga vaatsu</i>					
9.2.4.7. <i>Thirikadugu vaatsu</i>					
9.2.4.8. <i>Karunkoli vaatsu</i>					
9.2.4.9. <i>Veppampattai vaatsu</i>					
9.2.4.10. <i>Isangu vaatsu</i>					
9.2.4.11. <i>Karunkurinji vaatsu</i>					
9.2.4.12. <i>Meganathi vaatsu</i>					
9.2.4.13. <i>Kurunthotti vaatsu</i>					
9.2.4.14. <i>Garudakodi vaatsu</i>					
9.2.4.15. <i>Kombarakku vaatsu</i>					
9.2.4.16. <i>Veppampattai vaatsu</i>					
9.2.4.17. <i>Kariveppu vaatsu</i>					
9.2.4.18. <i>Thuvalai poga vaatsu</i>					
9.2.4.19. <i>Indu vaatsu</i>					
9.2.4.20. <i>Muttai vaatsu</i>					
9.2.4.21. <i>Vathakaya vaatsu</i>					
9.2.4.22. <i>Kayasangara vaatsu</i>					
9.2.4.23. <i>Sengkaluneer vaatsu</i>					
9.2.4.24. <i>Kabakayarasangana vaatsu</i>					
9.2.4.25. <i>Thratchathi vaatsu</i>					
9.2.5. <i>Chooranam</i> (Medicinal Powder)					
9.2.5.1. <i>Athimathura chooranam</i>					
9.2.5.2. <i>Ruthiratcha podi</i>					
9.2.5.3. <i>Irumal podi</i>					
9.2.5.4. <i>Kurosani oma podi</i>					

9.2.5.5. <i>Kodiveli chooranam</i>					
9.2.5.6. <i>Thirukadukaathi podi</i>					
9.2.5.7. <i>Nilavagai podi</i>					
9.2.5.8. <i>Saya Chooranam II</i>					
9.2.5.9. <i>Sundai ver chooranam</i>					
9.2.5.10. <i>Thippi chooranam</i>					
9.2.5.11. <i>Devathara chooranam</i>					
9.2.5.12. <i>Nathaisoori chooranam</i>					
9.2.5.13. <i>Mavilangu chooranam</i>					
9.2.5.14. <i>Akkini chooranam</i>					
9.2.5.15. <i>Vilva ver chooranam</i>					
9.2.6. <i>Ilagam/Legium</i> (Electuary)					
9.2.6.1. <i>Karisalai ilagam</i>					
9.2.6.2. <i>Irumaluku ilagam</i>					
9.2.6.3. <i>Kandan kathiri ilagam</i>					
9.2.6.4. <i>Sitramutti ilagam</i>					
9.2.6.5. <i>Paal ilagam</i>					
9.2.6.6. <i>Vasathi ilagam</i>					
9.2.6.7. <i>Moola vayuvukku /vayitrottathirku ilagam</i>					
9.2.6.8. <i>Vellattu ilagam</i>					
9.2.6.9. <i>Thazam poo ilagam</i>					
9.2.6.10. <i>Madhana kamiya ilagam</i>					
• M9U3 Varmam medicine part-II					
9.3.1. <i>Nei/Kiruthangal</i> (Medicated ghee)					
9.3.1.1. <i>Kandangkathiri nei</i>					
9.3.1.2. <i>Kozhi nei/kukuda nei</i>					
9.3.1.3. <i>Koduveli nei</i>					
9.3.1.4. <i>Vellattu nei</i>					
9.3.1.5. <i>Veezhi nei</i>					
9.3.1.6. <i>Vallarai nei</i>					
9.3.1.7. <i>Veli paruthu nei</i>					
9.3.1.8. <i>Kumari nei</i>					

9.3.1.9. Kovvai nei					
9.3.1.10. Chippi nei					
9.3.2.Thylam/Ennai (Medicated oil)					
9.3.2.1. Aalam paal murivennai					
9.3.2.2. Vasa vennai					
9.3.2.3. Murivu ennai					
9.3.2.4. Mukootu thylam					
9.3.2.5. Anjennai thylam					
9.3.2.6. Kaya sarvanga thylam					
9.3.2.7. Kaya rajanga thylam					
9.3.2.8. Kaya thirumeni thylam					
9.3.2.9. Koovila thylam					
9.3.2.10. Kurunthotti ennai					
9.3.2.11. Nayana vilvaathi thylam					
9.3.2.12.Thiripalathi thylam					
9.3.2.13. Varmani thylam					
9.3.2.14. Pasalathi thylam					
9.3.2.15. Etti pazha thylam					
9.3.2.16. Sivan vembu thylam					
9.3.2.17. Moodilathaali thylam					
9.3.2.18. Nagarathi thylam					
9.3.2.19. Kumari ennai (Internal & External) II					
9.3.2.20. Nalpamarathi					
9.3.2.21.Thoothulam pasha thylam					
9.3.2.22. Thaanu manthiraathi thylam					
9.3.2.23. Vatha rasanga thylam					
9.3.2.24. Isangu ver thylam					
9.3.2.25. Ulunthennai					
9.3.2.26. Karisalai ennai					
9.3.2.27. Thiripalathi thylam					
9.3.2.28. Puya varma ennai					
9.3.2.29. Maha thiriphalathi ennai					

9.3.2.30. <i>Vilva ver thylam</i> 9.3.3. <i>Kulikaikal/Maathirai (Tablets)</i> 9.3.3.1. <i>Varma kulikai – I</i> 9.3.3.2. <i>Varma kulikai – VII</i> 9.3.3.3. <i>Varma sannu kulikai</i> 9.3.3.4. <i>Varmani kulikai</i> 9.3.3.5. <i>Vettu marppan kulikai</i> 9.3.4. <i>Kuzhambu (Medicated Viscous Mixture)</i> 9.3.4.1. <i>Karisalai kuzhambu</i> 9.3.4.2. <i>Muttai kuzhambu II</i> 9.3.4.3. <i>Saya kuzhambu</i> 9.3.4.4. <i>Naal paamara kuzhambu</i> 9.3.4.5. <i>Kombarakku kuzhambu</i> 9.3.5. <i>Panda Puthayal/Arishtam (Fermented Herbal Decoction)</i> 9.3.5.1. <i>Velvael varisai panda puthayal</i> • M9U4 Pathiyakaala ozhukkam 9.4.1. Types of <i>pathiyam</i> (Diet regimen) 9.4.2. <i>Pathiya kaala kuliya muraigal</i> 9.4.3. <i>Pathiya kari vagaigal & porutkal</i> 9.4.4. <i>Unavu & kanji</i> 9.4.4.1. <i>Uzhinjai III</i> 9.4.4.2. <i>Eazha kanji</i> 9.4.4.3. <i>Chittramutti kanji</i> 9.4.4.4. <i>Thippili arisi kanji</i> 9.4.4.5. <i>Varma kanji</i> 9.4.4.6. <i>Eppilaippu kanji</i> 9.4.4.7. <i>Pazhaiya varmangaluku kanji</i> 9.4.4.8. <i>Karungsundai kanji</i> 9.4.4.9. <i>Karpini kanji</i> 9.4.4.10. <i>Kondrai kanji</i> 9.4.4.11. <i>Thirikadugu kanji</i>					
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	9.4.4.12. <i>Pancha moola kanji</i> 9.4.5. List of <i>Varmam Kanji Vagaigal</i> Used In Sports Nutrition 9.4.5.1. <i>Samaiya kanji</i> 9.4.5.2. <i>Thinaiyarisi kanji</i> 9.4.5.3. <i>Venthaya kanji</i> 9.4.5.4. <i>Karuppu vaaliyarisi kanji</i> 9.4.5.5. <i>Adathodai kanji</i> 9.4.5.6. <i>Mudakatran kanji</i> 9.4.5.7. <i>Kurunthotti ver kanji</i> 9.4.5.8. <i>Chittramutti kanji</i> 9.4.5.9. <i>Paal kanji</i> 9.4.5.10. <i>Kuruvai arisi kanji</i>					
10	M-10 Varmam Pura Marundhu (Varmam External Medicine) This module describes the various external medicinal preparations and their ingredients, <i>varmam</i> therapeutic techniques,used in sports conditions. • M10U1 Varmam External Medicine Part I 10.1.1. Definition of <i>Varmam pura marunthugal</i> <i>Varmam external medicine part I</i> 10.1.2. <i>Thalam</i> 10.1.2.1. <i>Uzhinjai Thalam</i> 10.1.2.2. <i>Kandakathiri Thalam</i> 10.1.2.3. <i>Karunjeeraka Thalam</i> 10.1.2.4. <i>Kothamalli Thalam</i> 10.1.2.5. <i>Savukkara Thalam</i> 10.1.2.6. <i>Thevathara Thalam</i> 10.1.2.7. <i>Mathalaipoo Thalam</i> 10.1.2.8. <i>Inji Thalam</i>	2	10	20	30	60

10.1.2.9. <i>Mayakkam Theerkum Thalam</i>					
10.1.3. <i>Definition and Types of Tharai</i>					
10.1.4. <i>Tharai Parigaram</i>					
10.1.4.1. <i>Kaadi Tharai II</i>					
10.1.4.2. <i>Saaru Tharai I</i>					
10.1.4.3. <i>Thayir Tharai</i>					
10.1.4.4. <i>Thaila Tharai III</i>					
10.1.4.5. <i>Nei Tharai</i>					
10.1.4.6. <i>Patcharisi Thaneer Tharai</i>					
10.1.4.7. <i>Paal Tharai I</i>					
10.1.4.8. <i>Moor Tharai I</i>					
10.1.4.9. <i>Kumari Tharai</i>					
10.1.4.10. <i>Thaneer Tharai</i>					
10.1.5. <i>Thuvaazhai</i> (Medicated Liquid or Medicinal Powder application)					
10.1.5.1. <i>Kumari Thuvaalai</i>					
10.1.5.2. <i>Santhana Thuvaalai</i>					
10.1.5.3. <i>Nilavaakai Thuvaalai</i>					
10.1.5.4. <i>Vennai Thuvaalai</i>					
10.1.5.5. <i>Elathi Thuvaalai</i>					
• M10U2 Varmam External Medicine Part II					
10.2.1. <i>Kizhi Parigaram</i> (Medicated Pouch)					
10.2.1.1. <i>Ela Kizhi</i>					
10.2.1.2. <i>Oruthal Thaamarai Kizhi</i>					
10.2.1.3. <i>Sankankuppi Kizhi</i>					
10.2.1.4. <i>Sirasu varma kizhi</i>					
10.2.1.5. <i>Thirugu Kalli Kizhi</i>					
10.2.1.6. <i>Thennam Poo kizhi</i>					
10.2.1.7. <i>Manjal Kizhi</i>					
10.2.1.8. <i>Muthugu Varma Kizhi</i>					
10.2.1.9. <i>Sinaga Pottanam</i>					
10.2.1.10. <i>Sangankuppi Kizhi</i>					
10.2.1.11. <i>Veppinpattai Kizhi</i>					

10.2.1.12. <i>Adutheendapalai Kizhi</i>					
10.2.1.13. <i>Izhuppai Pinnakku Kizhi</i>					
10.2.1.14. <i>Ezhumitchai Kizhi</i>					
10.2.1.15. <i>Kadugu Ottradam</i>					
10.2.1.16. <i>Kazharchi Ottradam</i>					
10.2.1.17. <i>Kazhuththu Mel Murivu Ottradam</i>					
10.2.1.18. <i>Kaatulli Ottradam</i>					
10.2.1.19. <i>Kukkil Ottradam II</i>					
10.2.1.20. <i>Kurunthotti Ottradam</i>					
10.2.1.21. <i>Senkzhuneer Kizhangu Ottradam</i>					
10.2.1.22. <i>Thumbai Poo Ottradam</i>					
10.2.1.23. <i>Vettrilai Ottradam</i>					
10.2.1.24. <i>Thevathaara Ottradam</i>					
10.2.1.25. <i>Nathaisoori Ottradam</i>					
10.2.1.26. <i>Neermulli Ottradam</i>					
10.2.1.27. <i>Notchi Ottradam</i>					
10.2.1.28. <i>Padikara Ottradam</i>					
10.2.1.29. <i>Pirantai Ottradam</i>					
10.2.1.30. <i>Pirantai Kolunthu Ottradam</i>					
10.2.1.31. <i>Murunkai ilai Ottradam</i>					
10.2.1.32. <i>Murunkai Poo Ottradam</i>					
10.2.1.33. <i>Muzhankaal Muda Ottradam</i>					
10.2.1.34. <i>Murivukku Ottradam</i>					
10.2.1.35. <i>Vasavukku Ottradam</i>					
10.2.1.36. <i>Venkunkiliya Ottradam</i>					
10.2.1.37. <i>Sennai Pattai Ottradam</i>					
10.2.1.38. <i>Thazhu Thazhai Ottradam</i>					
10.2.1.39. <i>Paaraikal Aavi Ottradam</i>					

• **M10U3 Varmam External Medicine Part III**

10.3.1. <i>Poochu (Liniment/Semi-Solid Applications)</i>					
10.3.1.1. <i>Adapothiyan Poochu</i>					
10.3.1.2. <i>Aazhiya Poochu II</i>					

10.3.1.3. <i>Uzhunthumaavu Poochu</i> 10.3.1.4. <i>Kazharchi Poochu</i> 10.3.1.5. <i>Kaara Poochu</i> 10.3.1.6. <i>Sathaimurivukku Poochu</i> 10.3.1.7. <i>Santhanathook Poochu</i> 10.3.1.8. <i>Siruneer Pidippukku Poochu III</i> 10.3.1.9. <i>Sevi Vizhi Sooraikku Poochu</i> 10.3.1.10. <i>Narambu Pidikku Poochu I</i> 10.3.1.11. <i>Viththu Varma Poochu</i> 10.3.1.12. <i>Narambu Pidikku Poochu II</i> 10.3.1.13. <i>Muthugu Varma Poochu</i> 10.3.1.14. <i>Karun Kungiliya Poochu</i> 10.3.2. <i>Pasai (Oinment)</i> 10.3.2.1. <i>Odivu Kattum Pasai</i> 10.3.2.2. <i>Odivu Kattum Pasai II</i> 10.3.2.3. <i>Murivu Kattum Pasai I</i> 10.3.2.4. <i>Murivu Kattum Pasai II</i> 10.3.2.5. <i>Mozhi Poruthu Kattu Pasai I</i> 10.3.2.6. <i>Mozhi Poruthu Kattu Pasai II</i> 10.3.3. <i>Kuli Neer</i> 10.3.3.1. <i>Kulineer I</i> 10.3.3.2. <i>Kulineer II</i> 10.3.3.3. <i>Kulineer III</i> • M10U4 Varmam External Medicine Part IV 10.4.1. <i>Pugai (Medicated Fume)</i> 10.4.1.1. <i>Pugai II</i> 10.4.1.2. <i>Varma Sanni Pugai</i> 10.4.2. <i>Nasiyam (Liquid Nasal Application)</i> 10.4.2.1. <i>Nasiyam III</i> 10.4.3. <i>Nasikaparanam (Powdered Nasal Application)</i> 10.4.3.1. <i>Nasiththool III</i> 10.4.3.2. <i>Nasiththool VIII</i>					
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	10.4.4. <i>Oothal</i> (Medicated Aerosol) 10.4.4.1. <i>Oothal</i> II & III 10.4.5. <i>Kalikkam</i> (Medicated Eye Salve) 10.4.5.1. <i>Mizhaku Kalikkam</i>					
		4	20	40	60	120
Semester No : 4						
2A Modu le Nu mber	2B Modules & units	2C Num ber of Credi ts	Notional Learning hours			
			2D Lectures	2E Practical Training	2F Experiential Learning including Modular Assessment	2G Total
11	M-11 Therapeutic Application of Varmam Points This module describes the therapeutic application of <i>adangal, illakku muraigal, thadaval, thirumal, thodu varmam, paduvarmam, thattu varmam, aadhara varmam, ull, odukki varmam</i> • M11U1 Ethical Guidelines of Varmam Application 11.1.1. Ethical guidelines of <i>varmam</i> therapeutic application of <i>adangal, Ilakku murai, thadaval, thirumal muraigal</i> • M11U2 Application of Varmam Points 11.2.1. Region wise application of <i>thodu varmam</i> – head and neck, upper limb, chest, abdomen and pelvis, lower limb 11.2.2. Therapeutic application of <i>padu varmam, thattu varmam, aadhara varmam, ul varmam, odukki varmam</i>	2	10	20	30	60

12	M-12 Varmam Clinical Protocol This module explains the importance for homeostasis of systemic and general wellness, relations between rejuvenation of body ,clinical varmam therapy, systemic wellness and general wellness varmam therapy • M12U1 Varmam for Systemic Wellness 12.1.1. <i>Varmam</i> for CNS wellness 12.1.2. <i>Varmam</i> for RS wellness 12.1.3. <i>Varmam</i> for CVS wellness 12.1.4. <i>Varmam</i> for GIT wellness 12.1.5. <i>Varmam</i> for Genito urinary wellness 12.1.6. <i>Varmam</i> for Endocrine wellness 12.1.7. <i>Varmam</i> for Eye wellness 12.1.8. <i>Varmam</i> for ENT wellness • M12U2 Varmam for General Wellness 12.2.1. <i>Varmam</i> for Palliative Care 12.2.2. <i>Varmam</i> for Geriatric Care 12.2.3. <i>Varmam</i> for Special Children Care 12.2.4. <i>Varmam</i> for Rehabilitation 12.2.5. <i>Varmam</i> for Post-Natal Care 12.2.6. <i>Varmam</i> for Speech Disorder 12.2.7. <i>Varmam</i> for Emergency Management 12.2.8. <i>Varmam</i> for Pain Management	2	10	20	30	60
		4	20	40	60	120
Semester No : 5						
2A Modu	2B Modules & units	2C Num	Notional Learning hours			

le Nu mber		ber of Credi ts	2D Lectures	2E Practical Training	2F Experiential Learning including Modular Assessment	2G Total
13	M-13 Therapeutic application of adangal This topic explains definition, classification, clinical application, machanism of <i>adangal murai</i> for emergency management and various clinical conditions • M13U1 Classification of Adangal 13.1.1. Region wise Classification 13.1.2. Numerical classification 13.1.3. Terminological classification 13.1.4. Classification based on groups 13.1.5. Major group <i>adangal</i> 13.1.5.1. <i>Paduvarma adangal</i> – 12 13.1.5.2. <i>Peradangal</i> – 13 13.1.5.3. <i>Ubadesa adangal</i> – 16 13.1.5.4. <i>Kai Kanda adangal</i> – 29 13.1.5.5. <i>Sitradangal</i> – 51 13.1.5.6. <i>Adangal</i> – 51 13.1.5.7. <i>Adangal</i> - 56 13.1.5.8. <i>Adangal</i> - 64 13.1.5.9. <i>Adangal</i> – 224 13.1.6. Minor group <i>adangal</i> 13.1.6.1. <i>Vayaga adangal</i> - 5	2	10	20	30	60

	13.1.6.2. <i>Paatha adangal</i> - 5 13.1.6.3. <i>Aathara adangal</i> - 6 13.1.6.4. <i>Kai kavuli adangal</i> - 4 13.1.6.5. <i>Ullankai adangal</i> - 3 13.1.6.6. <i>Thiravukol adangal</i> - 5 13.1.6.7. <i>Panja kalai adangal</i> - 5 13.1.6.8. <i>Panja mudichu adangal</i> - 5 13.1.6.9. <i>Laada adangal</i> - 11 13.1.6.10. <i>Pinkazhuthu adangal</i> • M13U2 Adangal Application for Various Disorders 13.2.1. <i>Adangal Maruthuvam</i> for Regional Symptoms 13.2.1.1. Head and neck symptoms, ENT symptoms, Genito urinary symptoms, GIT symptoms. 13.2.2. <i>Adangal Maruthuvam</i> for General Symptomatology 13.2.2.1. <i>Adangalkal</i> for fits, Fainting, Delirium, Breathing Difficulty, Palpitation, Shivering, Thermo regulation, Regulation of BP, Regulation of Heart rate and Pulse rate, Regulation of SpO ₂ , Regulation of naadi, Regulation of <i>vaayu</i> , Hemorrhage and acute pain management					
14	M-14 Therapeutic Application of Ilakku Murai and Thiravukol (Varmam Retrieving Techniques) This topic explains the definition, types, application methods of various affected varmam (padu varmam, thodu varmam, iam kanda varmam), various affected regions varmam ilakku murai and thiravukol techniques • M14U1 Varmam ilakku murai 14.1.1. <i>Padu varmam ilakku murai</i> 14.1.2. <i>Thodu varmam ilakku murai</i> 14.1.3. <i>Im Kandam Ilakku Murai</i> 14.1.3.1. <i>Varmam</i> retrieving methods for head and neck	2	10	20	30	60

	14.1.3.2. <i>Varmam</i> retrieving methods for thorax, abdomen and pelvis 14.1.3.3. <i>Varmam</i> retrieving methods for upper limb and lower limb • M14U2 Varmam Thiravu Kol 14.2.1. Definition of <i>varmam thiravukol</i> 14.2.2. Classification of <i>thiravukol</i> 14.2.3. Application method of <i>thiravukol</i> 14.2.4. Retrieving Methods for Specific Conditions 14.2.4.1. Pregnant women, Lactating mothers, children and Infants & neonatal					
		4	20	40	60	120
Semester No : 6						
2A Modu le Nu mber	2B Modules & units	2C Num ber of Credi ts	Notional Learning hours			
			2D Lectures	2E Practical Training	2F Experiential Learning including Modular Assessment	2G Total
15	M-15 Varmam Thadaval Parigaram (Varmam Massage Techniques) This topic explains the definition, types, mechanism based on siddha principles, application methods of <i>chavuttu murai thirumal</i>, <i>pinnal murai</i> and <i>varmam</i> massage techniques for various clinical conditions • M15U1 Chavuttu Thirumal (Massage with Foot) 15.1.1. Definition of thirumal muraigal 15.1.2. Types of thirumal muraigal 15.1.3. Application of kai thirumal	2	10	20	30	60

15.1.4. Application of chavuttu thirumal

• **M15U2 Various Massage Techniques**

15.2.1. *Pothu Varmam Thadavu Murai*

15.2.1.1. *Kandam thadavu murai* – Head, neck, upper limb, lower limb, thorax, abdomen and pelvis

15.2.1.2. *Paduvarma thadavu murai*

15.2.1.3. *Sarvaanga varmam thadavu murai*

15.2.1.4. *Aekaandha varmam thadavu murai*

15.2.1.5. *Narambu Ilakka thadavu murai*

15.2.2. *Soothira thadavu muraigal*

15.2.2.1. *Kadikaara soothiram*

15.2.2.2. *Karpa soothiram*

15.2.2.3. *Linga soothiram*

15.2.2.4. *Dasanaadi soothiram*

15.2.2.5. *Thooka narambu soothiram*

15.2.2.6. *Narambin soothiram*

15.2.2.7. *Mayakka soothiram*

15.2.3. *Thasa Naadi Pinnal Muraigal*

15.2.4. *Traditional Varmam Thadaval Techniques*

15.2.4.1. *Sadaayanthira kalam*

15.2.4.2. *Kathali vana thadaval*

15.2.4.3. *Kalai nivarthi thadaval*

15.2.4.4. *Visai etrram Irakkam thadaval*

15.2.4.5. *Eri kalai thoondal*

15.2.4.6. *Suththi tharai thadaval*

15.2.4.7. *Petti kaala thadaval*

15.2.4.8. *Abanan seeramaippu*

15.2.4.9. *Viyanan seeramaippu*

15.2.4.10. *Uthanan seeramaippu*

15.2.4.11. *Thandaga thoondal*

15.2.4.12. *Meltharai Iyakkam*

15.2.4.13. *Men thattal*

15.2.4.14. <i>Vala saari thadaval</i>					
15.2.4.15. <i>Ida saari thadaval</i>					
15.2.4.16. <i>Nettangam thadaval</i>					
15.2.4.17. <i>Thandu vada thadaval</i>					
15.2.4.18. <i>Nenjanai thadaval</i>					
15.2.4.19. <i>Nettiluppu thadaval</i>					
15.2.4.20. <i>Pujavari thadaval</i>					
15.2.4.21. <i>Kaazhuthurai thadaval</i>					
15.2.4.22. <i>Naavaari thadaval</i>					
15.2.4.23. <i>Vayitru thadaval</i>					
15.2.4.24. <i>Vila vattam thadaval</i>					
15.2.4.25. <i>Nattelpootu thadaval</i>					
15.2.4.26. <i>Vattathiruppi thadaval</i>					
15.2.4.27. <i>Vala kan thadaval</i>					
15.2.4.28. <i>Ida kan thadaval</i>					
15.2.4.29. <i>Muzhangal mootu thadaval</i>					
15.2.4.30. <i>Thalai vatta thadaval</i>					
15.2.4.31. <i>Thandu vada pithukka thadaval</i>					
15.2.4.32. <i>Sirupura thadaval</i>					
15.2.4.33. <i>Kuruthi maral thadaval</i>					
15.2.4.34. <i>Agankaal thadaval</i>					
15.2.4.35. <i>Purankaal thadaval</i>					
15.2.4.36. <i>Kanukaal thadaval</i>					
15.2.4.37. <i>Kai chakkaram</i>					
15.2.4.38. <i>Kaal chakkaram</i>					
15.2.4.39. <i>Netri thadaval</i>					
15.2.4.40. <i>Muga thadaval</i>					
15.2.4.41. <i>Nankoora thadaval</i>					
15.2.4.42. <i>Kai thadaval</i>					
15.2.4.43. <i>Kona nilai thadaval</i>					
15.2.4.44. <i>Anu udal thadaval</i>					
15.2.4.45. <i>Aadhara thadaval</i>					

	15.2.4.46. <i>Tharai thadaval</i> 15.2.4.47. <i>Panchatchara thadaval</i> 15.2.4.48. <i>Mulaikuru thadaval</i>					
16	M-16 Iluvai Parigaram (Traction Methods) This topic explains the definition, examination, radiological findings for various neuro-muscular disorders and mechanism, application methods of <i>iluvai parigaram</i> • M16U1 Basics of Iluvai Parigaram 16.1.1. Definition of <i>Iluvai (Neetchi muraigal)</i> Traction 16.1.2.Types of <i>Iluvai murai</i> (Manual, Mechanical Traction) 16.1.3. Indication and contra Indication of <i>Iluvai murai</i> (Traction) 16.1.4. Musculo skeletal examination • M16U2 Traction Methods 16.2.1. Application of <i>Iluvai muraigal</i> (Traditional Traction Technique) 16.2.1.1. Degenerative disc disease, 16.2.1.2. Sciatica, 16.2.1.3. Herniated disc, 16.2.1.4. Stenosis, Spondylitis 16.2.2. Stretching and Strengthen exercise	2	10	20	30	60
		4	20	40	60	120
		16	80	160	240	480
Paper No : 3 (VARMA KAAYA MARUTHUVA IYAL(MANAGEMENT OF SIDDHA VARMAM TRAUMATOLOGY)						
Semester No : 3						
2A Modu	2B Modules & units	2C Num	Notional Learning hours			

le Nu mber		ber of Credi ts	2D Lectures	2E Practical Training	2F Experiential Learning including Modular Assessment	2G Total
17	M-17 Introduction to varmam injuries & medicines used in varmam injuries This module describes the classification and aetiology of <i>varmam</i> injuries, as well as general principles and equipment required for fracture management, including internal and external medicine. • M17U1 Classification 17.1. Introduction and classification of <i>varmam</i> injuries 17.1.1 Classification of <i>varmam</i> injuries 17.1.2 Etiology of <i>varmam</i> injuries • M17U2 General principles of fracture management 17.2. Mechanism of fracture management 17.2.1. Closed reduction 17.2.2. Manipulation 17.2.3. Immobilisation 17.2.4. Open reduction • M17U3 Equipments required for fracture management 17.3. Equipments required for fracture management • M17U4 Internal medicines for Fracture management 17.4.1. <i>Chooranam</i> (Powder) 17.4.2. <i>Nei</i> (Ghee) 17.4.3. <i>Kudineer</i> (Decoctions)	2	10	20	30	60

	17.4.4. <i>Ennaigal</i> (Oils) • M17U5 External medicines used in Fracture management 17.5.1. <i>Ennaigal</i> (Oils) 17.5.2. <i>Pootchu</i> (Liquid poultice) 17.5.3. <i>Thoovalai</i> (Paste Massage) 17.5.4. <i>Ottradam</i> (Foementation) 17.5.5. <i>Kizhi</i> (Medicated pouch) 17.5.6. <i>Pasai</i> (Embrocation) 17.5.7. <i>Tharai</i> (Oil pouring method)					
18	M-18 Injuries of head & face and its varmam management This module describes the classification, mechanism, and common causes of injuries, as well as their clinical features and diagnosis. Additionally, it covers reduction techniques and the application of <i>varmam</i> treatment. • M18U1 Thalai Kaayangal 18.1.1 <i>Kabala kaayangal</i> (Injuries to the skull) 18.1.2. <i>Mandai utchi elumbu murivugal</i> (Fracture of parietal bone) 18.1.3. <i>Pidari elumbu murivu</i> (Fracture of Occipital bone) 18.1.4. <i>Kathalivana eadu</i> (Craniocerebral trauma) 18.1.5. <i>Lada maiya norunkal</i> (Brain damage) • M18U2 Muga Kaayangal 18.2.1. <i>Thilartha poruthu murivu</i> (Fracture of nasal notch) 18.2.2. <i>Nasi elumbu murivu</i> (Fracture of nasal bone) 18.2.3. <i>Aakirana bala kaayam</i> (Injuries to the nasal bridge) 18.2.4. <i>Alavellu murivu</i> (Fracture of mandible) 18.2.5. <i>Keel-alavu vilagal</i> (Dislocation and subluxation of mandible)	2	10	20	30	60
		4	20	40	60	120
Semester No : 4						

2A Module Number	2B Modules & units	2C Number of Credits	Notional Learning hours			
			2D Lectures	2E Practical Training	2F Experiential Learning including Modular Assessment	2G Total
19	M-19 Atchu-Elumbu Kaayangal (Injuries of the Axial Skeleton) This module describes the classification, mechanism, common causes, clinical features, diagnosis, reduction technique, & application of <i>varmam</i> treatment for <i>Atchu-Elumbu kaayangal</i>. • M19U1 Nattellu Kaayangal 19.1.1. <i>Kaluthu nattellu kaayangal</i> (Injuries of the cervical spine) 19.1.2. <i>Maarubu nattellu kaayangal</i> (Injuries of the thoracic spine) 19.1.3. <i>Iduppu nattellu kaayangal</i> (Injuries of the lumbar spine) 19.1.4. <i>Nattallu-naduppoottu vilagal</i> (Subluxation of the lumbo sacral joint) • M19U2 Complication of spinal cord injury 19.2.1. <i>Keel-vaasi mudam</i> (Traumatic paraplegia) 19.2.2. <i>Mael-vaasi mudam</i> (Traumatic quadriplegia) 19.2.3. <i>Veena thandu murivu</i> (Spinal cord Injury) • M19U3 Injuries of Ilium, Sacrum, Coccyx 19.3.1. <i>Chil-eumbu murivu</i> (Fracture of the Ilium) 19.3.2. <i>Nankana-poruthu naluval</i> (Subluxation of sacro-iliac joint) 19.3.3. <i>Moonaara kaayangal</i> (Sacral injuries) 19.3.4. <i>Kathir-moolam kaayangal</i> (Injury of the coccyx) • M19U4 Injuries of Rib, Hyoid, Sternum 19.4.1. <i>Vaari-ellu murivu</i> (Rib fracture)	2	10	20	30	60

	19.4.2. <i>Vaari-poonell murivu</i> (Fracture & dislocation of the costo-vertebral joints and costo-transverse joints) 19.4.3. <i>Sankuthiri elumbu murivu</i> (Fracture of hyoid bone) 19.4.4. <i>Nenju elumbu kaayangal</i> (Injuries of the sternum)					
20	M-20 Varmam Management For Regional Injuries – Part -I Upper limb injuries This module describes classification of upper limb injuries, methods of applying various reduction techniques, potential complications, and <i>varmam</i> management strategies for upper limb injuries. • M20U1 Thol poruthu kaayanagal 20.1.1. <i>Kaarai enbu murivu</i> (Fracture of the clavicle) 20.1.2. <i>Chippi mozhi kaarai poruthu kaayangal</i> (Injuries of the acromio clavicular joint) 20.1.3. <i>Nenju-kaarai poruthu kaayangal</i> (Injuries of the sterno clavicular joint) 20.1.4. <i>Chippi enbu kaayangal</i> (Injuries of the scapula) 20.1.5. <i>Thol-poruthu vilagal</i> (Dislocation of shoulder joint) • M20U2 Puya kaayangal 20.2.1. <i>Puya enbu-maelmunai kaayangal</i> (Fracture of Proximal humerus) 20.2.2. <i>Puya enbu thandu paguthi mundakkai elumbu murivu</i> (Fracture of the shaft of the humerus) • M20U3 Mulankai mootu kaayangal 20.3.1. <i>Mulankai moottu vilagal</i> (Dislocation of elbow) 20.3.2. <i>Mulankai elumbu murivu</i> (Fracture of the forearm) • M20U4 Manikkattu Kaayangal 20.4.1. <i>Manikkattu kaayangal</i> (Injuries of the wrist joint) • M20U5 Ankai Kaayangal 20.5.1. <i>Karaba enbu murivu</i> (Fracture of metacarpals) 20.5.2. <i>Kai-viral kaayangal</i> (Injuries of the phalanx)	2	10	20	30	60

		4	20	40	60	120
Semester No : 5						
2A Module Number	2B Modules & units	2C Number of Credits	Notional Learning hours			
			2D Lectures	2E Practical Training	2F Experiential Learning including Modular Assessment	2G Total
21	M-21 Varmam Management For Regional Injuries –Part II- Lower limb injuries This module provides a holistic understanding of <i>varmam</i> management for regional Injuries, specifically lower limb injuries, covering classification, causes, mechanisms, reduction techniques, complications, and <i>varmam</i> management strategies. • M21U1 Iduppu paguthi kaayangal 21.1.1. <i>Iduppu poruthu vilagal</i> (Discolation of the hip joint) 21.1.2. <i>Nangana kundu naluval</i> (Subluxation of the hip joint) 21.1.3. <i>Kundumani vilagal</i> (Discolation of the hip joint) 21.1.4. <i>Urulai poottu vilagal</i> (Discolation of the hip joint) • M21U2 Thodai kaayangal 21.2.1. <i>Thodai thandu murivu</i> (Fracture of the shaft of the femur) • M21U3 Mulankaal Muttu Kaayangal 21.3.1. <i>Chirattai elumbu murivu</i> (Fracture of the patella bone) 21.3.2. <i>Chirattai vilagal</i> (Dislocation of patella bone)	2	10	20	30	60

	• M21U4 Kanukkaal Kaayangal 21.4.1. <i>Kaalkannu vilagal</i> (Dislocation of ankle joint) 21.4.2. <i>Kaal karandai naluval</i> (Subluxation of the ankle joint) 21.4.3. <i>Kuthi elumbu murivu</i> (Fracture of the calcaneum) • M21U5 Paatha kaayangal 21.5.1. <i>Kaal kulachi elumbu vilagal</i> (Dislocation of the tarsal bones) 21.5.2. <i>Padankaal viral poruthu kaayangal</i> (Injuries of the metatarsophalangeal joint) 21.5.3. <i>Padankaal nadu murivu</i> (Fracture of the metatarsal bones) 21.5.4. <i>Kaal viral murivu</i> (Fracture of the phalanx) 21.5.5. <i>Viral idai poruthu vilagal</i> (Dislocation of Interphangeal joints)					
22	M-22 Varmam management for soft tissue injuries This module describes the location, symptoms, clinical assessment, diagnosis, varmam management of soft tissue injuries in <i>varmam maruthuvam</i>. • M22U1 Injury to head and neck 22.1.1. <i>Chenthanal varmam</i> 22.1.2. <i>Thilartha kala varmam</i> 22.1.3. <i>Mel inthiriya varmam</i> • M22U2 Injury to abdomen and thorax: 22.2.1. <i>Nadu vayiru isangal</i> 22.2.2. <i>Ottueeral</i> 22.2.3. <i>Pithukaai</i> 22.2.4. <i>Peesam</i> 22.2.5. <i>Kozhikudavan varmam</i> 22.2.6. <i>Pagarchai varmam</i> 22.2.7. <i>Vittil varmam</i> 22.2.8. <i>Thiralu varmam</i> 22.2.9. <i>Ulkuthu varmam</i> 22.2.10. <i>Pathi – virathai varmam</i>	2	10	20	30	60

	22.2.11. <i>Punal varmam</i> 22.2.12. <i>Pira – Veetchu varmam</i> 22.2.13. <i>Arana – vaal varmam</i> 22.2.14. <i>Thirivisai varmam</i> 22.2.15. <i>Karal – kalangi varmam</i> 22.2.16. <i>Etchi varmam</i> 22.2.17. <i>Inthiriya varmam</i> 22.2.18. <i>Koombiyangi varmam</i> 22.2.19. <i>Neruppu varmam</i> 22.2.20. <i>Kuda-kaari varmam</i> 22.2.21- <i>Alagai varmam</i> • M22U3 Injury to upper and lower limb 22.3.1. <i>Naal viral maththi keeral</i> 22.3.2. <i>Theeneri varmam</i> 22.3.3. <i>Paerellu varmam</i> 22.3.4 <i>Kavali varmam</i> 22.3.5. <i>Kathir – valai varmam</i> 22.3.6. <i>Thivalai varmam</i>					
		4	20	40	60	120
Semester No : 6						
2A Modu le Nu mber	2B Modules & units	2C Num ber of Credi ts	Notional Learning hours			
			2D Lectures	2E Practical Training	2F Experiential Learning including Modular Assessment	2G Total
23	M-23 Varmam management for nerve injuries	2	10	20	30	60

This module describes the nerve injuries, its location, clinical features, and its *varmam* management

• M23U1 Nerve Injuries of Head and Neck

- 23.1.1. *Keeri* (External jugular vein)
- 23.1.2. *Uthiram parathi* (Left common carotid artery)
- 23.1.3. *Kootchal* (Greater occipital nerve)
- 23.1.4. *Kambi* (Temporal branch of facial nerve)
- 23.1.5. *Pagalozhi* (Supra trochlear nerve)
- 23.1.6. *Kannoli* (Supra orbital nerve)
- 23.1.7. *Pootha* (Supra orbital nerve)
- 23.1.8. *Thudi* (Supra orbital nerve)
- 23.1.9. *Thaaru* (Lacrimal nerve)
- 23.1.10. *Pidari* (Cervical plexus)
- 23.1.11. *Neer koori* (Glossopharyngeal nerve)
- 23.1.12. *Pathiri* (External laryngeal nerve)

• M23U2 Nerve Injuries of Thorax

- 23.2.1. *Uthira* (Aorta)
- 23.2.2. *Vil* (Long thoracic nerve)
- 23.2.3. *Akkini* (Internal thoracic nerve)
- 23.2.4. *Thaamarai* (Subcostal T10 nerve)
- 23.2.5. *Villu* (Subcostal T 7 nerve)
- 23.2.6. *Pathini* (Eighth intercostal nerve)
- 23.2.7. *Uthira parathi* (Left common carotid artery)
- 23.2.8. *Uthira janni* (Inferior vena cava)
- 23.2.9. *Ilaval* (Intercostal nerve)
- 23.2.10. *Eakaasi* (Anterior cutaneous branch of intercostal nerve)
- 23.2.11. *Kukkuda* (T12 spinal cord segment nerve)
- 23.2.12. *Karu-manthi* -(Hepatic plexus)
- 23.2.13. *Mel varna* (Supra clavicular nerve)

23.2.14. <i>Karal virithaan</i> (Abdominal branch of phrenic nerve) 23.2.15. <i>Seetha(mel)</i>(Posterior cutaneous branches of dorsal rami C4-T6) 23.2.16. <i>Koombu narambu</i>(Thoracic nerve T9) 23.2.17. <i>Mayir kootchal</i>(Sub costal T 7nerve) 23.2.18. <i>Oodu</i> (Long thoracic nerve) 23.2.19. <i>Ulkodi</i>(Thoracic nerve T 8) 23.2.20. <i>Athisara</i>-(Thoracic abdominal nerve T8) 23.2.21. <i>Kathir pesi</i> (Thoraco dorsal nerve) 23.2.22. <i>Uyir Narambu</i> (Lesser occipital nerve) 23.2.23. <i>Kunukkellu</i> (Thoracic nerveT9) • M23U3 Nerve Injuries of Abdomen and pelvis 23.3.1. <i>Peesa Narambu</i> (Ilio inguinal nerve) 23.3.2. <i>Mael uri</i> (Greater splanchnic nerve) 23.3.3. <i>Neer</i> (Pelvic nerve) 23.3.4. <i>Kottai-kai narumbu</i> (Posterior scrotal nerve) 23.3.5. <i>Guru-boga</i> (Ilio hypogastric nerve) 23.3.6. <i>Keel varna</i> (Pudendal nerve) 23.3.7. <i>Kuyil Narambu</i> (Splenic plexus) 23.3.8. <i>Kozhuthu Narambu</i> (Greater splanchnic nerve) 23.3.9. <i>Kudukkai</i> (Dorsal nerve of clitoris) 23.3.10. <i>Poonthurumbal</i> (Ilio hypogastric nerve) 23.3.11. <i>Vaasal narambu</i> (Inferior rectal nerve) 23.3.12. <i>Uri narambu</i> (Genitofemoral nerve) 23.3.13. <i>Paaloonti</i> (Genital branch of genitofemoral nerve) 23.3.14. <i>Saaya narambu</i> (Coccygeal nerve) 23.3.15. <i>Thavalai Narambu</i> (Perineal nerve) 23.3.16. <i>PinMudichu</i> (lumbosacral) 23.3.17. <i>Pusal thiri Narambu</i> (Dorsal nerve of penis) 23.2.18. <i>Therai</i> (Coeliac plexus) 23.2.19. <i>Kundisangal</i> (Sacral nerve) 23.2.20. <i>Surakaari</i> (Splanchnic nerve) 23.2.21. <i>Irai mali</i> (Anterior vagal trunk)					
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	23.2.22. <i>Poovalasan</i> (Anterior cutaneous branch of ventral rami of T6-T12) • M23U4 Nerve Injuries of Upper limb and lower limb 23.4.1. <i>Mel varna</i> (Supraclavicular nerve) 23.4.2. <i>Mundirukki</i> (Axillary nerve) 23.4.3. <i>Neer-pisi</i> (Lumbar nerve) 23.4.4. <i>Kural</i> (Brachial plexus) 23.4.5. <i>Suvaasappal</i> (Sacral plexus) 23.4.6. <i>Sirasathi</i> (Median nerve) • M23U5 Peripheral nerve injuries 23.5.1. Anatomy and structure of nerve 23.5.2. Classification 23.5.3. Clinical examination 23.5.4. Diagnostic test 23.5.5. <i>Varmam</i> management.					
24	M-24 Varmam management for Sports injuries This module describes the common sports injuries, classification, mechanism, clinical features, examination, types of injuries, complications & its <i>varmam</i> management. • M24U1 Injuries to muscles and tendons 24.1.1. Contusion 24.1.2. Wound 24.1.3. Strain 24.1.4. Cramps • M24U2 Injuries to ligaments 24.2.1. Sprain around the shoulder, elbow, wrist, hip, knee, ankle 24.2.2. Ligament injury around the shoulder, elbow, wrist, hip, knee, ankle • M24U3 Injuries to the cartilage 24.3.1. Shoulder	2	10	20	30	60

	24.3.2. Hip 24.3.3. Knee • M24U4 Fractures and Dislocation 24.4.1. Etiology 24.4.2. Investigation 24.4.3. Reduction 24.4.4. Immobilisation 24.4.5. Rehabilitation					
		4	20	40	60	120
		16	80	160	240	480
Paper No : 4 (ESSENTIALS IN TRAUMATOLOGY AND ORTHOPEDICS)						
Semester No : 3						
2A Modu le Nu mber	2B Modules & units	2C Num ber of Credi ts	Notional Learning hours			
			2D Lectures	2E Practical Training	2F Experiential Learning including Modular Assessment	2G Total
25	M-25 General principles of traumatology - Part1 This module contains the definition of the types of bones, joints, fractures, dislocations and their types, introduction to radiology, stages of fracture healing methods and management. • M25U1 Introduction to skeletal system	2	10	20	30	60

	25.1.1. Brief anatomy 25.1.2. Organizations, types of bone and joints 25.1.3. Mechanism of joint movements • M25U2 General principles of fractures 25.2.1. Introduction: definition, types, mechanism of injury, clinical features 25.2.2. Approach to orthopaedic injury, Investigation, management and approach to polytrauma case. • M25U3 General principles of dislocations 25.3.1. Definition, classification, patho-anatomy, clinical features, investigation, diagnosis, treatment and complications of dislocation 25.3.2. Definition, classification, patho-anatomy, clinical features, investigation, diagnosis, treatment and complications of subluxation • M25U4 Fracture healing methods 25.4.1. Introduction 25.4.2. Indirect fracture healing 25.4.3. Stage of impact, stage of induction, stage of inflammation, stage of soft callus, stage of hard callus, stage of remodeling. 25.4.4. Direct fracture healing 25.4.5. Distraction histogenesis					
26	M-26 General principles of Traumatology -part 2 This module describes the complications of fractures with radiological findings, first aid management for emergencies, treatment modalities for fractures in special situations, soft tissue & nerve injuries • M26U1 Complication of fractures 26.1.1. Introduction 26.1.2. Acute Respiratory Distress Syndrome (ARDS) 26.1.3. Volkmann's ischemia or compartmental syndromes. 26.1.4. Non-union, avascular necrosis, malunion, traumatic myositis ossificans,	2	10	20	30	60

	26.1.5. Deep vein thrombosis, pulmonary embolism, 26.1.6. Injuries to blood vessels and nerves, 26.1.7. Crush Injuries 26.1.8. Complications of open fracture, shock, Gas gangrene and tetanus. • M26U2 Emergency care for the injuries 26.2.1. First AID Definition, goals of first aid treatment. 26.2.2. Initial care of the injured at the scene of the accident. 26.2.3. Modus operandi in first aid -airway, cardiac, bleeding and examination of vital structures. 26.2.4. Management at the hospital • M26U3 Fracture in special situations 26.3.1. Fractures in children 26.3.2. Epiphyseal injuries 26.3.3. Pathological fractures 26.3.4. Fatigue or stress fractures • M26U4 Soft tissue injuries and Nerve injuries 26.4.1. Soft Tissue Injury 26.4.1.1. Introduction 26.4.1.2. Mechanism of injury, approach to the patient, treatment goals, 26.4.1.3. Classification -muscle strain and sprains, ligament 26.4.2. Nerve injury 26.4.2.1. Peripheral nerve injury-anatomy, general principles, classification 26.4.2.2. Ulnar, Radial and Sciatic nerve injury 26.4.2.3. Brachial plexus injuries, Erb's palsy, axillary and long thoracic nerve Injuries.					
		4	20	40	60	120
Semester No : 4						
2A Modu	2B Modules & units	2C Num	Notional Learning hours			

le Number		ber of Credits	2D Lectures	2E Practical Training	2F Experiential Learning including Modular Assessment	2G Total
27	M-27 Regional Traumatology part I injuries of the Upper limb This module describes the definition, pathophysiology, mechanisms, signs, symptoms, relevant investigations and modern aspects and varmam aspects management of injuries in the upper limb bones • M27U1 Injuries around the clavicle 27.1.1. Fracture of the clavicle 27.1.2. Injuries of the acromioclavicular joint 27.1.3. Injuries of the sternoclavicular joint • M27U2 Injuries of the shoulder joint. 27.2.1. Introduction, Brief anatomy of bones around the shoulder joint & anatomy of the shoulder joint 27.2.2. Fracture of the scapula 27.2.3. Dislocations of the shoulder joint 27.2.4. Anterior dislocation of the shoulder, recurrent anterior dislocation of the shoulder, 27.2.5. Inferior dislocation of the shoulder 27.2.6 Posterior dislocation of the shoulder. • M27U3 Injuries around the elbow joint 27.3.1. Brief anatomy, classification of fractures for the distal Humerus 27.3.1.1. Supracondylar fracture 27.3.1.2. Physeal fracture	2	10	20	30	60

27.3.1.3. T condylar fracture 27.3.1.4. Cubitus valgus cubitus varus 27.3.2. Injuries around the elbow joint 27.3.2.1. Dislocation of the elbow joint, 27.3.2.2. Fracture of the head of the radius 27.3.2.3. Fractures of the olecranon process of the ulna 27.3.2.4. Fracture coronoid process of the ulna 27.3.2.5. Injuries in the capitulum, medial epicondyle and lateral epicondyle of the humerus, & sideswipe injuries • M27U4 Injuries of the forearm 27.4. Forearm Injuries 27.4.1. Introduction, fracture of both bones, isolated distal end of ulnar fracture 27.4.2. Monteggia fracture 27.4.3. Distal radius fracture 27.4.4. Colles fracture, distal shaft of radius fracture 27.4.5. Galeazzi's fracture 27.4.6. Essex-Lopresti fracture 27.4.7. Radial styloid fracture 27.4.8. Smith or reverse 27.4.9. Colles' fracture 27.4.10. Barton's fracture 27.4.11. Volar barton fracture 27.4.12. Palmar rim fracture • M27U5 Injuries of the wrist 27.5. Injuries of carpal bones 27.5.1. Brief anatomy of carpal bones and carpal bone Injuries 27.5.2. Scaphoid fracture 27.5.3. Injuries of the carpometacarpal joints of the thumb and the radio-carpal. 27.5.4. Injuries & radio-carpal dislocations 27.5.5. Dorsal trans scaphoid peri lunate fracture 27.5.6. Fractures of lunate, triquetral, pisiform, hamate, capitate, trapezoid and trapezium					
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	• M27U6 Injuries of the hand 27.6. Injuries of the phalanx 27.6.1. General principles, Injuries of the phalanx, mallet finger, distal interphalangeal joint Injuries fractures of the middle phalanx, dislocations of the IP joint, proximal phalanx fractures, metacarpophalangeal dislocations, kaplan's lesion, dislocations of the thumb, Injuries of fractures from 2 nd to 5th metacarpal bones, metacarpal fracture of the little finger, tendon Injuries, soft tissue and crush Injuries of the hand, amputation					
28	M-28 Regional Traumatology Part II Injuries of the lower limb This module contains definitions, pathophysiology, mechanisms, investigations and conservative management of injuries in the lower limb, axial skeleton and pelvic bones • M28U1 Injuries around the hip, knee and leg. 28.1. Injuries of the hip 28.1.1. Introduction, Brief anatomy, posterior, anterior and central dislocation of the hip joint. 28.1.2. Fracture of the femur 28.1.2.1. Fracture neck of femur, 28.1.2.2. Subtrochanteric fracture 28.1.2.3. Trochanteric fracture 28.1.2.4. Fracture of the shaft of the femur 28.1.2.5. Distal femur fracture and supracondylar fracture of the femur. 28.1.3 Injuries of knee 28.1.3.1. Brief Anatomy, knee ligament Injuries -general principles, medial collateral ligament injuries, anterior and posterior cruciate ligament injuries, semilunar cartilage injuries 28.1.3.2. Fracture of the patella 28.1.3.3. Injuries around the extensor apparatus of the knee	2	10	20	30	60

	28.1.3.4. Acute dislocation of the patella and the knee 28.1.4. Injuries of the leg 28.1.4.1. Fracture of tibia and fibula-proximal tibial fractures, fracture shaft of tibia and fibula, distal tibial fractures, open tibial fractures. • M28U2 Injuries of the ankle joint and foot 28.2.1. Injuries of the ankle joint 28.2.1.1. Anatomy of ankle joint,ankle injuries, ankle sprains -lateral and medial ligament sprain, tri-malleolar fracture, Achilles tendon injury. 28.2.2. Injuries of the foot 28.2.2.1. Forefoot injuries- Phalangeal fracture 28.2.2.2. Interphalangeal joint dislocation, metaphalangeal joint injury, injuries to other MTP joints, sesamoid bone injuries, and metatarsal fracture. 28.2.2.3. Mid-foot injuries -Navicular bone fractures, cuboid bone fractures, cuneiform injuries, tarsometatarsal injuries, 28.2.2.4. Hindfoot injuries- fracture calcaneum, fracture talus • M28U3 Injuries of the axial skeleton 28.3. Injuries of the Axial skeleton 28.3.1. Anatomy of the axial skeleton 28.3.2. Injuries to the cervical spine, Whiplash injury, thoracic and lumbosacral spine injury, spinal cord injuries-injury at cervical level, injury at thoracic level, injury at thoracolumbar region, injury below L1, cauda-equina syndrome • M28U4 Pelvic injuries, rib and coccyx injuries 28.4.1. Anatomy and fracture of the pelvis 28.4.2. Anatomy and fracture of the coccyx 28.4.3. Anatomy and fracture of the rib					
		4	20	40	60	120
Semester No : 5						
2A Modu	2B Modules & units	2C Num	Notional Learning hours			

le Nu mber		ber of Credi ts	2D Lectures	2E Practical Training	2F Experiential Learning including Modular Assessment	2G Total
29	M-29 General orthopedics-part I This module describes the definition, etiology, pathophysiology, investigation methods & management of congenital, developmental, metabolic, rheumatic, neuromuscular disorders & neoplasm. • M29U1 Congenital disorder 29.1.1. Congenital disorder of the upper limb - 29.1.1.1. Torticollis 29.1.1.2. Sprengel deformity 29.1.1.3. Cleidocranial dysostosis 29.1.1.4. Madelung's deformity 29.1.1.5. Congenital absence of radius 29.1.2. Congenital disorder of the lower limb 29.1.2.1. Congenital dysplasia of the hip 29.1.2.2. Congenital pseudarthrosis of the tibia 29.1.2.3. Congenital talipes equinovarus 29.1.2.4. Congenital absence of the tibia 29.1.2.5. Congenital absence of the fibula • M29U2 Developmental disorder 29.2.1. Introduction, achondroplasia, osteogenesis imperfecta, mucopolysaccharide disorders 29.2.2. Hurler's disease, hunter's disease, hereditary multiple exostoses,	2	10	20	30	60

dyschondroplasia, maffucci's disease 29.2.3. Osteopetrosis (marble bone disease) 29.2.4. Epiphyseal dysplasia, metaphyseal dysplasia, diaphyseal dysplasia, fibrous dysplasia, albert syndrome, nail patella syndrome, marfan's syndrome, acrocephalosyndactyly, carpenter 's syndrome, Cleidocranial dysplasia. 29.2.5. Congenital neurofibromatosis, 29.2.6. Paget's disease • M29U3 Metabolic disorders 29.3.1. Rickets 29.3.2. Renal osteodystrophy 29.3.3. Vitamin D-resistant rickets 29.3.4. Celiac rickets_ gluten sensitive enteropathy 29.3.5. Osteomalacia 29.3.6. Hyperparathyroidism 29.3.7. Osteoporosis 29.3.8. Scurvy 29.3.9. Metabolic disorders leading to osteosclerosis. • M29U4 Rheumatic diseases 29.4.1. Introduction 29.4.2. Classification 29.4.3. Rheumatoid arthritis 29.4.5. Seronegative spondylarthritis 29.4.6. Ankylosing spondylitis 29.4.7. Fibromyalgia • M29U5 Neuromuscular disorders 29.5.1. Cerebral palsy 29.5.2. Poliomyelitis 29.5.3. Arthrogryposis multiplex Congenita 29.5.4. Leprosy in orthopedics 29.5.6. Muscular dystrophies 29.5.7. Neural tube defects- spina bifida Aperta • M29U6 Bone neoplasm					
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	29.6.1. Introduction 29.6.2. General principles of tumors, classification 29.6.3. Tumors of cartilaginous origin, osseous origin, resorptive bone tumors, giant cell tumor, tumors of non-osseous origin and inclusion tumors					
30	M-30 General orthopedics- part-2 and sports medicine This module describes the definition, etiology, pathophysiology, investigation methods & management of infectious, degenerative, sports injuries & wound healing. • M30U1 Infection of bone and skeletal tuberculosis. 30.1. Osteomyelitis-acute, subacute and chronic 30.2. Skeletal tuberculosis - general principles, TB spine, TB of the hip joint, TB of the knee, TB of the shoulder. T.B. of the ankle and Tuberculosis osteomyelitis • M30U2 Disorder of the joints 30.2.1. Infective arthritis 30.2.2. Gonococcal arthritis 30.2.3. Syphilitic arthritis 30.2.4. Neuropathy arthritis 30.2.5. Hemophilic arthritis • M30U3 Degenerative disorder 30.3.1. Osteoarthritis of the hip, knee and other regions. 30.3.2. Crystalline arthropathy- Gout and pseudogout • M30U4 Sports Injuries and wound healing timeline 30.4.1. Sports injury-Introduction 30.4.2. Classification of sports injury 30.4.2.1. William's classification 30.4.2.2. Consequential Injuries 30.4.2.3. Non-consequential Injuries 30.4.3. Sports injuries of upper limbs, lower limbs, head, neck, trunk and spine.	2	10	20	30	60

	30.4.4. Wound healing timeline-Terminology, growth factors influences, chronology, of wound healing 30.4.5. Ligament healing timeline 30.4.6. Tendon healing timeline 30.4.7. Muscle healing timeline 30.4.8. Articular cartilage healing timeline 30.4.9. Bone healing timeline. • M30U5 Sports injuries and medicine 30.5.1. Sports injuries of upper limbs, lower limbs- Investigation, conservative treatment, preventive, proper treatment and proper training					
		4	20	40	60	120
Semester No : 6						
2A Modu le Nu mber	2B Modules & units	2C Num ber of Credi ts	Notional Learning hours			
			2D Lectures	2E Practical Training	2F Experiential Learning including Modular Assessment	2G Total
31	M-31 Non-traumatic orthopaedic disorders. This module describes a non-traumatic orthopaedic disorder. clinical signs and symptoms, investigation, and differential diagnosis of the various conditions of the regions of the body. • M31U1 General principles and Regional conditions of the neck 31.1.1. History, examination, investigation	2	10	20	30	60

	31.1.2. Neck-torticollis, thoracic outlet syndrome, cervical rib, cervical disc syndrome • M31U2 Regional condition of the upper limb and disorders of the hand 31.2.1. Shoulder -frozen shoulder, rotator cuff lesions, rotator cuff tears, deltoid contracture. 31.2.2. Elbow-tennis elbow, golfer's elbow, olecranon bursitis. 31.2.3. Wrist and hand. -de- quervain's syndrome, trigger fingers and thumb, ganglia, Dupuytren's contracture, carpal tunnel syndrome, compound palmar ganglion • M31U3 Regional condition of the lower limbs 31.3.1. Hip-coxa Vara, Legg-Calve-Perthes disease, slipped capital femoral epiphysis 31.3.2. Knee-genu valgum, genu varum, genu recurvatum, bursa around the knee, popliteal cyst, chondromalacia patella, recurrent dislocations of patella, loose bodies in the knee, jumper's knee, iliotibial band syndrome, Osgood -schlatter disease, sinding- Larsen Johansson syndrome, plica syndrome, osteochondritis dissecans, Hoffa's syndrome 31.3.3. Foot-introduction ,pes-cavus,pes-planus, painful heel- traumatic disturbances, foot pain 31.3.4. Heel- developmental and pathological disturbances of the heel, plantar fibromatosis, dancer tendinitis, hallux valgus, hammer toe, sesamoiditis • M31U4 Regional condition of the spine and Low back ache 31.4.1. Scoliosis, kyphosis, lumbosacral stenosis, spondylolisthesis 31.4.2. Low back ache -introduction, epidemiology, posture, pathophysiology, functional anatomy, lumbar disc disease, classification of intervertebral disc, 31.4.3. Examination, clinical features, investigation, differential diagnosis, conservative treatment of the back, 31.4.4. Back education in special situations -school bag syndrome, repetitive stress injury					
32	M-32 Physical medicine	2	10	20	30	60

This module contains the definition, types, mechanism, indication and contraindication of Posture, biomechanics, clinical kinesiology, therapeutic exercises, massage therapy, electrotherapy, mobility aids, suspension, traction orthosis, braces, prosthesis.

• M32U1 Physiotherapy, therapeutic exercises & orthosis, brace and prosthesis

32.1.1. Physiotherapy-Physiotherapy approach to osteoarthritis, rheumatoid arthritis, ankylosing spondylitis, frozen shoulder and torticollis, upper and lower extremities post arthroplasty rehabilitation-Neurological -stroke, Parkinson's disease, multiple sclerosis, poliomyelitis, motor neuron disease and traumatic brain injury.

32.1.2. Therapeutic exercises- Introduction, mechanism, various exercises procedures for strengthening, relaxation, coordination, mobilisation, endurance, gait, balance and musculoskeletal injuries

32.1.3. Orthosis, brace and prosthesis- Classification, varieties-spinal, cervical, upper and lower limbs. types-supportive spinal orthosis, corrective spinal orthosis, lower limb Orthosis,Hip-Knee-Ankle-Foot [HAKF] Orthosis , upper Orthosis ,foot wear and it's modifications.

32.1.4. Prosthesis -classification, types, PrHip-Knee-Ankle-Foot Orthosisosthetic for lower and upper limb.

• M32U2 Posture, biomechanics, massage therapy & clinical kinesiology

32.2.1. Posture alignment procedure for standing, sitting, muscle imbalance, pathological, upper & lower extremities

32.2.2. Body Biomechanics - basic principles,back education, wallet syndrome

32.2.3. Techniques, Indications, Contra indication, Dangers of massage therapy

32.2.4. Clinical kinesiology, Introduction, terminology, basic concepts, osteo kinematics, arthrokinematics, clinical application

• M32U3 Suspension and traction

Introduction, physiological effects, modes and techniques for applying traction parameters and suspension, indication and Contra indication.

• M32U4 Electro therapy and mobility AIDS 32.4.1. Low frequency, medium frequency and high frequency currents, transcutaneous nerve stimulation (TENS), microfilament electrical Neuromuscular stimulation, iontophoresis common motor points-indication, Contraindication, physiological effects. 32.4.2. Diathermy -short wave, microwave and long wave diathermy-indication, Contraindication 32.4.3. Radiation therapy - infrared and ultraviolet radiation-indication, Contra indication dangers 32.4.4. Laser therapy 32.4.5. Superficial heating modalities -paraffin,wax bath therapy, hot pack, electrical heating pads, Whirlpool bath, helio therapy, sauna therapy, biofeedback, electromyography 32.4.6. Mobility AIDS-parallel walk, walking frames, rollators, walking cane and stick, crutches, dependent mobility AIDS					
	4	20	40	60	120
	16	80	160	240	480
	64	320	640	960	1920

Table 3 : Modules - Unit - Module Learning Objectives and Session Learning Objective- Notional Learning Hours- Domain-Level- TL Methods

Paper No : 1 PRINCIPLES AND PRACTICES OF VARMAM MARUTHUVAM						
Semester No : 3						
3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical training /experiential learning) session, the students should be able to)	3C Notional learning Hours	3D Lecture/ Practical Training/ Experientia l Learning	3E Domain/ Sub Domain	3F Level (D oes/Sho ws how/ Knows h ow/Kno w)	3G Teachin g Learnin g Methods
Module 1 : Methods of locating varmam points						
Module Learning Objectives (At the end of the module, the students should be able to) Describe various methods used to locate <i>varmam</i> points Elucidate the spatial relationships between Varmam points using various quantifiable parameters Identify the location of <i>varmam</i> points through multimodal measurement verification Evaluate the effectiveness of different methods for locating <i>varmam</i> points						
M 1 Unit 1 Anatomical landmarks methods 1.1.1.Head 1.1.2. Neck 1.1.3. Chest 1.1.4. Upper limb 1.1.5. Abdomen 1.1.6. Pelvis & back 1.1.7. Lower limb References: 5,12,21,23,24,25,26,27,33,40,42,49						
3A	3B	3C	3D	3E	3F	3G

CO1	Describe the method of locating <i>varmam</i> points through anatomical landmarks method	1	Lecture	CC	Knows-how	L&PPT
CO1	Identify the anatomical landmarks and mark the <i>varmam</i> points associated with it	2	Practical Training 1.1	PSY-GUD	Knows-how	D-M,DIS,D
CO1	Demonstrate proficiency in locating various <i>varmam</i> points precisely by anatomical landmark method.	2	Experiential-Learning 1.1	PSY-MEC	Does	SDL,D

M 1 Unit 2 Proportional measurement a) Finger breadth measurement method b) Thread measurement method

1.2.1 Head 1.2.2. Neck 1.2.3. Chest 1.2.4. Upper limb 1.2.5. Abdomen 1.2.6. Pelvis & back 1.2.7. Lower limb

References: 5,8,9,21,24,37,43

3A	3B	3C	3D	3E	3F	3G
CO1	Describe the method of proportionally measuring the body and locating the key <i>varmam</i> points using finger breadth measurement and thread measurement methods	1	Lecture	CC	Knows-how	L&PPT
CO1	Identify the key <i>varmam</i> points in the body using finger breadth measurement and thread measurement method	2	Practical Training 1.2	PSY-GUD	Shows-how	DIS,D-M,D
CO1	Demonstrate proficiency in locating various <i>varmam</i> points precisely by proportionally segmenting the body and locating the <i>varmam</i> points by finger breadth method and thread measurement method	3	Experiential-Learning 1.2	PSY-MEC	Does	SDL,D

M 1 Unit 3 Graphical measurement method

1.3.1 Head 1.3.2. Neck 1.3.3. Chest 1.3.4. Upper limb 1.3.5. Abdomen 1.3.6. Pelvis & back 1.3.7.Lower limb

References: 5,13

3A	3B	3C	3D	3E	3F	3G
CO1	Describe the method of locating <i>varmam</i> points through graphical measurement method.	1	Lecture	CC	Knows-how	L&PPT
CO1	Identify the location of <i>varmam</i> points by graphical measurement method.	2	Practical Training 1.3	PSY-GUD	Shows-how	DIS,D-M,D
CO1	Demonstrate proficiency in locating various <i>varmam</i> points precisely by graphical measurement methods.	3	Experiential-Learning 1.3	PSY-MEC	Does	D,EDU

M 1 Unit 4 Body planes and Nomenclature method

1.4.1. Head 1.4.2. Neck 1.4.3. Chest 1.4.4. Upper limb 1.4.5. Abdomen 1.4.6. Pelvis & back 1.4.7. Lower limb

References: 5

3A	3B	3C	3D	3E	3F	3G
CO1	Describe the method of locating <i>varmam</i> points through the division of body into different planes and assigning standardized nomenclature.	1	Lecture	CC	Knows-how	L&PPT
CO1	Identify the location of <i>varmam</i> points relative to body planes and assign standardized nomenclature.	2	Practical Training 1.4	PSY-GUD	Shows-how	D-M,DIS,D
CO1	Demonstrate and proficiency in locating various <i>varmam</i> points precisely with respect to various body planes.	3	Experiential-Learning 1.4	PSY-MEC	Does	EDU,D,S DL

M 1 Unit 5 Locating by reference to adjacent *varmam* points

1.5.1. Head 1.5.2. Neck 1.5.3. Chest 1.5.4. Upper limb 1.5.5. Abdomen 1.5.6. Pelvis & back 1.5.7. Lower limb

References: 5,12,21,64,80

3A	3B	3C	3D	3E	3F	3G
CO1	Describe the method of locating <i>varmam</i> points with reference to adjacent <i>varmam</i> points.	1	Lecture	CC	Knows-how	L&PPT
CO1	Identify the position of <i>varmam</i> points relative to adjacent key <i>varmam</i> points.	2	Practical Training 1.5	PSY-GUD	Shows-how	D,D-M,DIS
CO1	Demonstrate and proficiency in locating various <i>varmam</i> points precisely with respect to adjacent <i>varmam</i> points.	2	Experiential-Learning 1.5	PSY-MEC	Does	D,EDU

Practical Training Activity

Practical Training 1.1 : *Varmam* points identification by anatomical landmarks method.

Total activity :2 hrs

Activity 1. Demonstration (1 hr 20 min)

Step1. The teacher explains the objectives of the practical session(10 mins).

Step 2. Provide an overview of importance of anatomical landmarks in identifying *varmam* points.(10 mins).

Step 3. The teacher demonstrates/displays an instructional video to show how to mark the key anatomical landmark in the body.(30mins).

Step 4. The teacher demonstrates the method to locate the *varmam* points associated with each anatomical landmark.(30 mins).

Activity 2. Demonstration on Models (30 min)

The students are encouraged to practice identifying anatomical landmarks and marking *varmam* points on anatomical models/volunteers under supervision.(30 mins)

Activity 3. Discussion (10 mins).

The teacher conducts a group discussion to review the practical session. The students submit the report about the session.

Practical Training 1.2 : *Varmam* points location in the body using the finger breadth measurement and the thread measurement method.

Total hours (2 hours)

Activity 1. Demonstration (1hr 5min)

Step 1. The teacher explains the objective of the practical session.(10 mins).

Step 2. Provides an overview of the importance of the finger breadth measurement method and the thread measurement method in locating the *varmam* points.(10 mins).

Step 3. (a) Finger measurement method: The teacher demonstrates or displays an instructional video to show how to proportionally segment the body of a volunteer by

finger breadth measurement method and mark the key *varmam* points(20 mins).

Step 4. (b) Thread measurement method: The teacher demonstrates or displays an instructional video to show how to proportionally segment each part of the body of the model or volunteer by thread measurement method and mark the key *varmam* points(25 mins).

Activity 2. Demonstration on models (45 mins).

The students are encouraged to practice segmenting the body by the finger breadth measurement method and the thread measurement method, and mark the key *varmam* points under close supervision

Activity 3. Discussion (10 mins).

The teacher conducts a group discussion to review the practical session, and the students submit a report about the session

Practical Training 1.3 : Identification and the location of *varmam* points by the graphical measurement method

Total hours(2 hours)

Activity 1. Demonstration (1hr 20 mins)

Step 1. The teacher explains the objective of the practical session.(10 mins).

Step 2. The teacher provides an overview of graphical measurement method in identifying the *varmam* points.(10 mins).

Step 3. The teacher provides live demonstration/displays instructional video to show how to create a graph by dividing the body with horizontal & vertical lines at one finger breadth intervals on anatomical models or anatomical charts.(30 mins),

Step 4.The teacher marks the key *varmam* points on the graph created in each segment of the body.(30 mins),

Activity 2. Demonstration on models (30 mins)

The students are guided to create a graph on each segment of body of anatomical model or anatomical charts by drawing vertical and horizontal lines at one finger breadth interval and mark the key *varmam* points on the graph(30 mins),.

Activity 3. Discussion (10 min)

The teacher conducts a group discussion to review the practical session,the students submit report about the session(10 mins).

Practical Training 1.4 : Identification and the location of *varmam* points relative to body planes & assign specialised nomenclature

Total hours (2 hours)

Activity 1. Demonstration (1 hr 10 min)

Step 1. The teacher explains the objective of the practical session.(10 mins).

Step 2. Provide an overview of the importance of body planes in identifying *varmam* points.(10 mins).

Step 3. The teacher demonstrates or displays an instructional video to show how to divide each part of the body based on the body planes.(20 mins).

Step 4. Mark the *varmam* points relative to the body planes.(15 mins).

Step 5. Assign specialized nomenclature to each point based on their relative location to these planes.(15 mins).

Activity 2. Demonstration on Models (40 min)

Step 1. Students are instructed to draw body planes on anatomical models and mark the *varmam* points relative to the body planes.(20 mins).

Step 2. The students are guided to assign appropriate nomenclature to each identified *varmam* point.(20 mins)

Activity 3. Discussion (10 mins).

The teacher conducts a group discussion to review the practical session.The students submit a report about the session.

Practical Training 1.5 : Identify the position of key *varmam* points relative to adjacent *varmam* points

Total activity (2 hours)

Activity 1. Demonstration (55 min)

Step 1. The teacher explains the objective of the practical session(10 mins).

Step 2. The teacher demonstrates how to locate *varmam* points with reference to adjacent key *varmam* points in volunteers(45 mins).

Activity 2. Demonstration on the Model (45 mins)

The students practice the method of locating *varmam* points concerning adjacent key *varmam* points in anatomical models

Activity 3. Discussion (20 mins).

The teacher conducts a group discussion to review the practical session and the student submit the report about the session

Experiential learning Activity

Experiential-Learning 1.1 : Location of various *varmam* points by the anatomical landmark method.

Total hours(2 hours)

Activity 1. Demonstration (50 mins)

Demonstrate and teach the undergraduate students about locating the *varmam* points by anatomical and marking methods

Activity 2. Self-Directed Learning (1 hr 10 mins))

Step 1. Prepare a video clip with clear, concise narrative demonstrating the localization of *varmam* points using the anatomical landmark method.(50 mins).

Step 2 .The students submit an elaborate report about the session(20 mins).

Experiential-Learning 1.2 : Location of key *varmam* points by finger breadth and thread measurement method.

Total hours(3 hours)

Activity 1. Demonstration (1 hr 20 min).

Step 1. Demonstrate and teach the undergraduate students about locating the *varmam* points by finger breadth measurement method and thread measurement method.

Activity 2. Self-Directed Learning (1 hr 40 min).

Step 1. Prepare a video clip with clear, concise narrative demonstrating the localization of *varmam* points using finger breadth measurement method and thread measurement method.(80 mins).

Step 2. The students submit elaborate report about the session (20 mins).

Experiential-Learning 1.3 : Locating *varmam* points by graphical measurement methods.

Total hours (3 hrs)

Activity 1.Demonstration (1hr 20 min)

Demonstrate and teach the undergraduate students about locating the *varmam* points by graphical measurement method.

Activity 2. Edutainment (1 hr 40 mins)

Prepare a video clip with clear concise narrative demonstrating the localization of *varmam* points by graphical measurement method.(80 mins).

The students submit an elaborate report about the session.(20 mins).

Experiential-Learning 1.4 : Locating key *varmam* points by various body planes and specialized nomenclature.

Total activity hours (3 hours)

Activity 1. Demonstration (60 mins)

The student will demonstrate and teach the undergraduate students about locating the *varmam* points relative to the body planes.

Activity 2. Self-Directed Learning (60 min)

Teach the student to assign specialised nomenclature to each identified *varmam* points relative to the body planes

Activity 3. Edutainment (60 min)

Prepare a video clip with a clear, concise narrative demonstrating the method of locating *varmam* points relative to body planes(40 mins).

The students submit an elaborate report about the session(20 mins)

Experiential-Learning 1.5 : Locating *varmam* points by adjacent key *varmam* points.

Total activity (2 hours)

Activity 1. Demonstration (50 mins).

The teacher will demonstrate and teach the undergraduate students about locating the *varmam* points with respect to adjacent key *varmam* points.

Activity 2. Edutainment (1 hr 10 min).

Prepare a video clip with a clear, concise narrative demonstrating the localisation of *varmam* points with respect to adjacent key *varmam* points.(50 mins).
The students submit an elaborate report about the session(20 mins).

Modular Assessment

Assessment method	Hour
INSTRUCTIONS: Conduct a structured modular assessment. The assessment will be for 25 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the Table 6C 1.Practical demonstration-20 marks Mark any 5 specified <i>varmam</i> points in the model or chart by a specified method and validate it with any other method of locating <i>varmam</i> points. a) For each accurate identification and marking of a <i>varmam</i> point on the chart or model - 2 marks.(2x5=10 marks). b) Validation of identified <i>varmam</i> points using alternative methods - 2 marks(2x5 =10 marks). 2.Making of charts -5 marks Create a meticulous chart of any specified region of body and mark 5 pivotal <i>varmam</i> points specified by teacher using Graphical measurement method(5x1=5) or Any practical in converted form can be taken for assessment.(10 marks) and Any experiential, such as portfolios/reflections/presentations, can be taken as an assessment.(15 marks)	2

3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical training /experiential learning) session, the students should be able to)	3C Notional learning Hours	3D Lecture/ Practical Training/ Experientia l Learning	3E Domain/ Sub Domain	3F Level (D oes/Sho ws how/ Knows h ow/Kno w)	3G Teachin g Learnin g Methods
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Module 2 : Varmam points in the head

Module Learning Objectives

(At the end of the module, the students should be able to)

Describe the *varmam* points in the head.

Discuss principles of *varmam* points with *aatharangal*, *mudicchugal*, *naadigal* and *vaayukal*.

Practice therapeutic applications of *varmam* points in the head.

Identify signs and symptoms caused due to injury to specific *varmam* points.

Discuss *Ilakkumuraigal* specific to a *varmam* point injury and recommend treatment and dietary regimen.

M 2 Unit 1 Varmam points on the anterior & lateral aspect of the Head- Physiological Aspects

2.1.1 Location 2.1.2 Actions 2.1.3 Principles 2.1.4 Relationship with *aatharangal*, *mudicchugal*, *naadigal* & *vaayukkal* 2.1.5 Stimulation methods 2.1.6 Physiological indications

References: 2,3,5,8,9,11,12,13,20,21,22,23,24,25,26,27,28,30,33,37,39,40,41,42,43,44,45,53,55,64,69,80,83

3A	3B	3C	3D	3E	3F	3G
CO1,CO3,CO5,CO8	Describe the locations of <i>varmam</i> points in the anterior & lateral aspects of the head and connect the actions and principles of the <i>varmam</i> points with their relationships with <i>athaarangal</i> , <i>mudicchugal</i> , <i>naadigal</i> and <i>vaayukkal</i> .	2	Lecture	CC	Knows-how	BS,L&GD,L&PPT
CO1,CO3,CO5,CO8	Describe the stimulation methods and therapeutic indications of the <i>varmam</i> points.	2	Lecture	CC	Knows-how	L&GD,L&PPT
CO1,CO3,CO5,CO8	Perform the stimulation techniques on <i>varmam</i> points of anterior and lateral aspects of head for therapeutic indications.	8	Practical Training 2.1	PSY-GUD	Shows-how	D,D-M,DIS
CO1,CO3,CO5,CO8	Apply the manipulation techniques of <i>varmam</i> points in the anterior and lateral aspects of head., in different pathological conditions.	5	Experiential-Learning 2.1	PSY-MEC	Does	CBL,DIS,D

CO1,CO3,CO5,CO8	Demonstrate and document the efficacy of therapeutic applications of <i>varmam</i> points in the anterior and lateral aspects of head	5	Experiential-Learning 2.2	PSY-MEC	Does	D-BED,DIS
M 2 Unit 2 Varmam points in the anterior & lateral aspects of the Head-pathological aspects 2.2.1 Signs and symptoms of injury 2.2.2 Specific <i>ilakkumuraigal</i> & Treatments 2.2.3 Dietary regimen References: 2,3,12,19,20,21,22,23,24,25,26,27,28,30,33,37,39,41,42,43,44,45,49,50,64,83						
3A	3B	3C	3D	3E	3F	3G
CO3,CO4	Enlist the signs and symptoms of <i>varmam</i> points injury in the anterior and lateral aspects of head.	2	Lecture	CK	Know	BS,DIS,L &GD
CO3,CO4	Describe specific <i>illakumuraigal</i> , treatment and dietary regimen specific to each <i>varmam</i> point injury.	2	Lecture	CK	Know	L&PPT
CO3,CO4	Identify the signs and symptoms of <i>varmam</i> points injury in the anterior and lateral aspects of head and perform specific <i>illakumuraigal</i> and treatment.	7	Practical Training 2.2	PSY-GUD	Shows-how	SIM,D-M,BS,D-BED,CBL
CO3,CO4	Demonstrate proficiency in performing <i>illakumuraigal</i> and treatment in conditions of <i>varmam</i> injuries.	5	Experiential-Learning 2.3	PSY-MEC	Does	CBL,D,DIS,D-BED
CO3,CO4	Apply the various <i>ilakkumuraigal</i> and expertise in selecting <i>ilakkumuraigal</i> specific to each <i>varmam</i> point injury of the anterior and lateral aspects of head.	5	Experiential-Learning 2.4	CAP	Does	DIS,CBL
M 2 Unit 3 Varmam points in the superior and posterior aspect of Head-physiological aspects 2.3.1 Location 2.3.2 Actions 2.3.3 Principles 2.3.4 Relationship with <i>aatharangal</i> , <i>mudicchugal</i> , <i>naadigal</i> & <i>vaayukkal</i> 2.3.5 Stimulation methods 2.3.6.Physiological indications						

References: 2,3,5,8,9,11,12,13,20,21,22,23,24,25,26,27,28,30,33,37,39,40,41,42,43,44,45,53,55,64,69,80,83

3A	3B	3C	3D	3E	3F	3G
CO1,CO3,CO5,CO8	Describe the location of <i>varmam</i> points in the superior & posterior aspects of head and connect the actions and principles of the <i>varmam</i> points with their relationships with <i>Athaarangal</i> , <i>mudicchugal</i> , <i>naadigal</i> and <i>vaayukkal</i> .	2	Lecture	CK	Know	L&GD,L &PPT,BS
CO1,CO3,CO5,CO8	Describe the stimulation methods and therapeutic indications of the <i>varmam</i> points.	2	Lecture	CC	Knows-how	L&GD,L &PPT
CO1,CO3,CO5,CO8	Perform the stimulation techniques on <i>varmam</i> points of superior and posterior aspects of head for therapeutic indications.	8	Practical Training 2.3	PSY-GUD	Shows-how	SIM,DIS,D,D-M
CO1,CO3,CO5,CO8	Apply the manipulation techniques on <i>varmam</i> points in the superior and posterior aspects of head in different pathological conditions.	5	Experiential-Learning 2.5	PSY-MEC	Does	D,DIS,CB L
CO1,CO3,CO5,CO8	Demonstrate and record the efficacy of therapeutic applications of <i>varmam</i> points in the superior and posterior aspects of head.	5	Experiential-Learning 2.6	PSY-MEC	Does	D-BED,DIS

M 2 Unit 4 Varmam points in superior and posterior aspects oh Head-pathological aspects

2.4.1 Signs and symptoms of injury 2.4.2 Specific *ilakkumuraigal* & Treatments 2.4.3 Dietary regimen

References: 2,3,12,19,20,21,22,23,24,25,26,27,28,30,33,37,41,42,43,44,45,49,50,64,83

3A	3B	3C	3D	3E	3F	3G
CO3,CO4	Enlist the signs and symptoms of <i>varmam</i> points injury in the superior and posterior aspects of head.	1	Lecture	CK	Know	L&GD,L &PPT
CO3,CO4	Describe <i>illakumuraigal</i> , treatment and dietary regimen specific to each <i>varmam</i> point injury.	2	Lecture	CC	Knows-how	L&PPT,L&GD
CO3,CO4	Identify the signs and symptoms of <i>varmam</i> points injury in the superior and posterior	7	Practical Training 2.4	PSY-GUD	Shows-how	D,DIS,SI M,D-M

aspects of head & Perform specific *illakumuraigal* and treatment.

CO3,CO4	Demonstrate proficiency in performing <i>illakumuraigal</i> and treatment in conditions of <i>varmam</i> injuries.	5	Experiential-Learning 2.7	PSY-MEC	Does	D-BED,D ,CBL,DIS
CO3,CO4	Apply the various <i>ilakkumuraigal</i> and expertise in selecting <i>ilakkumuraigal</i> specific to each <i>varmam</i> point injury in the superior and posterior aspects of head.	4	Experiential-Learning 2.8	CE	Does	DIS,CBL

Practical Training Activity

Practical Training 2.1 : Varmam point therapy for head and face- Stimulation techniques and therapeutic uses

Total activity: 8 hrs

Activity 1. Demonstration (3 hrs 50 mins)

Step 1. The teacher provides an overview of key *varmam* points of the anterior and lateral aspects of the head and their therapeutic indications.(30 mins).

Step 2. The teacher locates each *varmam* point precisely and performs a live demonstration or uses instructional videos to show how to perform the stimulation techniques.(180 mins).

Step 3. The teacher highlights the correct method and importance of pressure and precision.(20 mins).

Activity 2. Demonstration on Models (3hr 30 mins)

The students are guided to practice the stimulation techniques of each *varmam* point on volunteers or anatomical models.(210 min).

Activity 3. Discussion (40 min)

The teacher facilitates a group discussion to review the practical experience. The students submit an elaborate report about the session(40 mins).

Practical Training 2.2 : Varmam points & *illakumuraigal* for anterior and lateral aspects of head

Total activity : 7 hrs

Activity 1. Simulation (1 hr)

Step 1. The teacher provides an overview of signs and symptoms of injuries specific to each *varmam* point located in the anterior and lateral aspects of head.(30 mins).

Step 2. The teacher sets up simulated scenarios of *varmam* point injuries where students are encouraged to diagnose each *varmam* point injury based on presentation.(30 mins).

Activity 2. Brainstorming (1 hr)

The teacher provides a brief overview of *ilakkumuraigal* and treatment specific to each *varmam* point injury.(60 mins).

Activity 3. Demonstration (2 hrs)

The teacher performs a live demonstration or uses instructional videos to show how to perform *ilakkumuraigal* & treatment specific to the injury of each *varmam* point on volunteers or a model.

Activity 4. Demonstration on Models(120 mins)

Guide the students to practice *ilakkumurai* techniques for each *varmam* point injury on volunteers or models.

Supervise to ensure the correct application of the techniques.

Activity 5. Discussion (1 hr)

Facilitate a group discussion to review the practical session.(30 mins).

The students submit a detailed report about the session(30 mins).

Practical Training 2.3 : *Varmam* points for superior and posterior aspects of the head -Stimulation techniques and therapeutic uses

Total activity hours:8

Activity 1. Demonstration (3hrs)

Step 1. The teacher provides an overview of key *varmam* points of the superior and posterior aspects of the head and their therapeutic indications.(30 mins).

Step 2. The teacher locates each *varmam* point precisely and performs a live demonstration or uses instructional videos to show how to perform the stimulation techniques (2 hours).

Step 3. The teacher highlights the correct method and importance of pressure and precision.(30 mins).

Activity 2. Demonstration on Model (3 hrs)

The students are guided to practice the stimulation techniques of each *varmam* point on volunteers or anatomical models..

Activity 3. Discussion (2hrs)

Step 1. The teacher facilitates a group discussion to review the practical experience(1 hr)

Step 2. The students submit a detailed report about the practical session.(1hr)

Practical Training 2.4 : *Varmam* points & *illakumuraigal* of superior and posterior aspects of head

Total activity: 7 hrs

Activity 1. Demonstrations (2 hrs)

Step 1. The teacher provides an overview of signs and symptoms of injuries specific to each *varmam* point located in the superior and posterior aspects of the head.(30 mins).

Step 2. The teacher set up stimulated scenarios of *varmam* point injuries where students are encouraged to diagnose each *varmam* point injury based on presentation(30 mins).

Step 3. The teacher provides an overview of *ilakkumuraigal* and treatment specific to each *varmam* point injury.(60 mins).

Activity 2. Demonstration on Models.(4 hrs).

Step 1. The teacher performs a live demonstration or uses instructional videos to show how to perform *ilakkumuraigal* & treatment specific to the injury of each *varmam* point on volunteers or a model (2 hrs)

Step 2. The teacher guides the students to practice *ilakkumurai* techniques for each *varmam* point injury on volunteers or models. The teacher supervises so as to ensure the correct application of the techniques.(2 hrs)

Activity 3. Discussion (1 hr)

The teacher facilitates a group discussion to review the practical session.(30 mins).

The students submit a detailed report about the session.(30 mins).

Experiential learning Activity

Experiential-Learning 2.1 : *varmam* points in the anterior and lateral aspects of head in different pathological conditions.

Total activity : 5 hrs

Activity 1. Case-Based Learning (2hrs 10 min)

Step 1. The teacher emphasises the importance of precision, empathy and ethics in handling the patients.(10 mins).

Step 2. The teacher presents real-life cases with different pathological conditions, and the students apply the manipulation techniques under the guidance and close supervision of the teacher.(2 hrs).

Activity 2. Discussion (30 mins)

The teacher facilitates group discussion to review the clinical experience.

Activity 3. Demonstration (2 hrs 20 min)

Step 1. The student demonstrates and teaches the undergraduate students about the manipulation techniques of *varmam* points in the anterior and lateral aspects of the head.(2 hrs).

Step 2. The students submit a detailed report about their experience (20 mins).

Experiential-Learning 2.2 : Therapeutic applications of *varmam* points in the anterior and lateral aspects of head.

Total activity : 5 hrs

Activity 1. Discussion(60 mins).

The teacher discusses the expected outcomes and therapeutic benefits of stimulating the *varmam* points in the anterior and lateral aspects of head.

Activity 2. Demonstration Bedside(180 mins)

Step 1. Each student is instructed to perform the stimulation techniques on key *varmam* points and document the pre and post treatment clinical conditions for at least 5 cases

Step 2. The students should Compare the pre and post treatment assessments to evaluate the efficacy of therapeutic application of *varmam* points.(30 mins).

Activity 3. Discussion (60 mins)

Step 1. The teacher facilitates a group discussion to review the experiential learning experience.(30 mins).

Step 2. The students submit a detailed report of the session(30 mins).

Experiential-Learning 2.3 : *Illakumuraigal* and treatment for *varmam* injuries.

Total activity: 5 hrs

Activity 1. Case-Based Learning (60 min)

The teacher presents real-life case studies from the outpatient and inpatient ward, showcasing signs and symptoms of specific *varmam* point injuries.

Activity 2. Demonstration Bedside (60 min)

Students are then encouraged to apply *illakumuraigal* techniques tailored to address the respective *varmam* point injuries under expert supervision.(120 mins).

Activity 3. Discussion (30 min)

The faculty guides refining the *illakumuraigal* skills through discussion and feedback.(30 mins).

Activity 4. Demonstration (2hrs 30 min)

Demonstrate and teach the undergraduate students about the *illakumuraigal* techniques for *varmam* injuries.(2hrs).

The students submit a detailed report about the session(30 mins).

Experiential-Learning 2.4 : Varmam point & *ilakkumuraigal* injuries in the anterior and lateral aspects of head

Total activity : 5 hrs

Activity 1. Case-Based Learning (3 hrs 30 mins)

Step 1. Each student is advised to perform *ilakkumurai* techniques on at least 5 patients and document pre- and post-treatment assessment.(180 mins).

Step 2. The students compare the pre- and post-treatment assessments and evaluate the efficacy of *illakumuraigal* in each *varmam* point injury.(30 mins).

Activity 3. Discussion(1hr 30 min)

Step 1. The teacher facilitates group discussion to review the experiential learning experience and share insights.(60mins).

Step 2. The students submit a detailed record about the session (30mins).

Experiential-Learning 2.5 : *Varmam* points for the superior and posterior aspects of the head in different pathological conditions.

Total activity: 5 hrs

Activity 1. Case-Based Learning (2 hrs)

Step 1. The teacher emphasises the importance of precision, empathy and ethics in handling the patients.(20 mins)

Step 2. The teacher presents real-life cases with different pathological conditions, and the students apply the manipulation techniques under the guidance and close supervision of the teacher.(100 mins).

Activity 2. Discussion (30 mins).

The teacher facilitates group discussion to review the clinical experience and document the conclusion in their logbook

Activity 3. Demonstration (2 hrs 30 min)

Step 1. The student demonstrates and teaches the undergraduate students about the manipulation techniques of *varmam* points in the superior and posterior aspects of the head.(120 mis).

Step 2. The students submit a detailed report about the session.(20 mins).

Experiential-Learning 2.6 : Therapeutic applications of *varmam* points in the superior and posterior aspects of the head.

Total activity: 5 hrs

Activity 1. Demonstration Bedside (3 hrs 30 mins)

Step 1. Each student is instructed to perform the stimulation techniques on key *varmam* points and document the pre- and post-treatment clinical conditions for at least 5 cases.(180 mins).

Step 2. The students compare the pre- and post-treatment assessments to evaluate the efficacy of the therapeutic application of *varmam* points(30 mins).

Activity 2. Discussion (1 hr 30 mins)

Step 1. The teacher facilitates a group discussion to review the experiential learning experience.(30 mins).

Step 2The teacher discusses the expected outcomes and therapeutic benefits of stimulating the *varmam* points in the superior and posterior aspects of the head. (30 min)

Step 3 The students submit a detailed report about the session (30 mins).

Experiential-Learning 2.7 : *Illakumuraigal* and treatment in conditions of *varmam* injuries.

Total activity : 5 hrs

Activity 1. Case-Based Learning (60 min)

The teacher presents real-life case studies from the outpatient and inpatient wards show showcasing signs and symptoms of specific *varmam* point injuries.

Activity 2. Demonstration Bedside (60 min)

Students are then encouraged to apply *illakumuraigal* techniques tailored to address the respective *varmam* point injuries under expert supervision

Activity 3. Discussion (30 min)

The faculty guides refining *illakumuraigal* skills through discussion and feedback

Activity 4. Demonstration (2hrs 30 mins)

The students should demonstrate and teach the undergraduate students about *the illakumaraigal* techniques for *varmam* injuries(120 mins).

The students should submit a detailed report about the entire session.(30 mins).

Experiential-Learning 2.8 : *Varmam* point and *ilakkumuraigal* for superior and posterior aspects of the head.

Total activity : 4 hrs

Activity 1. Case-Based Learning .(2hrs 30 mins)

Step 1. Each student is advised to perform *ilakkumurai* techniques on at least 5 patients and document pre- and post-treatment assessment (120 mins)
 Step 2. The students should compare the pre- and post-treatment assessments and evaluate the efficacy of *illakumuraigal* in each *varmam* point injury.(30 mins)
 Activity 2. Discussion (1 hr 30 mins)
 Step 1. The teacher facilitates group discussion to review the experiential learning experience and share insights(60 mins).
 Step 2. The students submit a detailed report about the session.(30 mins).

Modular Assessment

Assessment method	Hour
INSTRUCTIONS Conduct a structured modular assessment. Assessment will be for 75 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6C 1.MCQ = 10 marks.(10x1=10) Multiple choice questions on actions and principles of <i>varmam</i> points of head and relationship between <i>varmam</i> points and <i>aatharangal</i>, <i>mudichhugal</i> and <i>vayukkal</i>. 2.Quiz = 10 marks. Quiz conducted on the topic -identification of signs and symptoms of <i>varmam</i> points injuries of head. 3.DOPS=20 marks The students perform therapeutic application of 5 specified <i>varmam</i> points of head. For each <i>varmam</i> points- 4 marks a) Identification of <i>varmam</i> points -1 mark - b).Demonstration of appropriate therapeutic technique on each <i>varmam</i> point - 2 mark c) Adherence of safety protocol and precautions-1 mark. 4.Practical performance= 35 marks The students perform <i>ilakkumurai</i> techniques for <i>varmam</i> points injuries of head for 5 patients and document the prognosis.(5x7=35). a) Pre procedure preparation-1 marks. b) <i>Ilakkumuraigal</i> technique application-4 marks - c) Safety and precaution-1 mark d) Post-procedure care -1 mark Or Any practical in converted form can be taken for assessment. (35 mark) And	6

Any experiential, such as portfolios/reflections/presentations, can be taken as an assessment. (40 mark)						
Semester No : 4						
3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical training /experiential learning) session, the students should be able to)	3C Notional learning Hours	3D Lecture/ Practical Training/ Experientia l Learning	3E Domain/ Sub Domain	3F Level (D oes/Sho ws how/ Knows h ow/Kno w)	3G Teachin g Learnin g Methods
Module 3 : Varmam points in the neck and chest						
Module Learning Objectives (At the end of the module, the students should be able to)						
Describe the principles and actions of varmam points with aatharangal, mudicchugal, naadigal, and vaayukkal Evaluate the therapeutic efficacy of varmam points in the neck and chest region Apply Ilakkumaraigal for varmam point injuries, treatment and dietary recommendations						
M 3 Unit 1 Physiological Aspects						
3.1.1 Location 3.1.2 Actions 3.1.3 Principles 3.1.4 Relationship with <i>aatharangal, mudicchugal, naadigal & vaayukkal</i> 3.1.5 Stimulation methods 3.1.6 Therapeutic indications						
References: 2,5,8,9,11,12,13,20,21,22,23,24,25,26,27,28,33,37,39,40,41,42,43,44,45,53,55,64,69,80,83						
3A	3B	3C	3D	3E	3F	3G

CO1,CO3,CO5,CO8	Describe the location of <i>varmam</i> points in the neck & chest and connect the actions and principles of <i>varmam</i> points with their relationship with <i>aatharangal</i> , <i>mudicchugal</i> , <i>naadigal</i> and <i>vaayukkal</i> .	2	Lecture	CK	Know	L&GD,B S,L&PPT
CO1,CO3,CO5,CO8	Discuss about the stimulation methods and therapeutic indications of the <i>varmam</i> points	3	Lecture	CK	Know	L&GD
CO1,CO3,CO5,CO8	Perform the stimulation techniques on <i>varmam</i> points in the neck & chest for therapeutic indications.	10	Practical Training 3.1	PSY-GUD	Shows-how	D,DIS,D-BED
CO1,CO3,CO5,CO8	Apply the manipulation techniques on <i>varmam</i> points of neck and chest in different pathological conditions.	6	Experiential-Learning 3.1	PSY-MEC	Does	CBL,DIS,D
CO1,CO3,CO5,CO8	Demonstrate and record the efficacy of therapeutic applications of <i>varmam</i> points in neck and chest.	7	Experiential-Learning 3.2	PSY-MEC	Does	D,DIS

M 3 Unit 2 Pathological Aspects

3.2.1 Signs and symptoms of injury 3.2.2 Specific *ilakkumuraigal* & Treatment 3.2.3 Dietary Regimen

References: 2,3,12,19,20,21,22,23,24,25,26,27,28,30,33,37,39,41,42,43,44,45,49,50,64,83

3A	3B	3C	3D	3E	3F	3G
CO3,CO4	Enlist the signs and symptoms of <i>varmam</i> points injury in the neck and chest.	1	Lecture	CK	Know	L&PPT
CO3,CO4	Describe specific <i>illaku muraigal</i> , treatment and dietary regimen specific to each <i>varmam</i> point injury.	4	Lecture	CK	Knows-how	L&GD,DIS,BS
CO3,CO4	Identify the signs and symptoms of <i>varmam</i> points injury in the neck, chest and perform specific <i>illakumuraigal</i> and treatment.	10	Practical Training 3.2	PSY-GUD	Shows-how	SIM,CBL,D-M,D-BED
CO3,CO4	Demonstrate proficiency in performing <i>illakumuraigal</i> and treatment in conditions of <i>varmam</i> injuries of neck and chest.	10	Experiential-Learning 3.3	PSY-MEC	Does	D-BED,D,CBL,DIS

CO3,CO4	Apply the various <i>illakumuraigal</i> and expertise in selecting <i>illakumuraigal</i> specific to each <i>varmam</i> point injury of neck and chest.	3	Experiential-Learning 3.4	CE	Does	DIS,CBL
Practical Training Activity						
Practical Training 3.1 : Application of the stimulation techniques on <i>varmam</i> points in the neck & chest for therapeutic indications.						
Total activity: 10 hrs Activity 1. Demonstration (6 hrs) Step 1. The teacher provides an overview of key <i>varmam</i> points in the neck and chest for their therapeutic indications(30 mins) Step 2. The teacher locates each <i>varmam</i> point precisely and performs a live. demonstration or use instructional videos to show how to perform the stimulation techniques.(5 hrs). Step 3. The teacher highlights the correct method and importance of pressure and precision.(30 mins). Activity 2. Demonstration on Models .(3 hrs) The students are guided to practice the stimulation techniques of each <i>varmam</i> point on volunteers or anatomical models Activity 3. Discussion.(60 mins). The teacher facilitates a group discussion to review the practical experience,the students submit a detailed report about the practical class						
Practical Training 3.2 : Identification of the signs and symptoms of <i>varmam</i> points injury in the neck & chest, perform specific <i>illakumuraigal</i> and treatment.						
Total activity : 10 hrs Activity 1. Simulation (2 hrs 45 mins) Step 1. The teacher provides an overview of signs and symptoms of injuries specific to each <i>varmam</i> point located in the neck and chest.(45mins) Step 2. The teacher set up stimulated scenarios of <i>varmam</i> point injuries where students are encouraged to diagnose each <i>varmam</i> point injury based on presentation.(60 mins) Step 3. The teacher provides an overview of <i>ilakkumuraigal</i> and treatment specific to each <i>varmam</i> point injury.(60 mins) Activity 2. Demonstration on Models (6 hrs) Step 1. The teacher performs a live demonstration or use instructional videos to show how to perform <i>ilakkumuraigal</i> & treatment specific to injury of each <i>varmam</i> point on volunteers or model.(180 mins) Step 2. The teacher guides the students to practice <i>ilakkumurai</i> techniques for each <i>varmam</i> point injury on volunteers or models.(180 mins), Supervise to ensure the correct application of the techniques. Activity 3. Discussion (1hr 15 mins) Facilitate a group discussion to review the practical session(45 mins).						

The students submit a detailed report about the session.(30 mins).

Experiential learning Activity

Experiential-Learning 3.1 : Application of the manipulation techniques on *varmam* points of neck and chest in different pathological conditions.

Total activity: 6 hrs

Activity 1. Case-Based Learning (2 hrs 10 mins)

Step 1. The teacher emphasises the importance of precision, empathy and ethics in handling the patients.(10 mins)

Step 2. The teacher presents real-life cases with different pathological conditions, and the students apply the manipulation techniques under the guidance and close supervision of the teacher.(120 mins)

Activity 2. Discussion (30 mins)

The teacher facilitates group discussion to review the clinical experience.(30 mins)

Activity 3. Demonstration (3 hrs 20 mins)

The student demonstrates and teaches the undergraduate students about the manipulation techniques of *varmam* points in the neck and chest.(180 mins).

The students submit a detailed report about the session.(20 mins).

Experiential-Learning 3.2 : Demonstration and recording of the efficacy of therapeutic applications of *varmam* points in neck and chest.

Total activity: 7 hrs

Activity 1. Discussion (1 hr)

The teacher discusses the expected outcomes and therapeutic benefits of stimulating the *varmam* points in the neck and chest.

Activity 2. Demonstration Bedside (5 hrs)

Step 1. Each student is instructed to perform the stimulation techniques on key *varmam* points and document the pre- and post-treatment clinical conditions for at least 5 cases.(230 mins)

Step 2. The students compare the pre- and post-treatment assessments to evaluate the efficacy of the therapeutic application of *varmam* points(70 mins).

Activity 3. Discussion (60 min)

The teacher facilitates a group discussion to review the experiential learning experience.(30 mins).

The students submit a detailed report about the session.(30 mins).

Experiential-Learning 3.3 : Demonstrate *illakumuraigal* and treatment in conditions of *varmam* injuries of neck and chest.

Total activity: 10 hrs

Activity 1. Case-Based Learning (40 min)

The teacher presents real-life case studies from the outpatient and inpatient wards showcasing signs and symptoms of specific <i>varmam</i> point injuries. Activity 2. Demonstration Bedside (3hrs 20 min) Students are then encouraged to apply <i>illakumuraigal</i> techniques tailored to address the respective <i>varmam</i> point injuries under expert supervision.(200 mins). Activity 2. Discussion (30 min) The faculty guides refining the <i>illakumuraigal</i> skills through discussion and feedback.(30 mins). Activity 3. Demonstration (5hrs 30 min) Step 1. Demonstrate and teach the undergraduate students about the <i>illakumuraigal</i> techniques for <i>varmam</i> injuries (5 hrs). Step 2. The students submit a detailed report about the session.(30 mins).	
Experiential-Learning 3.4 : Varmam points and <i>illakumuraigal</i> for injury of neck and chest.	
Total activity :3 hrs Activity 1. Case-Based Learning (2 hrs) Step 1. Each student is advised to perform <i>ilakkumurai</i> techniques on at least 5 patients and document pre- and post-treatment assessment.(60 mins). Step 2. The students compare the pre- and post-treatment assessments and evaluate the efficacy of <i>illakumuraigal</i> in each <i>varmam</i> point injury.(60 mins). Activity 2. Discussion (1hr) Step 1. The teacher facilitates a group discussion to review the experiential learning experience and share insights.(30 mins) Step 2. The students submit a detailed report about the session.(30 mins).	
Modular Assessment	
Assessment method	Hour
INSTRUCTIONS; Conduct a structured modular assessment. Assessment will be for 50 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6c. 1.Structured LAQ =10 marks long answer question about the actions principles,relationships between the <i>varmam</i> points of neck and chest and <i>mudicchugal,nadigal,vaayukkal</i>. 2.Viva=10 marks Viva voce on signs and symptoms of <i>varmam</i> point injuries of neck and chest. 3.Class presentation=15 marks. The students are required to prepare a presentation on the stimulation techniques of <i>varmam</i> points of neck and chest. a)Introduction to <i>varmam</i> point of neck and chest-3 marks b)Demonstration of stimulation techniques- 7marks.	4

c)Explanation of rationale and benefits of each technique- 3 marks.
d)Usage of visual aids-2 marks.
4.Mini-CEX - 15 marks
Performance of *ilakkumuraigal* for *varmam* point injuries of neck or chest.
The students will be given a patient scenario with *varmam* point injury of neck or chest
The students will perform *ilakkumuraigal* on patients,the examiner will observe the student's performance.
a)Analysing the signs and symptoms and identifying the *varmam* point injury.- 3 marks.
b)Performance of *ilakkumurai* techniques specific to *varmam* point injuries.- 7 marks
c) Exhibition of communication skills while interacting with the patients and ensuring comfort and safety of patients while performing the techniques.-5 marks.
Or
Any practical in converted form can be taken for assessment. (25 marks)
and
Any experiential, such as portfolios/reflections/presentations, can be taken as an assessment.(25 marks)

3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical training /experiential learning) session, the students should be able to)	3C Notional learning Hours	3D Lecture/ Practical Training/ Experientia l Learning	3E Domain/ Sub Domain	3F Level (D oes/Sho ws how/ Knows h ow/Kno w)	3G Teachin g Learnin g Methods
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Module 4 : Varmam points in the upper limb

Module Learning Objectives

(At the end of the module, the students should be able to)

Describe the location, actions & principles of *varmam* points of the upper limbs with *aatharangal*, *mudicchugal*, *naadigal* and *vaayukkal*
Evaluate the therapeutic efficacy of *varmam* points in the upper limb
Apply *Ilakkumuraigal* for specific to a *varmam* point injury, treatment & dietary regimen

M 4 Unit 1 Physiological Aspects

4.1.1 Location 4.1.2 Actions 4.1.3 Principles 4.1.4 Relationship with *aatharangal*, *mudicchugal*, *naadigal* & *vaayukkal* 4.1.5 Stimulation methods 4.1.6 Therapeutic indications

References: 2,3,5,8,9,11,12,13,20,21,22,23,24,25,26,27,28,30,33,37,39,40,41,42,43,44,45,53,55,64,69,80,83

3A	3B	3C	3D	3E	3F	3G
CO1,CO3,CO5,CO8	Describe the location of <i>varmam</i> points in the upper limb and connect actions and principles of the <i>varmam</i> points with their relationship with <i>aatharangal</i> , <i>mudicchugal</i> , <i>naadigal</i> and <i>vaayukkal</i> .	2	Lecture	CK	Know	L&GD,B S,L&PPT
CO1,CO3,CO5,CO8	Describe the stimulation methods and therapeutic indications of the <i>varmam</i> points.	3	Lecture	CK	Know	L&GD
CO1,CO3,CO5,CO8	Perform the stimulation techniques on <i>varmam</i> points of upper limb for therapeutic indications.	10	Practical Training 4.1	PSY-GUD	Shows-how	D,DIS,D-M
CO1,CO3,CO5,CO8	Apply the manipulation techniques on <i>varmam</i> points of upper limb in different pathological conditions.	6	Experiential-Learning 4.1	PSY-MEC	Does	DIS,CBL,D
CO1,CO3,CO5,CO8	Demonstrate and record the efficacy of therapeutic applications <i>varmam</i> points of the upper limb.	7	Experiential-Learning 4.2	PSY-MEC	Does	DIS,D

M 4 Unit 2 Pathological Aspects

4.2.1 Signs and symptoms of injury 4.2.2 Specific *ilakkumuraigal* & Treatment 4.2.3 Dietary Regimen

References: 2,3,12,19,20,21,22,23,24,25,26,27,28,30,33,37,39,41,42,43,44,45,49,50,64,83

3A	3B	3C	3D	3E	3F	3G
CO3,CO4	Enlist the signs and symptoms of <i>varmam</i> points injury in the upper limb.	1	Lecture	CK	Know	L&PPT
CO3,CO4	Describe specific <i>illakumuraigal</i> , treatment and dietary regimen specific to each <i>varmam</i> point injury.	4	Lecture	CK	Knows-how	L&GD,B S,DIS
CO3,CO4	Identify the signs and symptoms of <i>varmam</i> points injuries in the upper limb and perform specific <i>illakumuraigal</i> and treatment.	10	Practical Training 4.2	PSY-GUD	Shows-how	CBL,D-B ED,D-M,SIM
CO3,CO4	Demonstrate proficiency in performing <i>illakumuraigal</i> and treatment in conditions of <i>varmam</i> injuries of upper limb.	10	Experiential-Learning 4.3	PSY-MEC	Does	D,CBL,D-BED,DIS
CO3,CO4	Access the efficacy of various <i>illakumuraigal</i> and expertise in selecting <i>illakumuraigal</i> specific to each <i>varmam</i> point injury of upper limb.	3	Experiential-Learning 4.4	PSY-MEC	Does	DIS,CBL

Practical Training Activity

Practical Training 4.1 : Application of the stimulation techniques on *varmam* points of upper limb for therapeutic indications.

Total activity: 10 hrs

Activity 1.Demonstration (6 hrs)

Step 1. The teacher provides an overview of key *varmam* points of the upper limb for their therapeutic indications.(1 hr)

Step 2. The teacher locates each *varmam* point precisely and perform a live demonstration or use instructional videos to show how to perform the stimulation techniques.(300 mins)

Step 3. The teacher highlights the correct method and importance of pressure and precision.(30 mins).

Activity 2. Demonstration on Models (3 hrs).

The students are guided to practice the stimulation techniques of each *varmam* point on volunteers or anatomical models.

Activity 3. Discussion (60 mins).

The teacher facilitates a group discussion to review the practical experience,the students submit a detailed report about the practical session.

Practical Training 4.2 : Identification of the signs and symptoms of *varmam* points injuries in the upper limb and Performing specific *illakumuraigal* and treatment.

Total activity: 10 hrs

Activity 1. Simulation (2 hrs 45 mins)

Step 1. The teacher provides an overview of signs and symptoms of injuries specific to each *varmam* point located in the upper limb.(45 mins).

Step 2. The teacher set up stimulated scenarios of *varmam* point injuries where students are encouraged to diagnose each *varmam* point injury based on presentation.(60 mins).

Step 3. The teacher provides a brief overview of *ilakkumuraigal* and treatment specific to each *varmam* point injury.(60 mins)

Activity 2. Demonstration (3 hrs).

The teacher performs a live demonstration or uses instructional videos to show how to perform *ilakkumuraigal* & treatment specific to the injury of each *varmam* point on volunteers or a model.

Activity 3. Demonstration on Models (3 hrs)

The teacher guides the students to practice *ilakkumurai* techniques for each *varmam* point injury on volunteers or models. The teacher supervises to ensure the correct application of the techniques.

Activity 4. Discussion (1hr 15 min)

The teacher facilitates a group discussion to review the practical session.(45 mins).

The students submit a detailed report about the session(30 mins).

Experiential learning Activity

Experiential-Learning 4.1 : Application of the manipulation techniques on *varmam* points of upper limb in different pathological conditions.

Total activity: 6 hrs

Activity 1. Case-Based Learning (2 hr 10 min)

Step 1. The teacher emphasises the importance of precision, empathy and ethics in handling the patients.(10 mins).

Step 2. The teacher presents real-life cases with different pathological conditions and the students apply the manipulation techniques under the guidance and close supervision of the teacher.(120 mins).

Activity 2. Discussion (30 mins)

The teacher facilitates group discussion to review the clinical experience.(30 mins).

Activity 3. Demonstration (3 hrs 20 mins).

The student demonstrates and teaches the undergraduate students about the manipulation techniques of *varmam* points in the upper limb.(180 mins)

The students submit a detailed report about the session.(20 mins).

Experiential-Learning 4.2 : Demonstration and recording the efficacy of therapeutic applications *varmam* points of the upper limb.

Total activity: 7 hrs

Activity 1. Discussion. (30 mins)

The teacher discusses the expected outcomes and therapeutic benefits of stimulating the *varmam* points in the upper limb

Activity 2. Demonstration Bedside (5 hrs 30min)

Step 1. Each student is instructed to perform the stimulation techniques on key *varmam* points and document the pre- and post-treatment clinical conditions for at least 5 cases. (300 mins)

Step 2. The students compare the pre- and post-treatment assessments to evaluate the efficacy of the therapeutic application of *varmam* points (30 mins).

Activity 2. Discussion (1 hr)

The teacher facilitates a group discussion to review the experiential learning experience. (30 mins).

The students submit a detailed report about the session. (30 mins).

Experiential-Learning 4.3 : Demonstration of proficiency in performing *illakumuraigal* and treatment in conditions of *varmam* injuries of upper limb.

Total activity: 10 hrs

Activity 1. Case-Based Learning (40 mins)

The teacher presents real life case studies from outpatient and inpatient ward showcasing signs and symptoms of specific *varmam* point injuries.

Activity 2. Demonstration Bedside (3 hr 20mins).

Students are then encouraged to apply *illakumuraigal* techniques tailored to address the respective *varmam* point injuries under expert supervision.

Activity 3. Discussion (30 mins)

The faculty provides guidance on refining *illakumuraigal* skills through discussion and feedback. (30 mins).

Activity 4. Demonstration (5 hr 30 mins)

The students demonstrate and teach the undergraduate students about the *illakumuraigal* techniques for *varmam* injuries. (300 mins).

The students submit a detailed report about the session. (30 mins)

Experiential-Learning 4.4 : Assessment of the efficacy of various *illakumuraigal* and expertising in selecting *illakumuraigal* specific to each *varmam* point injury of upper limb.

Total activity : 3 hrs

Activity 1. Case-Based Learning (2 hrs)

Step 1. Each student is advised to perform *ilakkumurai* techniques on at least 5 patients and document pre and post treatment assessment. (60 mins).

Step 2. Compare the pre and post treatment assessment and evaluate the efficacy of *illakumuraigal* in each *varmam* point injury. (60 mins).

Activity 2. Discussion (1 hr)

Facilitate the group discussion to review the experiential learning experience and share insights.(30 mins).

The students submit a detailed report about the session,(30 mins).

Modular Assessment

Assessment method

Hour

INSTRUCTION:

Conduct a structured modular assessment. The assessment will be for 50 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6c.

1.Making charts= 10 marks.

The students prepare a chart about the actions and principles of *varmam* points of upper limb,relationship between the *varmam* points and *athaarangal,mudicchugal,nadigal* and *vaayukkal*.

2.Practical role play = 20 marks.

The students demonstrate a practical role play to portray the signs and symptoms of *varmam* point injury of upper limb.

3.OSPE=20 marks

Application of stimulation techniques on 5 *varmam* points of upper limb specified by the teacher.(5x4=20).

The students are provided with simulator/volunteer and instructed to perform the stimulation technique on 5 *varmam* points of upper limb specified by the teacher.

a) Identification of *varmam* points - 1 mark

b)Performance of stimulation techniques -2 marks.

Or

Any practical in converted form can be taken for assessment. (25 marks)

and

Any experiential, such as portfolios/reflections/presentations can be taken as an assessment.(25 marks)

4

Semester No : 5

3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical training /experiential learning) session, the students should be able to)	3C Notional learning Hours	3D Lecture/ Practical Training/	3E Domain/ Sub Domain	3F Level (D oes/Sho ws how/	3G Teachin g Learnin
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			Experientia l Learning		Knows h ow/Kno w)	g Methods
Module 5 : Varmam points in the Abdomen						
Module Learning Objectives (At the end of the module, the students should be able to)						
Describe the location, actions & principles of <i>varmam</i> points of the abdomen with <i>aatharangal</i>, <i>mudicchugal</i>, <i>naadigal</i> and <i>vaayukkal</i> Evaluate the therapeutic efficacy of <i>varmam</i> points in the abdomen Apply <i>Ilakkumuraigal</i> for specific to a <i>varmam</i> point injury ,treatment & dietary regimen.						
M 5 Unit 1 Physiological Aspects						
5.1.1 Location 5.1.2 Actions 5.1.3 Principles 5.1.4 Relationship with <i>aatharangal</i> , <i>mudicchugal</i> , <i>naadigal</i> & <i>vaayukkal</i> 5.1.5 Stimulation methods 5.1.6 Therapeutic indications						
References: 2,3,5,8,9,11,12,13,20,21,22,23,24,25,26,27,28,30,33,37,39,40,41,42,43,44,45,53,55,64,69,80,83						
3A	3B	3C	3D	3E	3F	3G
CO1,CO3,CO5 ,CO8	Describe the location of <i>varmam</i> points in the abdomen and connect the actions and principles with their relationships with <i>aatharangal</i> , <i>mudicchugal</i> , <i>naadigal</i> and <i>vaayukkal</i> .	2	Lecture	CK	Know	L&PPT , L&GD,B S
CO1,CO3,CO5 ,CO8	Describe the stimulation methods and therapeutic indications of the <i>varmam</i> points.	3	Lecture	CK	Know	L&GD
CO1,CO3,CO5 ,CO8	Perform the stimulation techniques on <i>varmam</i> points in the abdomen for therapeutic indications.	10	Practical Training 5.1	PSY- GUD	Shows- how	D,D- M,DIS

CO1,CO3,CO5,CO8	Apply the manipulation techniques on the <i>varmam</i> points of abdomen in different pathological conditions.	6	Experiential-Learning 5.1	PSY-MEC	Does	D,DIS,CBL
CO1,CO3,CO5,CO8	Demonstrate and record the efficacy of therapeutic applications of <i>varmam</i> points of the abdomen	7	Experiential-Learning 5.2	PSY-MEC	Does	DIS,D
M 5 Unit 2 Pathological Aspects 5.2.1 Signs and symptoms of injury 5.2.2 Specific <i>illakumuraigal</i> & Treatment 5.2.3 Dietary Regimen References: 2,3,12,19,20,21,22,23,24,25,26,27,28,30,33,37,39,41,42,43,44,45,49,50,64,83						
3A	3B	3C	3D	3E	3F	3G
CO3,CO4	Enlist the signs and symptoms of <i>varmam</i> points injury in the abdomen.	1	Lecture	CK	Know	L&PPT
CO3,CO4	Describe specific <i>illakumuraigal</i> , treatment and dietary regimen specific to each <i>varmam</i> point injury.	4	Lecture	CK	Knows-how	L&GD,DIS,BS
CO3,CO4	Identify the signs and symptoms of <i>varmam</i> points injury in the abdomen, Perform specific <i>illakumuraigal</i> and treatment.	10	Practical Training 5.2	PSY-GUD	Shows-how	D-BED,D-M,CBL,SIM
CO3,CO4	Demonstrate proficiency in performing <i>illakumuraigal</i> and treatment in conditions of <i>varmam</i> injuries of the abdomen.	10	Experiential-Learning 5.3	PSY-MEC	Does	D-BED,CBL,D,DIS
CO3,CO4	Apply the various <i>illakumuraigal</i> and expertise in selecting <i>illakumuraigal</i> specific to each <i>varmam</i> point injury of abdomen	3	Experiential-Learning 5.4	PSY-MEC	Does	CBL,DIS
Practical Training Activity						
Practical Training 5.1 : Application of the stimulation techniques on <i>varmam</i> points in the abdomen for therapeutic indications.						
Total activity :10 hrs Activity 1. Demonstration (360 mins)						

Step 1. The teacher provides an overview of key *varmam* points of the abdomen for their therapeutic indications.(60 mins).

Step 2. The teacher locates each *varmam* point precisely and perform a live demonstration or use instructional videos to show how to perform the stimulation techniques.(300 mins).

Step 3. The teacher highlights the correct method and importance of pressure and precision.(30 mins).

Activity 2.Demonstration on Models.(180 mins).

The students are guided to practice the stimulation techniques of each *varmam* point on volunteers or anatomical models

Activity 3. Discussion(60 mins).

The teacher facilitates a group discussion to review the practical experience,the students submit a detailed report about the practical session.

Practical Training 5.2 : Identification of the signs and symptoms of *varmam* points injury in the abdomen, Perform specific *illakumuraigal* and treatment.

Total activity : 10 hrs

Activity 1. Simulation (2hr 45mins)

Step 1. The teacher provides an overview of signs and symptoms of injuries specific to each *varmam* point located in the abdomen.(45 mins).

Step 2. Teacher set up stimulated scenarios of *varmam* point injuries where students are encouraged to diagnose each *varmam* point injury based on presentation.(60 mins).

Step 3. The teacher provides an overview of *ilakkumuraigal* and treatment specific to each *varmam* point injury.(60 mins).

Activity 2. Demonstration(3 hrs).

The teacher performs a live demonstration or use instructional videos to show how to perform *ilakkumuraigal* & treatment specific to injury of each *varmam* point on volunteers or model.

Activity 3. Demonstration on Models (3 hrs)

The teacher guides the students to practice *ilakkumurai* techniques for each *varmam* point injury on volunteers or models.The teacher supervises to ensure correct application of the techniques.(180 mins).

Activity 4. Discussion (1 hr 15 mins)

The teacher facilitates a group discussion to review the practical session.(45 mins).

The students submit a detailed report about about the session.(30 mins).

Experiential learning Activity

Experiential-Learning 5.1 : Application of the manipulation techniques on the *varmam* points of abdomen in different pathological conditions.

Total activity: 6 hrs

Activity 1. Case-Based Learning (2 hrs 10 mins)

Step 1. The teacher emphasises the importance of precision, empathy and ethics in handling the patients.(10 mins).

Step 2. The teacher presents real life cases with different pathological conditions and the students apply the manipulation techniques under the guidance and close

supervision of the teacher.(120 mins)

Activity 2. Discussion .(30 mins).

The teacher facilitates group discussion to review the clinical experience

Activity 3. Demonstration (3 hrs 20mins)

The student demonstrates and teaches the undergraduate students about the manipulation techniques of *varmam* points in the abdomen.(180 mins).

The students submit a detailed report about the session.(20 mins).

Experiential-Learning 5.2 : Demonstration and recording of the efficacy of therapeutic applications of *varmam* points of the abdomen.

Total activity: 7 hrs

Activity 1. Discussion (30 mins)The teacher discusses the expected outcomes and therapeutic benefits of stimulating the *varmam* points in the abdomen.(30 mins).

Activity 2. Demonstration Bedside (5 hrs 30 mins)

Step 1. Each student is instructed to perform the stimulation techniques on key *varmam* points and document the pre- and post-treatment clinical conditions for at least 5 cases.(300 mins).

Step 2. The students compare the pre and post treatment assessments to evaluate the efficacy of therapeutic application of *varmam* points.(30 mins).

Activity 3. Discussion (60 mins)

The teacher facilitates a group discussion to review the experiential learning experience.(30 mins).

The students submit a detailed report about the session.(30 mins).

Experiential-Learning 5.3 : Demonstration of proficiency in performing *illakumuraigal* and treatment in conditions of *varmam* injuries of the abdomen.

Total activity : 10 hrs

Activity 1. Case-Based Learning .(40 mins).

The teacher presents real-life case studies from outpatient and inpatient ward showcasing signs and symptoms of specific *varmam* point injuries.

Activity 2. Demonstration Bedside.(3 hrs 20min).

Students are then encouraged to apply *illakumuraigal* techniques tailored to address the respective *varmam* point injuries under expert supervision

Activity 3. Discussion(30 mins).

The faculty provides guidance on refining *illakumuraigal* skills through discussion and feedback.

Activity 4. Demonstration (5 hrs30 min)

The students demonstrate and teach the undergraduate students about the *illakumuraigal* techniques for *varmam* injuries (300 mins)

The students submit a detailed report about the session.(30 mins).

Experiential-Learning 5.4 : Assessment of the efficacy of various *illakumuraigal* and expertising in selecting *illakumuraigal* specific to each *varmam* point injury of

abdomen.

Total activity : 3 hrs

Activity 1. Case-Based Learning (2 hr)

Step 1. Each student is advised to perform *ilakkumurai* techniques on atleast 5 patients and document pre and post treatment assessment.(60 mins).

Step 2. The students compare the pre and post treatment assessment and evaluate the efficacy of *illakumuraigal* in each *varmam* point injury.(60 mins).

Activity 2. Discussion (60 mins).

The teacher facilitates group discussion to review the experiential learning experience and share insights.

The students submit a detailed report about the session.(30 mins).

Modular Assessment

Assessment method	Hour
INSTRUCTION: Conduct a structured modular assessment. Assessment will be for 50 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6c. 1.Making of posters - 10 marks Poster assignment : signs and symptoms of <i>varmam</i> point injury. The students are instructed to create an informative poster that illustrates signs and symptoms of <i>varmam</i> point injuries of abdomen. 2.Quiz =10 marks Conduct a quiz on actions, principles of <i>varmam</i> of abdomen,relationship between <i>varmam</i> points and <i>athaarangal,mudicchugal,naadigal</i> and <i>vaayukkal</i>. 3.DOPS=15 marks The students perform therapeutic application of 5 specified <i>varmam</i> points of abdomen For each <i>varmam</i> points- 4 marks a) Identification of <i>varmam</i> points -1 mark - b).Demonstration of appropriate therapeutic technique on each <i>varmam</i> point - 2 mark c) Adherence of safety protocol and precautions-1 mark. 3.Class presentation=15 marks. The students are required to prepare a presentation on <i>ilakkumuraigal</i> techniques of <i>varmam</i> injuries of abdomen. - a)Demonstrating signs and symptoms of <i>varmam</i> injuries of abdomen-5marks - b)Demonstration of <i>ilakkumuraigal</i> - 5 marks. - c)Explanation of rationale and benefits of each technique- 3marks.	4

d)Usage of visual aids-2 marks. Any practical in converted form can be taken for assessment. (25 marks) and Any experiential, such as portfolios/reflections/presentations can be taken as an assessment.(25 marks)						
3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical training /experiential learning) session, the students should be able to)	3C Notional learning Hours	3D Lecture/ Practical Training/ Experientia l Learning	3E Domain/ Sub Domain	3F Level (D oes/Sho ws how/ Knows h ow/Kno w)	3G Teachin g Learnin g Methods
Module 6 : Varmam points in the Pelvis and Back						
Module Learning Objectives (At the end of the module, the students should be able to) Locate the <i>varmam</i> points in the pelvis & back Explain & relate the actions & principles of <i>varmam</i> points with <i>aatharangal</i>, <i>mudicchugal</i>, <i>naadigal</i> and <i>vaayukkal</i> Perform the therapeutic applications of <i>varmam</i> points of the pelvis & back Identify the signs & symptoms caused due to injury to specific <i>varmam</i> points Perform <i>ilakku muaraigal</i> specific to a <i>varmam</i> point injury & recommend treatment & dietary regimen						
M 6 Unit 1 Physiological Aspects 6.1.1 Location 6.1.2 Actions 6.1.3 Principles 6.1.4 Relationship with <i>aatharangal</i>, <i>mudicchugal</i>, <i>naadigal</i> & <i>vaayukkal</i> 6.1.5 Stimulation methods 6.1.6 Therapeutic indications						

References: 2,3,5,8,9,11,12,13,20,21,22,23,24,25,26,27,28,30,33,37,39,40,41,42,43,44,45,53,55,64,69,80,83

3A	3B	3C	3D	3E	3F	3G
CO1,CO3,CO5,CO8	Describe the location of <i>varmam</i> points in the pelvis and back, connect the actions and principles with their relationship with <i>aatharangal</i> , <i>mudicchugal</i> , <i>naadigal</i> and <i>vaayukkal</i> .	2	Lecture	CK	Know	BS,L&GD,L&PPT
CO1,CO3,CO5,CO8	Explain the stimulation methods and therapeutic indications of the <i>varmam</i> points.	3	Lecture	CK	Knows-how	L&GD
CO1,CO3,CO5,CO8	Perform the stimulation techniques on <i>varmam</i> points in the pelvis & back for therapeutic indications.	10	Practical Training 6.1	PSY-GUD	Shows-how	D,D-M,DIS
CO1,CO3,CO5,CO8	Apply the manipulation techniques on <i>varmam</i> points of pelvis and back in different pathological conditions.	6	Experiential-Learning 6.1	PSY-MEC	Does	D,CBL,DIS
CO1,CO3,CO5,CO8	Demonstrate and record the efficacy of therapeutic applications <i>varmam</i> points of pelvis and back.	7	Experiential-Learning 6.2	PSY-MEC	Shows-how	D,DIS

M 6 Unit 2 Pathological Aspects

6.2.1 Signs and symptoms of injury 6.2.2 Specific *ilakkumuraigal* & Treatments 6.2.3 Dietary regimen

References: 2,3,12,19,20,21,22,23,24,25,26,27,28,30,33,37,39,41,42,43,44,45,49,50,64,83

3A	3B	3C	3D	3E	3F	3G
CO3,CO4	List out the signs and symptoms of <i>varmam</i> points injury in the pelvis and back.	1	Lecture	CK	Know	L&PPT
CO3,CO4	Describe specific <i>illakumuraigal</i> , treatment and dietary regimen specific to each <i>varmam</i> point injury.	4	Lecture	CK	Know	DIS,L&GD,BS
CO3,CO4	Identify the signs and symptoms of <i>varmam</i> points injury in the pelvis and back, perform specific <i>illakumuraigal</i> and treatment.	10	Practical Training 6.2	PSY-GUD	Shows-how	CBL,D-M,D-BED,SIM

CO3,CO4	Demonstrate proficiency in performing <i>illakumuraigal</i> and treatment in conditions of <i>varmam</i> injuries of pelvis and back.	10	Experiential-Learning 6.3	PSY-MEC	Does	D,DIS,D-BED,CBL
CO3,CO4	Access the efficacy of various <i>illakumuraigal</i> and expertise in selecting <i>illakumuraigal</i> specific to each <i>varmam</i> point injury of pelvis and back.	3	Experiential-Learning 6.4	CE	Does	CBL,DIS

Practical Training Activity

Practical Training 6.1 : Application of the stimulation techniques on *varmam* points in the pelvis & back for therapeutic indications.

Total activity hours: 10 hrs

1. The teacher provides an overview of key *varmam* points of the pelvis and back for their therapeutic indications.(30 mins).
2. Demonstration: The teacher locates each *varmam* point precisely and perform a live demonstration or use instructional videos to show how to perform the stimulation techniques.(300 mins).
3. The teacher highlights the correct method and importance of pressure and precision.(30 mins).
4. Demonstration on Model, Kinaesthetic Learning: The students are guided to practice the stimulation techniques of each *varmam* point on volunteers or anatomical models.(180 mins).
5. Discussion:The teacher facilitates a group discussion to review the practical experience,the students submit a detailed report about the practical session(60 mins).

Practical Training 6.2 : Identification of the signs and symptoms of *varmam* points injury in the pelvis and back, Perform specific *illakumuraigal* and treatment.

Total activity hours : 10 hrs

Activity 1. Simulation (2 hrs 45 mins)

Step 1. The teacher provides an overview of signs and symptoms of injuries specific to each *varmam* point located in the pelvis and back.(45 mins).

Step 2. Teacher set up stimulated scenarios of *varmam* point injuries where students are encouraged to diagnose each *varmam* point injury based on presentation.(60 mins).

Step 3. The teacher provides an overview of *ilakkumuraigal* and treatment specific to each *varmam* point injury.(60 mins).

Activity 2. Demonstration (3 hrs)

The teacher performs a live demonstration or use instructional videos to show how to perform *ilakkumuraigal* & treatment specific to injury of each *varmam* point on volunteers or model.(180 mins).

Activity 3. Demonstration on Model (3 hrs)

The teacher guides the students to practice *ilakkumurai* techniques for each *varmam* point injury on volunteers or models.(180 mins).

The teacher supervises to ensure correct application of the techniques.

Activity 4. Discussion (1 hr 15 mins)

The teacher facilitates a group discussion to review the practical session.(45 mins).

The students submit a detailed report about the session.(30 mins).

Experiential learning Activity

Experiential-Learning 6.1 : Application of the manipulation techniques on *varmam* points of pelvis and back in different pathological conditions

Total activity hours : 6 hrs

1. The teacher emphasizes the important of precision, empathy and ethics in handling the patients.(10 mins).
2. Case-Based Learning: The teacher presents real life cases with different pathological conditions and the students apply the manipulation techniques under the guidance and close supervision of the teacher.(120 mins).
3. Discussion: The teacher facilitates group discussion to review the clinical experience.(30 mins).
4. Demonstration: The students demonstrate and teach the undergraduate students about the manipulation techniques of *varmam* points in the pelvis and back.(180 mins).
5. The students submits a detailed report about the session.(20 mins).

Experiential-Learning 6.2 : Demonstration and recording of the efficacy of therapeutic applications *varmam* points of pelvis and back.

Total activity hours : 7 hrs

1. Discussion: The teacher discusses the expected outcomes and therapeutic benefits of stimulating the *varmam* points in the pelvis and back.(30 mins).
2. Demonstration Bedside: Each student is instructed to perform the stimulation techniques on key *varmam* points and document the pre and post treatment clinical conditions for at least 5 cases.(300 mins).
3. The students compare the pre and post treatment assessments to evaluate the efficacy of therapeutic application of *varmam* points.(30 mins).
4. Discussion:The teacher facilitates a group discussion to review the experiential learning experience.(30 mins).

5. The students submit a detailed report about session.(30 mins).

Experiential-Learning 6.3 : Demonstration of proficiency in performing *illakumuraigal* and treatment in conditions of *varmam* injuries of pelvis and back

Total activity hours : 10 hrs

1. CBL: The teacher presents real life case studies from outpatient and inpatient ward showcasing signs and symptoms of specific *varmam* point injuries.
2. Demonstration Bedside: Students are then encouraged to apply *illakumuraigal* techniques tailored to address the respective *varmam* point injuries under expert supervision.(240 mins).
3. Discussion: The faculty provides guidance on refining *illakumuraigal* skills through discussion and feedback.(30 mins).
4. Demonstration:The students demonstrate and teach the undergraduate students about the *illakumuraigal* techniques for *varmam* injuries(300 mins)
5. The students submit a detailed report about the session.(30 mins).

Experiential-Learning 6.4 : To assess the efficacy of various *illakumuraigal* and expertise in selecting *illakumuraigal* specific to each *varmam* point injury of pelvis and back.

Total activity hours : 3 hrs

1. Case-Based Learning: Each student is advised to perform *ilakkumurai* techniques on atleast 5 patients and document pre and post treatment assessment.(60 mins),
2. The students compare the pre and post treatment assessment and evaluate the efficacy of *illakumuraigal* in each *varmam* point injury.(60 mins).
3. Discussion:The teacher facilitates the group discussion to review the experiential learning experience and share insights.(30 mins)
4. The students submit a detailed report about the session(30 mins).

Modular Assessment

Assessment method

Hour

INSTRUCTION: Conduct a structured modular assessment. Assessment will be for 50 marks.Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point asper the table 6C. 1.Viva=10 marks Viva voce on topic "actions,principles,relationship with <i>aathaarangal,mudicchugal,nadigal</i> and <i>vayukkal</i> of <i>varmam</i> points of pelvis and back. 2.MCQs=10 marks(10x1=10). multiple choice questions on general and specific dietary regimen for <i>varmam</i> point injuries. 3.Practical perfomance= 15 marks The students perform therapeutic application techniques on <i>varmam</i> points of pelvis and back for 5 patients and document the prognosis.(5x3=15). a) Pre procedure preparation-1 marks. b) Performance of therapeutic application technique- 2 marks c) Safety and precaution measures -1 mark d) Post-procedure care -1 mark 4.Mini-CEX - 15 marks Performance of <i>ilakkumuraigal</i> for <i>varmam</i> point injuries of pelvis or back The students will be given a patient scenario with <i>varmam</i> point injury of pelvis or back. The students will perform <i>ilakkumuraigal</i> on patients,,the examiner will observe the student's performance. a)Analysing the signs and symptoms and identifying the <i>varmam</i> point injury.- 3 marks. b)Performance of <i>ilakkumurai</i> techniques specific to <i>varmam</i> point injuries.- 7 marks c)Exhibition of communication skills while interacting with the patients and ensuring comfort and safety of patients while performing the techniques.-5 marks. Or Any practical in converted form can be taken for assessment.(25marks) and Any experiential, such as portfolios/reflections/presentations can be taken as an assessment.(25marks)	4
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Semester No : 6

3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical training /experiential learning) session, the students should be able to)	3C Notional learning	3D Lecture/ Practical	3E Domain/ Sub	3F Level (D oes/Sho	3G Teachin g
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		Hours	Training/ Experientia l Learning	Domain	ws how/ Knows h ow/Kno w)	Learnin g Methods
Module 7 : Varmam points in the Lower limb						
Module Learning Objectives (At the end of the module, the students should be able to)						
Locate the <i>varmam</i> points in the lower limb Describe & relate the actions & principles of <i>varmam</i> points with <i>aatharangal</i>, <i>mudicchugal</i>, <i>naadigal</i> and <i>vaayukkal</i> Perform the therapeutic applications of <i>varmam</i> points of the lower limb Identify the signs & symptoms caused due to injury to specific <i>varmam</i> points Perform <i>ilakku muaraigal</i> specific to a <i>varmam</i> point injury & recommend treatment & dietary regimen						
M 7 Unit 1 Physiological Aspects						
7.1.1 Location 7.1.2 Actions 7.1.3 Principles 7.1.4 Relationship with <i>aatharangal</i> , <i>mudicchugal</i> , <i>naadigal</i> & <i>vaayukkal</i> 7.1.5 Stimulation methods 7.1.6 Therapeutic indications						
References: 2,3,5,8,9,11,12,13,20,21,22,23,24,25,26,27,28,30,33,37,39,40,41,42,43,44,45,53,55,64,69,80,83						
3A	3B	3C	3D	3E	3F	3G
CO1,CO3,CO5 ,CO8	Describe the location of <i>varmam</i> points in the lower limb and connect the actions and principles with their relationship with <i>aatharangal</i> , <i>mudicchugal</i> , <i>naadigal</i> and <i>vaayukkal</i> .	2	Lecture	CK	Know	L&GD,B S,L&PPT
CO1,CO3,CO5	Describe the stimulation methods and therapeutic indications of the <i>varmam</i> points.	3	Lecture	CK	Know	L&GD

,CO8						
CO1,CO3,CO5 ,CO8	Perform the stimulation techniques on <i>varmam</i> points in the lower limb for therapeutic indications.	10	Practical Training 7.1	PSY-GUD	Shows-how	D-M,D,DIS
CO1,CO3,CO5 ,CO8	Apply the manipulation techniques on <i>varmam</i> points in the lower limbs in different pathological conditions.	6	Experiential-Learning 7.1	PSY-MEC	Does	DIS,D,CB L
CO1,CO3,CO5 ,CO8	Demonstrate and record the efficacy of therapeutic applications of <i>varmam</i> points in the lower limbs	7	Experiential-Learning 7.2	PSY-MEC	Does	D-M,DIS

M 7 Unit 2 Pathological Aspects

7.2.1 Signs and symptoms of injury 7.2.2 Specific *illakumuraigal* & Treatment 7.2.3 Dietary Regimen

References: 2,3,12,19,20,21,22,23,24,25,26,27,28,30,33,37,39,41,42,43,44,45,49,50,64,83

3A	3B	3C	3D	3E	3F	3G
CO3,CO4	List out the signs and symptoms of <i>varmam</i> points injury in the lower limb.	1	Lecture	CK	Know	L&PPT
CO3,CO4	Describe <i>illakumuraigal</i> , treatment and dietary regimen specific to each <i>varmam</i> point injury.	4	Lecture	CK	Know	L&GD,B S,DIS
CO3,CO4	Identify the signs and symptoms of <i>varmam</i> points injury in the lower limb. Perform specific <i>illakumuraigal</i> and treatment.	10	Practical Training 7.2	PSY-GUD	Shows-how	SIM,D-M ,D-BED,CB L
CO3,CO4	Demonstrate proficiency in performing <i>illakumuraigal</i> and treatment in conditions of <i>varmam</i> injuries. of lower limbs.	10	Experiential-Learning 7.3	PSY-MEC	Does	D-BED,D ,CBL,DIS
CO3,CO4	Access the efficacy of <i>varmam illakumuraigal</i> and expertise in selecting <i>illakumuraigal</i> specific to each <i>varmam</i> point injury of lower limbs.	3	Experiential-Learning 7.4	CE	Does	DIS,CBL

Practical Training Activity

Practical Training 7.1 : Application of the stimulation techniques on *varmam* points in the lower limb for therapeutic indications.

Total activity : 10 hrs

Activity 1. Demonstration (360 mins)

Step 1. The teacher provides an overview of key *varmam* points of the lower limbs & their therapeutic indications.(60 mins).

Step 2. The teacher locates each *varmam* point precisely and perform a live demonstration or use instructional videos to show how to perform the stimulation techniques.(300 mins).

Step 3. The teacher highlights the correct method and importance of pressure and precision.(30 mins).

Activity 2. Demonstration on Models.(180 mins).

The students are guided to practice the stimulation techniques of each *varmam* point on volunteers or anatomical models

Activity 3. Discussion.(60 mins).

The teacher facilitates a group discussion to review the practical experience, The students submit a detailed report about the session

Practical Training 7.2 : Identification of the signs and symptoms of *varmam* points injury in the lower limb, Perform specific *ilakkumuraigal* and treatment.

Total activity : 10 hrs

Activity 1. Simulation (1 hr 45 min)

Step 1. The teacher provides an overview of signs and symptoms of injuries specific to each *varmam* point located in the lower limb.(45 mins).

Step 2. Teacher set up stimulated scenarios of *varmam* point injuries where students are encouraged to diagnose each *varmam* point injury based on presentation.(60 mins).

Step 3. The teacher provides a brief overview of *ilakkumuraigal* and treatment specific to each *varmam* point injury.(60 mins).

Activity 2. Demonstartion(240 mins).

The teacher performs a live demonstration or use instructional videos to show how to perform *ilakkumuraigal* & treatment specific to injury of each *varmam* point on volunteers or models.

Activity 3. Demonstartion on Models (180 mins).The teacher guides the students to practice *ilakkumurai* techniques for each *varmam* point injury on volunteers or models.

The teacher supervises to ensure correct application of the techniques.

Activity 4. Discussion (75 mins)

The teacher facilitates a group discussion to review the practical session.(45 mins).

The students submit a detailed report about the session.(30 mins).

Experiential learning Activity

Experiential-Learning 7.1 : Application of the manipulation techniques on *varmam* points in the lower limbs in different pathological conditions.

Total activity : 6 hrs

Activity 1. Case-based Learning (130 mins)

Step 1. The teacher emphasizes the importance of precision, empathy and ethics in handling the patients. (10 mins).

Step 2. The teacher presents real life cases with different pathological conditions and the students apply the manipulation techniques under the guidance and close supervision of the teacher. (120 mins).

Activity 2. Discussion (30 mins).

The teacher facilitates group discussion to review the clinical experience.

Activity 3. Demonstration. (200 mins).

The student demonstrates and teaches the undergraduate students about the manipulation techniques of *varmam* points in the lower limb

The students submit a detailed report about the session. (20 mins).

Experiential-Learning 7.2 : Demonstration and recording of the efficacy of therapeutic applications of *varmam* points in the lower limbs.

Total activity : 7 hrs

Activity 1. Discussion. (30 mins).

The teacher discusses the expected outcomes and therapeutic benefits of stimulating the *varmam* points in the lower limbs

Activity 2. Demonstration Bedside (330 mins)

Step 1. Each student is instructed to perform the stimulation techniques on key *varmam* points and document the pre and post treatment clinical conditions for at least 5 cases. (300 mins).

Step 2. The teacher compares the pre and post treatment assessments to evaluate the efficacy of therapeutic application of *varmam* points. (30 mins).

Activity 2. Discussion (60 mins)

The teacher facilitates a group discussion to review the experiential learning experience. (30 mins).

The students submit a detailed report about the session. (30 mins).

Experiential-Learning 7.3 : Demonstration of proficiency in performing *illakumuraigal* and treatment in conditions of *varmam* injuries of lower limbs.

Total activity : 10 hrs

Activity 1. Case-Based Learning. (40 mins).

The teacher presents real life case studies from outpatient and inpatient ward showcasing signs and symptoms of specific *varmam* point injuries.

Activity 2. Demonstration Bedside. (200 mins).

Students are then encouraged to apply *illakumuraigal* techniques tailored to address the respective *varmam* point injuries under expert supervision

Activity 3. Discussion. (30 mins).

The faculty provides guidance on refining *illakumuraigal* skills through discussion and feedback

Activity 4. Demonstration (330 mins)

Step 1. The students demonstrate and teach the undergraduate students about the *illakumaraigal* techniques for *varmam* injuries.(300 mins).

Step 2. The students submit a detailed report about the session.(30 mins).

Experiential-Learning 7.4 : Assessment of the efficacy of *varmam illakumuraigal* and expertising in selecting *illakumuraigal* specific to each *varmam* point injury of lower limbs.

Total activity : 3 hrs

Activity 1. Case-Based Learning (120 mins)

Step 1. Each student is advised to perform *ilakkumurai* techniques on atleast 5 patients and document pre and post treatment assessment.(60 mins).

Step 2. The students compare the pre and post treatment assessment and evaluate the efficacy of *illakumuraigal* in each *varmam* point injury.(60 mins).

Activity 2. Discussion (60 mins)

The teacher facilitates a group discussion to review the experiential learning experience and share insights.(30 mins).

The students submit a detailed report about the session.(30 mins).

Modular Assessment

Assessment method

Hour

INSTRUCTION:

Conduct a structured modular assessment. Assessment will be for 50 marks.Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6C

1.Making models and charts = 10 marks

The students are instructed to make models or charts about the principles and actions of *varmam* points of lower limb,and their interrelations with *aatharangal* ,*mudicchugal*,*nadigal* and *vaayukkal*.

2. Case presentation = 10 marks

Varmam injuries to legs

The students prepare a case presentation on patients with signs and symptoms of *varmam* point injuries of legs and clearly explain the rationale behind the diagnosis,highlighting the key clinical features that led to identify the *varmam* point injury of legs

a)Clarity and organization of presentation-3 marks

b)Ability to diagnose the *varmam* injury through signs and symptoms - 4 marks.

c)Communication and presentation skills-3 marks.

3.Compilation =10 marks.

The students are instructed to create a comprehensive compilation of various stimulation techniques on *varmam* points of lower limbs drawn from various

4

varmam texts. The compilation should provide a clear concise overview of different techniques, their indications, and their applications.

4. Practical Exam: =20 marks

Application of *Ilakkumuraigal* on *Varmam* Injuries of the Lower Limb

Instructions:

Exam Format:

1. The students will be presented with a series of case scenarios involving *varmam* injuries of the lower limb.
2. For each scenario, the students will be required to:
 - Analyze the signs and symptoms and Identify the affected *varmam* injury
 - Apply *Ilakkumuraigal* techniques
 - Provide treatment and dietary regimen.

Assessment Criteria:

- Accuracy of diagnosis of *varmam* injury - 5 mark
- Application of *Ilakkumuraigal* - 10 marks
- Recommending internal medicines and dietary regimen - 5 marks.

or

Any practical in converted form can be taken for assessment. (25 marks)

and

Any experiential, such as portfolios/reflections/presentations can be taken as an assessment. (25 marks)

3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical training /experiential learning) session, the students should be able to)	3C Notional learning Hours	3D Lecture/ Practical Training/ Experientia l Learning	3E Domain/ Sub Domain	3F Level (D oes/Sho ws how/ Knows h ow/Kno w)	3G Teachin g Learnin g Methods
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Module 8 : Varmam therapies for various Diseases

Module Learning Objectives

(At the end of the module, the students should be able to)

Discuss the role of *varmam* points in regulating the functions of each system
 Identify and locate *varmam* points relevant to disease conditions
 Practice designing & implementing *varmam* based treatment plan for various disorders
 Develop skills in accessing and monitoring patient progress

M 8 Unit 1 Varmam for Neurological disorders & Psychiatric disorders.

8.1.1 *Pakkavaatham* (Hemiplegia) 8.1.2 *Mugavaatham* (Facial paralysis) 8.1.3 *Nadukku vaatham* (Parkinsonism) 8.1.4 *Valippu* (Seizure disorders) 8.1.5 Motor neuron Disorders (*Narrambu Vila noikal*) 8.1.6 *Manachorvu* (Depression) 8.1.7 *Mana irukkam* (Mental tension) 8.1.8 *Kirigai* (Scizophrenia) etc

References: 8,9,11,12,13,61

3A	3B	3C	3D	3E	3F	3G
CO4,CO7,CO8	Discuss the role of <i>varmam</i> points in regulating the nervous system functions and mental functions.	1	Lecture	CC	Knows-how	L,DIS,BS
CO4,CO7,CO8	Perform manipulation techniques on <i>varmam</i> points related to neurological and psychiatric disorders	2	Practical Training 8.1	PSY-GUD	Shows-how	DIS,D-M,D
CO4,CO7,CO8	Implement <i>varmam</i> therapeutic techniques on patients with neurological and psychiatric disorders and document the clinical outcome.	3	Experiential-Learning 8.1	PSY-GUD	Does	D,CBL,RLE

M 8 Unit 2 Varmam for Musculoskeletal disorders

8.2.1 *Keel vaatha noigal* (All types of Arthritis including cervical & lumbar spondylosis) 8.2.2 *Sprains & Strains* (Sulukku & Pidippu)

References: 8,9,11,12,13,61

3A	3B	3C	3D	3E	3F	3G
CO4,CO7,CO8	Discuss the role of <i>varmam</i> points in regulating the function of musculoskeletal system.	1	Lecture	CC	Knows-how	BS,L,DIS
CO4,CO7,CO8	Perform manipulation techniques on <i>varmam</i> points related to musculoskeletal disorders.	2	Practical Training 8.2	PSY-GUD	Shows-how	D-M,D,DIS
CO4,CO7,CO8	Implement <i>varmam</i> therapeutic techniques on patients with musculoskeletal disorders and document the clinical outcome.	3	Experiential-Learning 8.2	PSY-GUD	Does	D,CBL

M 8 Unit 3 Varmam for Cardiovascular disorders

8.3.1 *Padapadappu* (Palpitation) 8.3.2 *kaba thamaraga noi* (Angina pectoris)

References: 8,9,11,12,13,61

3A	3B	3C	3D	3E	3F	3G
CO4,CO7,CO8	Discuss the role of <i>varmam</i> points in regulating the cardiovascular system.	1	Lecture	CC	Knows-how	L,DIS,BS
CO4,CO7,CO8	Perform manipulation techniques on <i>varmam</i> points related to cardiovascular disorder.	2	Practical Training 8.3	PSY-GUD	Shows-how	D,DIS,D-M
CO4,CO7,CO8	Implement <i>varmam</i> therapeutic techniques on patients with cardiovascular disorders and document the clinical outcomes.	2	Experiential-Learning 8.3	PSY-GUD	Does	D,CBL,RLE

M 8 Unit 4 Varmam for Respiratory disorders

8.4.1 *Erumal* (Cough) 8.4.2 *Eraippu* (Bronchial Asthma)

References: 8,9,11,12,13,61

3A	3B	3C	3D	3E	3F	3G
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CO4,CO7,CO8	Discuss the role of varmam points in regulating the respiratory system.	1	Lecture	AFT-RES	Knows-how	BS,L,DIS
CO4,CO7,CO8	Perform manipulation techniques on Varmam Points related to respiratory disorders.	2	Practical Training 8.4	PSY-GUD	Shows-how	DIS,D-M,D
CO4,CO7,CO8	Implement Varmam therapeutic techniques on patients with respiratory disorders & document the clinical outcomes.	2	Experiential-Learning 8.4	PSY-GUD	Does	CBL,RLE,D

M 8 Unit 5 Varmam for Digestive disorders and Genito urinary disorders

8.5.1 *Seriyamai* (Indigestion) 8.5.2 *Gunmam* (Peptic ulcer,Gastro Esophageal Reflux Disorder) 8.5.3 *Vaitrupokku* (Diarrhoea) 8.5.4 *Malachikkal* (Constipation) 8.5.5 *Moolam* (Haemorrhoids) 8.5.6 *Maneeral noigal* (Spleen disorders) 8.5.7 *Kaleeral noigal* (Liver disorders) 8.5.8 *Malattu noigal* (Male & Female infertility) 8.5.9 *Soothaga thadai* (Amenorrhoea) 8.5.10 *Soothagavali* (Dysmenorrhoea) 8.5.11 *Perumpadu* (Menorrhagia) 8.5.12 *Karuppai velithallal* (Uterus prolapse) etc..

References: 8,9,11,12,13,61

3A	3B	3C	3D	3E	3F	3G
CO4,CO7,CO8	Discuss the role of <i>varmam</i> points in regulating the digestive system & genito urinary system functions.	1	Lecture	CC	Knows-how	L,BS,DIS
CO4,CO7,CO8	Perform manipulation techniques on <i>varmam</i> points related to digestive system & genito urinary system disorders	2	Practical Training 8.5	PSY-GUD	Shows-how	D,D-M,DIS
CO4,CO7,CO8	Implement <i>varmam</i> therapeutic techniques on patients with digestive system & genito urinary system disorders & document the clinical outcome	3	Experiential-Learning 8.5	PSY-GUD	Does	CBL,RLE,D

M 8 Unit 6 Varmam for Endocrine disorders

8.6.1 Pituitary disorders 8.6.2 Pineal disorders 8.6.3 Thyroid disorders etc

References: 8,9,11,12,13,61

3A	3B	3C	3D	3E	3F	3G
CO4,CO7,CO8	Discuss the role of <i>varmam</i> points in regulating the endocrine system function.	1	Lecture	CC	Knows-how	L,BS,DIS
CO4,CO7,CO8	Perform manipulation techniques on <i>varmam</i> points related to endocrine disorders	2	Practical Training 8.6	PSY-GUD	Shows-how	D-M,D,DIS
CO4,CO7,CO8	Implement <i>varmam</i> therapeutic techniques on patients with endocrine disorders and document the clinical outcome.	3	Experiential-Learning 8.6	AFT-RES	Does	CBL,D,RLE

M 8 Unit 7 Varmam for Hematological disorders

8.7.1 *Paandu noigal* (all types of anemia) 8.7.2 Thrombocytopenia etc.

References: 8,9,11,12,13,61

3A	3B	3C	3D	3E	3F	3G
CO4,CO7,CO8	Discuss the role of <i>varmam</i> points in regulating the hematological functions.	1	Lecture	CC	Knows-how	BS,DIS,L &GD
CO4,CO7,CO8	Perform manipulation techniques on <i>varmam</i> points related to hematological disorders.	2	Practical Training 8.7	PSY-GUD	Shows-how	DIS,D,D-M
CO4,CO7,CO8	Implement <i>varmam</i> therapeutic techniques on patients with hematological disorders and document the clinical outcome.	2	Experiential-Learning 8.7	PSY-GUD	Does	RLE,D,CBL

M 8 Unit 8 Varmam for ENT diseases

8.8.1 *Kaathu iraichal* (Tinnitus) 8.8.2 *Sevidu* (Hearing loss) 8.8.3 *Nasikapeedam* (Nasal polyp) 8.8.4 *Mooku neer paichal* (Rhinorrhoea) 8.8.5 *Kuaral kammal* (Sore throat) 8.8.6 *Peenisam* (Sinusitis)

References: 8,9,11,12,13,61

3A	3B	3C	3D	3E	3F	3G
CO4,CO7,CO8	Discuss the role of <i>varmam</i> points in regulating the ENT functions.	1	Lecture	CC	Knows-how	L,BS,DIS
CO4,CO7,CO8	Perform manipulation techniques on <i>varmam</i> points related to ENT disorders	2	Practical Training 8.8	PSY-GUD	Shows-how	D,D-M,DIS
CO4,CO7,CO8	Implement <i>varmam</i> therapeutic techniques on patients with ENT disorders and document the clinical outcome.	3	Experiential-Learning 8.8	PSY-GUD	Does	CBL,D,RLE

M 8 Unit 9 Varmam for Pediatric diseases

8.9.1 *Sirakambavatham* (Cerebral palsy) 8.9.2 Autism 8.9.3 *Moolaivalarchi kuraivu* (Mental retardation)

References: 8,9,11,12,13,61

3A	3B	3C	3D	3E	3F	3G
CO4,CO7,CO8	Discuss the role of <i>varmam</i> points in various paediatric diseases.	1	Lecture	CC	Knows-how	BS,DIS,L
CO4,CO7,CO8	Perform manipulation techniques on <i>varmam</i> points related to pediatric diseases.	2	Practical Training 8.9	PSY-GUD	Shows-how	D-M,DIS,D
CO4,CO7,CO8	Implement <i>varmam</i> therapeutic techniques on pediatric diseases conditions and document the clinical outcome.	3	Experiential-Learning 8.9	PSY-GUD	Does	D,RLE,CBL

M 8 Unit 10 Varmam for Geriatric diseases

8.10.1 *Thookam inmai* (Insomnia) 8.10.2 *Marathi noi* (Dementia) 8.10.3 *Keel vayu* (Degenerative arthritis) etc..

References: 8,9,11,12,13,61

3A	3B	3C	3D	3E	3F	3G
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CO4,CO7,CO8	Discuss the role of <i>varmam</i> points in various geriatric conditions.	1	Lecture	CC	Knows-how	L,BS,DIS
CO4,CO7,CO8	Perform manipulation techniques on <i>varmam</i> points related to geriatric diseases.	2	Practical Training 8.10	PSY-GUD	Shows-how	DIS,D,D-M
CO4,CO7,CO8	Implement <i>varmam</i> therapeutic techniques on patients with geriatric disorders and document the clinical outcome.	2	Experiential-Learning 8.10	PSY-GUD	Shows-how	D,CBL,RLE

Practical Training Activity

Practical Training 8.1 : Apply the manipulation techniques on *varmam* points related to neurological and psychiatric disorders.

Total activity : 2 hrs

Activity 1. Discussion (40 mins)

Step 1. The teacher provides an overview of key *varmam* points related to neurological and psychiatric disorders..(20 mins).

Step 2. The teacher discusses the significance and therapeutic indications of these points.(20 mins).

Activity 2. Demonstration(30 mins).

The teacher performs live demonstration on volunteers on models/use instructional videos to show how to perform stimulation techniques on the *varmam* points.The teacher highlights the importance of precision and correct application.

Activity 3. Demonstration on Models (30 mins).

The teacher guides the students to practice the stimulation techniques on volunteers or models.

Activity 4. Discussion,(20 mins).

Facilitate a group discussion to review the practical experience,the students submit a detailed report about the session

Practical Training 8.2 : Apply the manipulation techniques on *varmam* points related to musculoskeletal disorders.

Total activity : 2 hrs

Activity 1. Discussion (60 mins)

Step 1. The teacher provides an overview of key *varmam* points related to geriatric disorders.(20 mins).

Step 2. The teacher discusses the significance and therapeutic indications of these points.(20 mins).

Step 3. Facilitate a group discussion to review the practical experience,the students submit a detailed report about the session(20 mins).

Activity 2. Demonstration(30 mins).

The teacher performs live demonstration on volunteers on models/use instructional videos to show how to perform stimulation techniques on the *varmam* points. The teacher highlights the importance of precision and correct application.

Activity 3. Demonstration on Models (30 mins).

The teacher guides the students to practice the stimulation techniques on volunteers or models.

Practical Training 8.3 : Application of manipulation techniques on varmam points related to cardiovascular disorder.

Total activity : 2hrs

Activity 1. Discussion (60 mins)

Step 1. The teacher provides an overview of key *varmam* points related to cardiovascular disorder. (20 mins).

Step 2. The teacher discusses the significance and therapeutic indications of these points. (20 mins).

Step 3. Facilitate a group discussion to review the practical experience, the students submit a detailed report about the session (20 mins).

Activity 2. Demonstration (30 mins)

The teacher performs live demonstration on volunteers on models/use instructional videos to show how to perform stimulation techniques on the *varmam* points. The teacher highlights the importance of precision and correct application

Activity 3. Demonstration on Models (30 mins) The teacher guides the students to practice the stimulation techniques on volunteers or models.

Practical Training 8.4 : Application of manipulation techniques on varmam points related to respiratory disorders.

Total activity: 2 hrs

Activity 1. Demonstration (30 mins)

The teacher performs a live demonstration on volunteers or models/uses instructional videos to show how to perform stimulation techniques on the varmam points. (30 mins).

Activity 2. Demonstration on Models (30 mins).

The teacher guides the students to examine the respiratory system and practice the stimulation techniques on volunteers or models.

Activity 3: Discussion (60 mins)

Step 1. The teacher provides an overview of key varmam points related to respiratory disorders. (20 mins).

Step 2. The teacher discusses the significance and therapeutic indications of these points. (20 mins).

Step 3. The teacher facilitates a group discussion to review the practical experience, the students submit a detailed report about the session. (20 mins).

Practical Training 8.5 : Apply the manipulation techniques on *varmam* points related to digestive system & genito urinary system disorders.

Total activity : 2hrs

Activity 1. Discussion (60 mins)

Step 1.The teacher provides an overview of key *varmam* points related to ENT disorders.(20 mins).

Step 2. The teacher discusses the significance and therapeutic indications of these points.(20 mins).

Step 3. Facilitate a group discussion to review the practical experience,the students submit a detailed report about the session(20 mins).

Activity 2. Demonstration (30 mins)

The teacher performs live demonstration on volunteers on models/use instructional videos to show how to perform stimulation techniques on the *varmam* points.The teacher highlights the importance of precision and correct application

Activity 3. Demonstration on Models(30 mins)The teacher guides the students to practice the stimulation techniques on volunteers or models.

Practical Training 8.6 : Application of manipulation techniques on *varmam* points related to endocrine disorders.

Total activity hours : 2 hrs

Activity 1. Discussion (60 mins)

Step 1. The teacher provides an overview of key *varmam* points related to endocrine disorders.(20 mins).

Step 2. The teacher discusses the significance and therapeutic indications of these points.(20 mins).

Step 3.The teacher facilitates a group discussion to review the practical experience,the students submit a detailed report about the practical session.(20 mins).

Activity 2. Demonstration (30 mins).

The teacher performs live demonstration on volunteers on models/use instructional videos to show how to perform stimulation techniques on the *varmam* points.The teacher highlights the importance of precision and correct application

Activity 3. Demonstration on Models (30 mins).

The teacher will guide the students to practice the stimulation manipulation techniques on *varmam* points related to endocrine disorders. on volunteers or models.(30 mins).

Practical Training 8.7 : Application of manipulation techniques on *varmam* points related to hematological disorders.

Total activity : 2 hrs

Activity 1. Discussion (40 mins)

Step 1.The teacher provides an overview of key *varmam* points related to hematological disorders.(20 mins).

Step2. The teacher discusses the significance and therapeutic indications of these points.(20 mins).

Activity 2. Demonstration.(30 mins)

The teacher performs live demonstration on volunteers on models/use instructional videos to show how to perform stimulation techniques on the *varmam* pointsThe teacher highlights the importance of precision and correct application.

Activity 3. Demonstration on Models.(30 mins).

The teacher guides the students to practice the stimulation techniques on volunteers or models

Activity 4. Discussion(20 mins).

Facilitate a group discussion to review the practical experience, the students submit a detailed report about the session.

Practical Training 8.8 : Apply the manipulation techniques on *varmam* points related to ENT disorders

Total activity hours : 2hrs

Activity 1. Discussion (60 mins)

Step 1. The teacher provides an overview of key *varmam* points related to ENT disorders. (20 mins).

Step 2. The teacher discusses the significance and therapeutic indications of these points. (20 mins).

Step 3. Facilitate a group discussion to review the practical experience, the students submit a detailed report about the session

Activity 2. Demonstration (30 mins)

The teacher performs live demonstration on volunteers on models/use instructional videos to show how to perform stimulation techniques on the *varmam* points. The teacher highlights the importance of precision and correct application

Activity 3. Demonstration on Models (30 mins) The teacher guides the students to practice the stimulation techniques on volunteers or models.

Practical Training 8.9 : Application of manipulation techniques on *varmam* points related to pediatric diseases.

Total activity : 2 hrs

Activity 1. Discussion (60 mins)

Step 1. The teacher provides an overview of key *varmam* points related to pediatric disorders. (20 mins).

Step 2. The teacher discusses the significance and therapeutic indications of these points. (20 mins).

Step 3. Facilitate a group discussion to review the practical experience, the students submit a detailed report about the session. (20 mins).

Activity 2. Demonstration (30 mins).

The teacher performs live demonstration on volunteers on models/use instructional videos to show how to perform stimulation techniques on the *varmam* points. The teacher highlights the importance of precision and correct application.

Activity 3.. Demonstration on Model (30 mins).

The teacher will guide the students to practice the stimulation the manipulation techniques on *varmam* points related to pediatric diseases. on volunteers or models. (30 mins).

Practical Training 8.10 : Apply the manipulation techniques on *varmam* points related to geriatric diseases.

Total activity hours : 2 hrs

Activity 1. Discussion (40 mins)

Step 1. The teacher provides an overview of key *varmam* points related to geriatric disorders. (20 mins).

Step 2. The teacher discusses the significance and therapeutic indications of these points. (20 mins).

Activity 2. Demonstration(30 mins).

The teacher performs live demonstration on volunteers on models/use instructional videos to show how to perform stimulation techniques on the *varmam* points.The teacher highlights the importance of precision and correct application.

Activity 3. Demonstration on Models (30 mins).

The teacher guides the students to practice the stimulation techniques on volunteers or models.

Activity 4. Discussion,(20 mins).

Facilitate a group discussion to review the practical experience,the students submit a detailed report about the session

Experiential learning Activity

Experiential-Learning 8.1 : Applying the *varmam* therapeutic techniques on patients with neurological and psychiatric disorders and document the clinical outcome.

Total activity : 3 hrs

Activity 1. Case-Based Learning (90 mins)

Step 1. The teacher emphasizes the importance of precision, safety and empathy in applications of *varmam* therapeutic techniques to the patients,The teacher assigns different endocrine disorder cases to each of the student..(30 mins).

Step 2. The teacher guides the students to apply the manipulation techniques on *varmam* points related to endocrine disorders.(60 mins).

Activity 2. Real Life Experience(30 mins).

The students are instructed to record the observations and out come.

Activity 3. Demonstration(60 mins).

The students demonstrates and teach the undergraduate students about the method of treating endocrine disorders by *varmam* therapeutic techniques.The students submit a detailed report about the session.

Experiential-Learning 8.2 : Applying the *varmam* therapeutic techniques on patients with musculoskeletal disorders and document the clinical outcome.

Total activity : 3 hrs

Activity 1. Case-Based Learning (90 mins)

Step 1. The teacher emphasizes the importance of precision, safety and empathy in applications of *varmam* therapeutic techniques to the patients,The teacher assigns different endocrine disorder cases to each of the student..(30 mins).

Step 2. The teacher guides the students to apply the manipulation techniques on *varmam* points related to endocrine disorders.(60 mins).

Activity 2. Real Life Experience(30 mins).

The students are instructed to record the observations and out come.

Activity 3. Demonstration(60 mins).

The students demonstrates and teach the undergraduate students about the method of treating endocrine disorders by *varmam* therapeutic techniques.The students submit a

detailed report about the session.

Experiential-Learning 8.3 : Implementation of *varmam* therapeutic techniques on patients with cardiovascular disorders and document the clinical outcomes.

Total activity hours: 2 hrs

Activity 1. Case-Based Learning (1 hr)

Step 1. The teacher emphasizes the importance of precision, safety and empathy in applications of *varmam* therapeutic techniques to the patients.(30 mins).

Step 2. The teacher guides the students to apply the manipulation techniques on *varmam* points related to cardiovascular disorders.(30 mins).

Activity 2. Real Life Experience(30 mins).

The students are instructed to record the observations about the findings of general, systemic examination, peculiar sounds of heart beat, heart rate and explain the mechanism behind the findings

Activity 3, Demonstration(30 mins).

The students demonstrate and teach the undergraduate students about the method of treating cardiovascular disorders by *varmam* therapeutic techniques.The students submit a detailed report about the session.

Experiential-Learning 8.4 : Implementation of *varmam* therapeutic techniques on patients with respiratory disorders and document the clinical outcomes.

Total activity: 2hrs

Activity 1. Case-Based Learning (1 hr)

Step 1. The teacher emphasises the importance of precision, safety and empathy in applications of *varmam* therapeutic techniques to the patients.The teacher assigns different respiratory disorder cases to each of the students.(30 mins).

Step 2. The teacher guides the students to apply the manipulation techniques on *varmam* points related to respiratory disorders.(30 mins).

Activity 2. Real Life Experience(30 mins).

The students are instructed to record the observations and outcomes.

Activity 3. Demonstration (30 mins).

The students demonstrate and teach the undergraduate students about the method of treating respiratory disorders by *varmam* therapeutic techniques. The students submit a detailed report about the session(30 mins).

Experiential-Learning 8.5 : Implementation of *varmam* therapeutic techniques on patients with digestive system & genito urinary system disorders & documentation of the clinical outcome.

Total activity : 3 hrs

Activity 1. Case-Based Learning (90 mins)

Step 1. The teacher emphasizes the importance of precision, safety and empathy in applications of *varmam* therapeutic techniques to the patients,The teacher assigns

different endocrine disorder cases to each of the student..(30 mins).

Step 2. The teacher guides the students to apply the manipulation techniques on *varmam* points related to endocrine disorders.(60 mins).

Activity 2. Real Life Experience(30 mins).

The students are instructed to record the observations and out come.

Activity 3. Demonstration(60 mins).

The students demonstrates and teach the undergraduate students about the method of treating endocrine disorders by *varmam* therapeutic techniques.The students submit a detailed report about the session.

Experiential-Learning 8.6 : Applying the *varmam* therapeutic techniques on patients with endocrine disorders and documentation of the clinical outcome.

Total activity : 3 hrs

Activity 1. Case-Based Learning(1hr30 mins)

Step 1. The teacher emphasizes the importance of precision, safety and empathy in applications of *varmam* therapeutic techniques to the patients,The teacher assigns different endocrine disorder cases to each of the student..(30 mins).

Step 2. The teacher guides the students to apply the manipulation techniques on *varmam* points related to endocrine disorders.(60 mins).

Activity 2. Real Life Experience(30 mins).

The students are instructed to record the observations and out come.

Activity 3. Demonstration(60 mins).

The students demonstrates and teach the undergraduate students about the method of treating endocrine disorders by *varmam* therapeutic techniques.The students submit a detailed report about the session.

Experiential-Learning 8.7 : Applying the *varmam* therapeutic techniques on patients with hematological disorders and document the clinical outcome.

Total activity : 2 hrs

Activity 1. Case-Based Learning (90 mins)

Step 1.The teacher emphasizes the importance of precision, safety and empathy in applications of *varmam* therapeutic techniques to the patients.The teacher assigns different haemotological disorder cases to each of the student.(30 mins).

Step 2.Guide the students to apply the manipulation techniques on *varmam* points related to haemotological disorders.(60 mins).

Activity 2. Real Life Experience (15 mins).

The students are instructed to record the observations and out comes.

Activity 3. Demonstration.(15 mins).

Demonstrate and teach the undergraduate students about the method of treating hematological disorders by *varmam* therapeutic techniques.The students submit a detailed report about the session.

Experiential-Learning 8.8 : Applying the *varmam* therapeutic techniques on patients with ENT disorders and documentation of the clinical outcome.

Total activity : 3 hrs

Activity 1. Case-Based Learning(90mins)

Step 1. The teacher emphasizes the importance of precision, safety and empathy in applications of *varmam* therapeutic techniques to the patients.(30 mins).

Step 2. The teacher assigns different ENT disorder cases to each of the student.

Step 3. The teacher guides the students to apply the manipulation techniques on *varmam* points related to ENT disorders.(60 mins).

Activity 2. Real Life Experience (30 mins).

The students are instructed to record the observations and outcome.

Activity 3. Demonstration(60 mins)

The teacher demonstrates and teach the undergraduate students about the method of treating ENT disorders by *varmam* therapeutic techniques.The students submit detailed report about the session.(60 mins)

Experiential-Learning 8.9 : Applying the *varmam* therapeutic techniques on pediatric diseases conditions and document the clinical outcome.

Total activity : 3 hrs

Activity 1. Case-Based Learning (90 mins)

Step 1. The teacher emphasizes the importance of precision, safety and empathy in applications of *varmam* therapeutic techniques to the patients.(30 mins).

Step 2. The teacher assigns children with various disorders to each of the student, guides the students to apply the manipulation techniques on *varmam* points related to various pediatric disorders.(60 mins).

Activity 2. Real Life Experience(30 mins).

The students are instructed to record the observations and outcome.(30 mins).

Activity 3. Demonstration (60 mins)

Demonstrate and teach the undergraduate students about the method of treating pediatric disorders by *varmam* therapeutic techniques,and submits a detailed report about the session..(60 mins).

Experiential-Learning 8.10 : Applying of *varmam* therapeutic techniques on patients with geriatric disorders and documentation of the clinical outcome.

Total activity : 2 hrs

Activity 1. Case-Based Learning (1 hr)

Step 1. The teacher emphasizes the importance of precision, safety and empathy in applications of *varmam* therapeutic techniques to the patients.(30 mins).

Step 2. The teacher assigns patients with various geriatric disorders to each of the student.The teacher guides the students to apply the manipulation techniques on *varmam*

points related to geriatric disorders.(30 mins).

Activity 2. Real Life Experience (30 mins)

The students are instructed to record the observations and out come.(30 mins).

Activity 2. Demonstration.(30 mins).

The students demonstrate and teach the undergraduate students about the method of treating geriatric disorders by varamam therapeutic techniques

The students submit a detailed report about the session.

Modular Assessment

Assessment method	Hour
INSTRUCTION: Conduct a structured modular assessment. Assessment will be for 50 marks.Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point asper the table 6C 1.Objective Structured Clinical Examination (OSCE) =20 marks Exam Procedure: In this OSCE, the students will be presented with patients having different systemic diseases. the task is to diagnose the disease based on <i>varamam</i> concepts, perform therapeutic applications of <i>varamam</i> points relevant to the disease, and recommend internal medicine and dietary regimen Exam Format: 1. Thswill be allocated a series of stations, each with a patient having a different systemic disease. 2. At each station, the students will have to - Take a medical history and perform a physical examination. - Diagnose the disease based on <i>varamam</i> concepts. - Perform therapeutic applications of <i>varamam</i> points relevant to the disease. - Recommend internal medicine and diet. 3. The examiner will observe and assess the student's performance at each station. Assessment Criteria: 1. Medical history and physical examination-3 marks 2. <i>Varamam</i> diagnosis and interpretation -5 marks 3. Therapeutic application of <i>varamam</i> points - 10 marks 4. Recommendation of <i>internal</i> medicines and diet -2 marks. 2.Journal publication =30 marks <i>Varamam</i> Therapeutic Application for Systemic Disease Management	4

Instructions:

Select a systemic disease and design a study to investigate the efficacy of *varmam* therapeutic application techniques in managing the disease. Record the pre- and post-treatment conditions and publish the results of the study in a peer-reviewed journal.

Objectives:

1. To explore the application of *varmam* therapeutic techniques in managing systemic diseases.
2. To design and conduct a study to investigate the efficacy of *varmam* therapeutic techniques in treating systemic diseases.
3. To develop skills in research methodology, data collection, and analysis.
4. To publish the research findings in a peer-reviewed journal.

Or

Any practical in converted form can be taken for assessment.(25marks)

and

Any experiential, such as portfolios/reflections/presentations can be taken as an assessment.(25marks)

Paper No : 2 VARMAM THERAPEUTIC TECHNIQUES						
Semester No : 3						
Module 9 : Varmam aga marundhu (Varmam internal medicine)						
Module Learning Objectives (At the end of the module, the students should be able to) Describe the preparation of Internal medicine used in various disease conditions. Perform and documentation of internal medicine used in various disease conditions. Describe various preparations of porridge used in <i>varmam</i> and apply knowledge over the nutritional value of porridge used in <i>varmam</i> management Apply knowledge of <i>varmam</i>-based porridge varieties to substantiate sports conditions (athlete)						
M 9 Unit 1 Introduction of Varmam Aga Marundhu (Varmam Internal Medicine) 9.1.1.Varmam mooligai agarathi 9.1.2. Definition of <i>varmam aga maruthu</i> (Saaru, Karkam, kudineer/Kudineer,Vaatru/Theeneer,chooranam/Podi, Ilagam, Nei/Kirutham, Ennai/Thylam, Kulikai, Kuzhambu, Panda Puthayal) References: 1,2,3,4,5,7,9,10,11,13,15,17,19,20,21,23,38,39,44,51,52,53,54,55,56,57,58,59,60,61,62,68,70						
3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3 ,CO4,CO5,CO 8	Describe Varmam Mooligai Agarathi, Definition of Varmam aga maruthugal (Saaru, Karkam, Kudineer/Kashayam, vaatru, chooranam/podi, ilagam, Nei/kirutham, Ennai/Thylam, Kulikai, Kuzhambu, Panda Puthayal)	1	Lecture	CK	Know	L&PPT
CO1,CO2,CO3 ,CO4,CO5,CO	Listout Varmam mooligai agarathi based on Verupeyargal (Synonyms) and therapeutic uses	1	Experiential-Learning 9.1	PSY-GUD	Know	LS

M 9 Unit 2 Varmam medicine Part - I

9.2.1 Saaru (Extract or Juice) 9.2.1.1. Varmam ilakka saaru vagaigal 9.2.1.2. Mayakkam theerkum saaru 9.2.1.3. Ratham uraithalukku saaru 9.2.1.4. Kozhi saaru 9.2.1.5. Murivukku saaru 9.2.2. Karkam (Medicinal paste) 9.2.2.1. Kaduppu karkam 9.2.2.2. Suvasapidippukku karkam 9.2.2.3. Malasuthi karkam 9.2.2.4. Suvasa pidippu karkam 9.2.2.5. Mega karkam 9.2.3. Kudineer (Decoctions) 9.2.3.1. Anda varma kudineer 9.2.3.2. Athisara kudineer 9.2.3.3. Athimathura kudineer 9.2.3.4. Amirthavalli kudineer 9.2.3.5. Amukkara kudineer 9.2.3.6. Adathoadai kudineer 9.2.3.7. Aattellu kudineer 9.2.3.8. Aavarai kudineer 9.2.3.9. Eeral varmam kudineer 9.2.3.10. Linga varmam kudineer 9.2.3.11. Uzhinnai kudineer 9.2.3.12. Ulvarma kudineer 9.2.3.13. Ruthira varma kudineer 9.2.3.14. Kandang kathiri kudineer 9.2.3.15. Kazhuthu varmam kudineer 9.2.3.16. Kareeral varmam kudineer 9.2.3.17. Kaal kavuli kudineer 9.2.3.18. Kukkuda kudineer 9.2.3.19. Kurunthotti ver kudineer 9.2.3.20. Kothumalli kudineer 9.2.3.21. Sirasu varmam kudineer 9.2.3.22. Siru pancha moola kudineer 9.2.3.23. Sittramutti kudineer 9.2.3.24. Chukku kudineer 9.2.3.25. Ilaneer kudineer 9.2.3.26. Thasa moola kudineer 9.2.3.27. Thilartha varmam kudineer 9.2.3.28. Thoothuvalai ver kudineer 9.2.3.29. Thevathaara kudineer 9.2.3.30. Nilavarai Kudineer 9.2.4. Vaatru (Distillation Medicine) 9.2.4.1. Sayakulanthagan vaatru 9.2.4.2. Munthiri vaatru 9.2.4.3. Valiya Angadi vaatru 9.2.4.4. Santhanathi vaatru 9.2.4.5. Inji vaatru 9.2.4.6. Megarasanga vaatru 9.2.4.7. Thirikadugu vaatru 9.2.4.8. Karunkoli vaatru 9.2.4.9. Veppampattai vaatru 9.2.4.10. Isangu vaatru 9.2.4.11. Karunkurinji vaatru 9.2.4.12. Meganathi vaatru 9.2.4.13. Kurunthotti vaatru 9.2.4.14. Garudakodi vaatru 9.2.4.15. Kombarakku vaatru 9.2.4.16. Veppampattai vaatru 9.2.4.17. Kariveppu vaatru 9.2.4.18. Thuvalai poga vaatru 9.2.4.19. Indu vaatru 9.2.4.20. Muttai vaatru 9.2.4.21. Vathakaya vaatru 9.2.4.22. Kayasangara vaatru 9.2.4.23. Sengkaluneer vaatru 9.2.4.24. Kabakayarasangara vaatru 9.2.4.25. Thratchathi vaatru 9.2.5. Chooranam (Medicinal Powder) 9.2.5.1. Athimathura chooranam 9.2.5.2. Ruthiratcha podi 9.2.5.3. Irumal podi 9.2.5.4. Kurosani oma podi 9.2.5.5. Kodiveli chooranam 9.2.5.6. Thirukadukaathi podi 9.2.5.7. Nilavagai podi 9.2.5.8. Saya Chooranam II 9.2.5.9. Sundai ver chooranam 9.2.5.10. Thippi chooranam 9.2.5.11. Devathara chooranam 9.2.5.12. Nathaisoori chooranam 9.2.5.13. Mavilangu chooranam 9.2.5.14. Akkini chooranam 9.2.5.15. Vilva ver chooranam 9.2.6. Ilagam/Legium (Electuary) 9.2.6.1. Karisalai ilagam 9.2.6.2. Irumaluku ilagam 9.2.6.3. Kandan kathiri ilagam 9.2.6.4. Sitramutti ilagam 9.2.6.5. Paal ilagam 9.2.6.6. Vasathi ilagam 9.2.6.7. Moola vayuvukku /vayitrottathirku ilagam 9.2.6.8. Vellattu ilagam 9.2.6.9. Thazam poo ilagam 9.2.6.10. Madhana kamiya ilagam

References: 1,2,3,4,7,8,9,10,12,13,14,15,17,19,20,21,28,29,30,31,39,51,52,53,54,56,57,58,59,60,61,62,67

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3 ,CO4,CO5,CO 8	Describe in detail about ingredients, method of preparation, indication, diet restrictions (If any), (Saaru, Karkam, Vaatru, Kudineer, Ilagam)	3	Lecture	CK	Know	L&PPT
CO1,CO2,CO3	Document varmam aga Marunthugal based therapeutic uses (Musculo	5	Experiential-	PSY-	Knows-	CBL,PrB

,CO4,CO5,CO 8	Skeletal,Neurological, Psychiatric Conditions, Paediatric Conditions)		Learning 9.2	GUD	how	L
CO1,CO2,CO3 ,CO4,CO5,CO 8	Compile internal medicine Practiced in traditional Vaithiyas(Saaram,Karkam,Vaatru,Kudineer,Illagam)	4	Experiential-Learning 9.3	PSY-GUD	Knows-how	PrBL,TP W,TBL
CO1,CO2,CO3 ,CO4,CO5,CO 8	Analyze of Pharmacological activity, qualitative and quantitative analysis to validate varmam aga maruthugal (Saaru, Karkam, Vaatru, Kudineer, Illagam)	5	Practical Training 9.1	PSY-GUD	Shows-how	DA

M 9 Unit 3 Varmam medicine part-II

9.3.1. *Nei/Kiruthangal* (Medicated ghee) 9.3.1.1. *Kandangkathiri nei* 9.3.1.2. *Kozhi nei/kukuda nei* 9.3.1.3. *Koduveli nei* 9.3.1.4. *Vellattu nei* 9.3.1.5. *Veezhi nei* 9.3.1.6. *Vallarai nei* 9.3.1.7. *Veli paruthu nei* 9.3.1.8. *Kumari nei* 9.3.1.9. *Kovvai nei* 9.3.1.10. *Chippi nei* 9.3.2. *Thylam/Ennai* (Medicated oil) 9.3.2.1. *Aalam paal murivennai* 9.3.2.2. *Vasa vennai* 9.3.2.3. *Murivu ennai* 9.3.2.4. *Mukootu thylam* 9.3.2.5. *Anjennai thylam* 9.3.2.6. *Kaya sarvanga thylam* 9.3.2.7. *Kaya rajanga thylam* 9.3.2.8. *Kaya thirumeni thylam* 9.3.2.9. *Koovila thylam* 9.3.2.10. *Kurunthotti ennai* 9.3.2.11. *Nayana vilvaathi thylam* 9.3.2.12. *Thiripalathi thylam* 9.3.2.13. *Varmani thylam* 9.3.2.14. *Pasalathi thylam* 9.3.2.15. *Etti pazha thylam* 9.3.2.16. *Sivan vembu thylam* 9.3.2.17. *Moodilathaali thylam* 9.3.2.18. *Nagarathi thylam* 9.3.2.19. *Kumari ennai* (Internal & External) II 9.3.2.20. *Nalpamarathi* 9.3.2.21. *Thoothulam pasha thylam* 9.3.2.22. *Thaanu manthiraathi thylam* 9.3.2.23. *Vatha rasanga thylam* 9.3.2.24. *Isangu ver thylam* 9.3.2.25. *Ulunthennai* 9.3.2.26. *Karisalai ennai* 9.3.2.27. *Thiripalathi thylam* 9.3.2.28. *Puya varma ennai* 9.3.2.29. *Maha thiriphalathi ennai* 9.3.2.30. *Vilva ver thylam* 9.3.3. *Kulikaikal/Maathirai (Tablets)* 9.3.3.1. *Varma kulikai – I* 9.3.3.2. *Varma kulikai – VII* 9.3.3.3. *Varma sanni kulikai* 9.3.3.4. *Varmani kulikai* 9.3.3.5. *Vettu marppan kulikai* 9.3.4. *Kuzhambu* (Medicated Viscous Mixture) 9.3.4.1. *Karisalai kuzhambu* 9.3.4.2. *Muttai kuzhambu II* 9.3.4.3. *Saya kuzhambu* 9.3.4.4. *Naal paamara kuzhambu* 9.3.4.5. *Kombarakku kuzhambu* 9.3.5. *Panda Puthayal/Arishtam* (Fermented Herbal Decoction) 9.3.5.1. *Velvael varisai panda puthayal*

References: 1,2,3,4,6,7,9,14,16,17,19,21,22,27,28,29,30,31,39,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,70

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3 ,CO4,CO5,CO 8	Describe in detail about ingredients, method of preparation, indication, diet restrictions (If any), (Nei,Thylam,Kuligai,Kuzhambu,Panda Puthayal)	3	Lecture	CK	Know	L,L&PPT

CO1,CO2,CO3 ,CO4,CO5,CO 8	Enlist varmam aga Marunthugal based therapeutic uses (Musculo Skeletal,Neurological, Psychiatric Conditions, Paediatric Conditions)	5	Experiential-Learning 9.4	PSY-GUD	Knows-how	PrBL,W,TPW,TB L
CO1,CO2,CO3 ,CO4,CO5,CO 8	Compile internal medicine Practiced in traditional Vaithiyas (Nei,Thylam,Kuligai,Kuzhambu,Panda Puthayal)	3	Experiential-Learning 9.5	PSY-GUD	Knows-how	DIS,FV,P ER
CO1,CO2,CO3 ,CO4,CO5,CO 8	Analyse pharmacological activity, qualitative and quantitative analysis to validate varmam aga maruthugal (Nei,Thylam,Kuligai,Kuzhambu,Panda Puthayal)	5	Practical Training 9.2	PSY-GUD	Shows-how	D,DA,DI S,BS

M 9 Unit 4 Pathiyakaala ozhukkam

9.4.1. Types of *pathiyam* (Diet regimen) 9.4.2. *Pathiya kaala kuliya*l muraigal 9.4.3. *Pathiya kari vagaigal & porutkal* 9.4.4. *Unavu & kanji* 9.4.4.1. *Uzhinjai III* 9.4.4.2. *Eazha kanji* 9.4.4.3. *Chittramutti kanji* 9.4.4.4. *Thippili arisi kanji* 9.4.4.5. *Varma kanji* 9.4.4.6. *Eppilaippu kanji* 9.4.4.7. *Pazhaiya varmangaluku kanji* 9.4.4.8. *Karungsundai kanji* 9.4.4.9. *Karpini kanji* 9.4.4.10. *Kondrai kanji* 9.4.4.11. *Thirikadugu kanji* 9.4.4.12. *Pancha moola kanji* 9.4.5. List of *Varmam Kanji Vagaigal* Used In Sports Nutrition 9.4.5.1. *Samaiya kanji* 9.4.5.2. *Thinaiyarisi kanji* 9.4.5.3. *Venthaya kanji* 9.4.5.4. *Karuppu vaaliyarisi kanji* 9.4.5.5. *Adathodai kanji* 9.4.5.6. *Mudakattran kanji* 9.4.5.7. *Kurunthotti ver kanji* 9.4.5.8. *Chittramutti kanji* 9.4.5.9. *Paal kanji* 9.4.5.10. *Kuruvai arisi kanji*

References: 1,2,3,4,5,6,7,8,13,14,15,16,17,18,19,20,21,22,23,25,29,30,31,32,35,36,51,53,55,56,62,65,67,68,70

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3 ,CO4,CO5,CO 8	Define Pathiyam and types of Pathiyam, Pathiya Kaala Porutkal (Diet Regimen)	1	Lecture	CK	Know	L&PPT ,L
CO1,CO2,CO3 ,CO4,CO5,CO 8	Describe about Pathiya Kaal Kuliya Murai (Bathing methods during medication Period)	1	Lecture	CK	Know	L&PPT ,L
CO1,CO2,CO3 ,CO4,CO5,CO	Describe about Varmam Kanji Vagaigal in Sports Nutrition and Pathiyakala Kanji Vagaigal (Porridge during Medication Period)	1	Lecture	CK	Know	L&PPT ,L

8						
CO1,CO2,CO3 ,CO4,CO5,CO 8	Perform Case study or case series of varmam kanji (porridge varieties) for athletes in any sports academy/ Nutrient deficiency person/ person who suffered from Post viral complication	8	Experiential-Learning 9.6	PSY-GUD	Knows-how	CBL
CO1,CO2,CO3 ,CO4,CO5,CO 8	Analyse of nutrient value of varmam kanji vagaigal (Porridge)	5	Practical Training 9.3	PSY-GUD	Shows-how	D,DIS,BS,DA
CO1,CO2,CO3 ,CO4,CO5,CO 8	Perform Bio - chemical and pharmacological Screening of kanji vagaigal (Porridge)	5	Practical Training 9.4	PSY-GUD	Shows-how	DA

Practical Training Activity

Practical Training 9.1 : Pharmacological activity, qualitative and quantitative analysis for validation of Varmam aga maruthugal (Saaru, Karkam, Vaatru, Kudineer, Ilagam)

Total activity - 5 hours

Activity 1 Brainstroming (1 hr)

Step 1: Students divided into small groups for each group teacher should discuss the method of preparation, Pharmacological activities, Qualitative, Quantitative analysis by reviewing recent research articles in this topics

Activity 2 : Demonstration (1 hr)

Step 1: The teacher will divid the students into small group, for each group teacher should demonstrate Drug identification, Purification, method of preparation Saaru, Karkam, Vaatru, Kudineer, Ilagam.(15 min)

Step 2: The teacher should demonstrate pharmacological and qualitative and quantitative analysis through PPT/Video clips (45 min)

Activity 3 . Demonstration on Model (2 hours)

Step 1 : The teacher will perform identification of raw drugs,purification methods, method of preparation.

Step 2 :The teacher will demonstrate pharmacological activity and qualitative and quantitative analysis infront of teacher or give a study details for particular activity

Activity 4: Discussion - (1 hr)

The teacher conduct a group discussion to review the practical session,the student submit the record or report about the session

Practical Training 9.2 : Pharmacological activity, qualitative and quantitative analysis for validation of Varmam aga maruthugal (Nei,Thylam, Kuligai, Kuzhambu, Panda

Puthayal)
Total activity - 5 hours Activity 1 Brainstroming (1 hr) The teache will divide the students into small groups for each group teacher should discuss the method of preparation, Pharmacological activities, Qualitative, Quantitative analysis by reviewing recent research articles in this topics. (1 hour) Activity 2 : Demonstration (1 hr) Step 1: Students are divided into small group, for each group teacher should demonstrate Drug identification, Purification, method of preparation nei,thylam,kuligai,kuzhambu, panda puthayal.(15 min) Step 2: The teacher should demonstrate pharmacological and qualitative and quantitative analysis through PPT/Video clips (45 min) Activity 3. Drug Analysis (2 hrs) Step 1 : The teacher will perform identification of raw drugs,purification methods, method of preparation. Step 2 : The teacher will demonstrate pharmacological activity and qualitative and quantitative analysis infront of teacher or give a study details for particular activity Activity 4: Discussion (1 hr) The teacher conduct a group discussion to review thepractical session,the student submit the record or report about the session
Practical Training 9.3 : Nutrient value of Varmam kanji vagaigal (Porridge)
Total activity - 5 hours Activity 1 Brainstroming (30 min) The teacher willll divide the students divided into small groups for each group teacher should discuss nutrient value, calories, RDA for various vitamines, minerals and essential elements by reviewing recent research articles in this topics. Activity 2 : Demonstration (2 hr) Step 1. The Teacher will demonstrate the methods of prepatation of Varmam kanji vagaigal (Porridge) (1 hr) Step 2. The Teacher will determine nutrient value through PPT/Video clips/practical session (1 hr) Activity 3.Drug Analysis (2 hrs) Step 1. The teacher will demontrate the calories calculation based on body weight, body mass index, age, gender (1hr) Step 1 : The Teacher will perform the various methods of determine nutrient value or give a study details for particular session(1hr) Activity 4: Discussion (30 min) The teacher conduct a group discussion to review thepractical session,the student submit the record or report about the session
Practical Training 9.4 : Bio-chemical and pharmacological Screening of kanji vagaigal (Porridge)
Total activity - 5 hours

Activity 1 - Brainstroming (1 hr)

The teacher will divide the students into small groups for each group teacher should discuss the method of preparation, bio-chemical and pharmacological activities by reviewing recent research articles in this topics. (1 hour)

Activity 2 : Demonstration (1 hr)

Step 1: Students are divided into small group, for each group teacher should demonstrate Drug identification, Purification, various method of preparation of kanji vagaigal.(15 min)

Step 2: Teacher should demonstrate pharmacological and phyto chemical analysis through PPT/Video clips (45 min)

Activity 3. Drug Analysis (2 hrs)

Step 1 : The Students will perform identification of raw drugs, purification methods, various method of preparation.

Step 2 : The student will demonstrate pharmacological activity and phyto chemical analysis in front of teacher or given study details for particular activity

Activity 4: Discussion (1 hr)

The teacher conduct a group discussion to review the practical session, the student submit the record or report about the session

Experiential learning Activity

Experiential-Learning 9.1 : Varmam mooligai agarathi documentation based on Verupeyargal (Synonyms) and therapeutic uses

Total activity hour - 1 hr

Activity 1: Library session (1hr)

Step 1: The scholar will be making a data for another names of Varmam Mooligaigal and its therapeutic uses (30 minutes)

Step 2: After the documentation, the scholar will be sharing the collected materials about Varmam mooligaigal to his/her colleagues through ppt presentation, make a discussion based on suvai, mukktam, pharmacological activity of the medicine & research aspects (30 minutes)

Experiential-Learning 9.2 : Varmam aga Marunthugal documentation based therapeutic uses (Musculo Skeletal, Neurological, Psychiatric Conditions, Paediatric Conditions)

Total activity hours 5 :

Activity 1: Project - Based learning (3 hrs)

Students are divided into small groups for each group teacher assign project where student research and develop Varmam aga Marunthugal based on therapeutic uses.

Activity 2: Case based learning (2 hrs)

The student are instructed to conduct group discussion on Varmam aga Marunthugal and present their knowledge through case presentation / Prepare a manuscript and submit it to a indexed journal

Experiential-Learning 9.3 : Enlist the internal medicine Practiced in traditional Vaithiyas (Saaram, Karkam, Vaatru, Kudineer, Ilagam)

Total activity - 4 hour

Activity 1: Project based learning(3.30 hrs)

The teacher should divide the students into small groups,instructed to do following activities in rotatary manner

Group 1: Raw drug identification and analysation of its properties.

Group 2 : Preparation of various forms of Saaram,Karkam,Vaatru,Kudineer,Ilagam

Group 3 : Observe method of application and techniques of Saaram,Karkam,Vaatru,Kudineer,Ilagam

Group 4 : Observe life style management and preventive care used in traditional methods

Activity 2: Discussions (30 mins)

Each group are allowed to discuss the observed methods to their colleagues infront of teacher or make case study about ethnopractices of Saaram,Karkam,Vaatru,Kudineer,Ilagam

Experiential-Learning 9.4 : Documentation of varmam aga Marunthugal (Nei, Thylam, Kuligai, Kuzhambu, Panda Puthayal) based therapeutic uses (Musculo Skeletal, Neurological, Psychiatric Conditions, Paediatric Conditions)

Total activity - 5 hours

Activity 1: Project based learning(4.30 hrs)

The teacher should divide the students into small groups,instructed to do following activities in rotatary manner

Group 1: Observe and enlist medicine, therapeutic application of Nei, Thylam, Kuligai, Kuzhambu, Panda Puthayal used for management of musculo skeletal disorder.

Group 2 : Observe and enlist medicine,therapeutic application of Nei, Thylam, Kuligai, Kuzhambu, Panda Puthayal used for management of psychiatric conditions

Group 3 : Observe and enlist medicine,therapeutic application of Nei, Thylam, Kuligai, Kuzhambu, Panda Puthayal used for management of neurological conditions

Group 4 : Observe and enlist medicine, therapeutic application of Nei, Thylam, Kuligai, Kuzhambu, Panda Puthayal used for management of paediatric conditions

Activity 2 : Discussions (30 min)

Each group are allowed to discuss the observed methods to their colleagues infront of teacher or make case study about ethnopractices of Nei,Thylam, Kuligai, Kuzhambu, Panda Puthayal used for Musculo Skeletal, Neurological, Psychiatric Conditions, Paediatric Conditions

Experiential-Learning 9.5 : Enlist the internal medicine Practiced in traditional Vaithiyas (Nei,Thylam, Kuligai,Kuzhambu, Panda Puthayal)

Total activity - 3 hours

Activity 1: Field visit (2.30 hrs)

The teacher should divide the students into small groups, instructed to do following activities in rotatory manner

Group 1: Raw drug identification and analysation of its properties.

Group 2 : Preparation of various forms of Nei,Thylam, Kuligai, Kuzhambu, Panda Puthayal

Group 3 : Observe method of application and techniques of Nei,Thylam, Kuligai, Kuzhambu, Panda Puthayal

Group 4: Observe life style management and preventive care used in traditional methods

Activity 2 : Discussion (30 min)

Each group are allowed to discuss the observed methods to their colleagues Infront of teacher or make case study about ethnopractices of Nei,Thylam, Kuligai, Kuzhambu, Panda Puthayal

Experiential-Learning 9.6 : Case presentation of Varmam kanji (porridge varieties)

Total activity hour - 8 hours

Activity 1. Discussion (1 hr)

The Students divided into small groups for each group, teacher should discuss and allot different case scenario such as sports injury/nutrient deficinecy person/person who suffered from post viral complications

Activity 2. Case- Based Learning (5 hrs)

Step 1: Greet the patient and Get the consent from patient

Step 2: Selection of patient with suitable criteria by history taking and general and systemic examination

Step 3: Diagnose the patient with positive radiological and serological findings

Step 4: Provide suitable varmam kanji for particular duration

Step 5: Analyse the prognosis by using pain assessment scale

Activity 3 case presentation (2 hrs)

The student will perform the case presentation or case series to their collegues through ppt/video clips / case study

Modular Assessment

Assessment method	Hour
INSTRUCTIONS Conduct a structured modular assessment. Assessment will be for 50 marks . Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6C Each scholar will critic analysis a paper based on the toxic studies/quantitative and qualitative/ pharmacological view in Scopus/WOS journals - 40 Marks and Spotters of raw drugs - 10 marks Or Any practical in converted form can be taken for assessment (25 marks) and Any of the experiential as portfolio/reflection/presentations can be taken as an assessment (25 marks)	4

Module 10 : Varmam Pura Marundhu (Varmam External Medicine)

Module Learning Objectives

(At the end of the module, the students should be able to)

Describe the preparation of external medicine and external therapies used in disease conditions.

Perform and Documentation external medicine and *varmam* external therapies (*varmam pura maruthuvam*) used in various disease conditions.

Apply knowledge of *varmam* external therapies for various conditions

M 10 Unit 1 Varmam External Medicine Part I

10.1.1. Definition of *Varmam pura marunthugal Varmam external medicine* part I 10.1.2. *Thalam* 10.1.2.1. *Uzhinjai Thalam* 10.1.2.2. *Kandakathiri Thalam* 10.1.2.3. *Karunjeeraka Thalam* 10.1.2.4. *Kothamalli Thalam* 10.1.2.5. *Savukkara Thalam* 10.1.2.6. *Thevathara Thalam* 10.1.2.7. *Mathalaipoo Thalam* 10.1.2.8. *Inji Thalam* 10.1.2.9. *Mayakkam Theerkum Thalam* 10.1.3. *Definition and Types of Tharai* 10.1.4. *Tharai Parigaram* 10.1.4.1. *Kaadi Tharai II* 10.1.4.2. *Saaru Tharai I* 10.1.4.3. *Thayir Tharai* 10.1.4.4. *Thaila Tharai III* 10.1.4.5. *Nei Tharai* 10.1.4.6. *Patcharisi Thaneer Tharai* 10.1.4.7. *Paal Tharai I* 10.1.4.8. *Moor Tharai I* 10.1.4.9. *Kumari Tharai* 10.1.4.10. *Thaneer Tharai* 10.1.5. *Thuvaazhai* (Medicated Liquid or Medicinal Powder application) 10.1.5.1. *Kumari Thuvaalai* 10.1.5.2. *Santhana Thuvaalai* 10.1.5.3. *Nilavaakai Thuvaalai* 10.1.5.4. *Vennai Thuvaalai* 10.1.5.5. *Elathi Thuvaalai*

References: 1,2,7,15,17,19,21,28,38,39,51,52,53,54,55,56,57,58,59,60,61,62,63,68

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3,CO4,CO5,CO8	Describe the Definition of Varmam Pura Marunthugal Thalam/Poththal, Poochu, Kizhi and Ottradam, Thuvaazhai, Tharai, Pugai, Oothal, Nasikaparanam, Nasiyam, Kalikkam, Pasai, Kuli Neer with an example	2	Lecture	CK	Know	L&PPT
CO1,CO2,CO3,CO4,CO5,CO	Describe different types and method of application of of varmam pura marunthugal Thalam, Tharai, Thuvalai	1	Lecture	CK	Know	L&PPT, L

8						
CO1,CO2,CO3 ,CO4,CO5,CO 8	Compile Documentation of Thalam, Tharai, Thuvalai external therapies practiced in traditional Vaithiyars	4	Experiential-Learning 10.1	PSY-GUD	Knows-how	PrBL,DIS
CO1,CO2,CO3 ,CO4,CO5,CO 8	Demonstrate varmam pura maruthuvam (Thalam, Tharai, Thuvalai) based on diseases conditions	5	Practical Training 10.1	PSY-GUD	Shows-how	CBL,D-BED,D
CO1,CO2,CO3 ,CO4,CO5,CO 8	Perform varmam pura maruthuvam (Thalam, Tharai, Thuvalai) based on diseases conditions	4	Experiential-Learning 10.2	PSY-GUD	Does	PER,DIS, CBL

M 10 Unit 2 Varmam External Medicine Part II

10.2.1. Kizhi Parigaram (Medicated Pouch) 10.2.1.1. Ela Kizhi 10.2.1.2. Oruthal Thaamarai Kizhi 10.2.1.3. Sankankuppi Kizhi 10.2.1.4. Sirasu varma kizhi 10.2.1.5. Thirugu Kalli Kizhi 10.2.1.6. Thennam Poo kizhi 10.2.1.7. Manjal Kizhi 10.2.1.8. Muthugu Varma Kizhi 10.2.1.9. Sinega Pottanam 10.2.1.10. Sangankuppi Kizhi 10.2.1.11. Veppinpattai Kizhi 10.2.1.12. Adutheendapalai Kizhi 10.2.1.13. Izhuppai Pinnakku Kizhi 10.2.1.14. Ezhumitchai Kizhi 10.2.1.15. Kadugu Ottradam 10.2.1.16. Kazharchi Ottradam 10.2.1.17. Kazhuththu Mel Murivu Ottradam 10.2.1.18. Kaatulli Ottradam 10.2.1.19. Kukkil Ottradam II 10.2.1.20. Kurunthotti Ottradam 10.2.1.21. Senkashuneer Kizhangu Ottradam 10.2.1.22. Thumbai Poo Ottradam 10.2.1.23. Vettrilai Ottradam 10.2.1.24. Thevathaara Ottradam 10.2.1.25. Nathaisoori Ottradam 10.2.1.26. Neermulli Ottradam 10.2.1.27. Notchi Ottradam 10.2.1.28. Padikara Ottradam 10.2.1.29. Pirantai Ottradam 10.2.1.30. Pirantai Kolunthu Ottradam 10.2.1.31. Murunkai ilai Ottradam 10.2.1.32. Murunkai Poo Ottradam 10.2.1.33. Muzhankaal Muda Ottradam 10.2.1.34. Murivukku Ottradam 10.2.1.35. Vasavukku Ottradam 10.2.1.36. Venkunkiliya Ottradam 10.2.1.37. Sennai Pattai Ottradam 10.2.1.38. Thazhu Thazhai Ottradam 10.2.1.39. Paaraikal Aavi Ottradam

References: 1,2,3,4,7,15,17,19,21,28,58

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3 ,CO4,CO5,CO 8	Describe method of application of varmam pura marutnthugal (Kizhi)	3	Lecture	CK	Know	L,L&PPT

CO1,CO2,CO3 ,CO4,CO5,CO 8	Compile Documentation of Kizhi Parigaram practiced in traditional Vaithiyars	6	Experiential- Learning 10. 3	PSY- GUD	Knows- how	TBL,PrB L
CO1,CO2,CO3 ,CO4,CO5,CO 8	Demonstrate varmam pura maruthuvam (Kizhi Parigaram) based on diseases conditions	5	Practical Training 10.2	PSY- GUD	Shows- how	D- BED,CB L

M 10 Unit 3 Varmam External Medicine Part III

10.3.1. Poochu (Liniment/Semi-Solid Applications) 10.3.1.1. *Adapothiyar Poochu* 10.3.1.2. *Aazhiya Poochu II* 10.3.1.3. *Uzhunthumaavu Poochu* 10.3.1.4. *Kazharchi Poochu* 10.3.1.5. *Kaara Poochu* 10.3.1.6. *Sathaimurivukku Poochu* 10.3.1.7. *Santhanathook Poochu* 10.3.1.8. *Siruneer Pidippukku Poochu III* 10.3.1.9. *Sevi Vizhi Sooraikku Poochu* 10.3.1.10. *Narambu Pidikku Poochu I* 10.3.1.11. *Viththu Varma Poochu* 10.3.1.12. *Narambu Pidikku Poochu II* 10.3.1.13. *Muthugu Varma Poochu* 10.3.1.14. *Karun Kungiliya Poochu* 10.3.2. *Pasai* (Oinment) 10.3.2.1. *Odivu Kattum Pasai* 10.3.2.2. *Odivu Kattum Pasai II* 10.3.2.3. *Murivu Kattum Pasai I* 10.3.2.4. *Murivu Kattum Pasai II* 10.3.2.5. *Mozhi Poruthu Kattu Pasai I* 10.3.2.6. *Mozhi Poruthu Kattu Pasai II* 10.3.3. *Kuli Neer* 10.3.3.1. *Kulineer I* 10.3.3.2. *Kulineer II* 10.3.3.3. *Kulineer III*

References: 1,2,3,4,7,15,17,39,58,62

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3 ,CO4,CO5,CO 8	Describe method of application of varmam pura marutnthugal (Poochu,Pasai, Kuli Neer)	2	Lecture	CK	Know	L,L&PPT
CO1,CO2,CO3 ,CO4,CO5,CO 8	Compile Documentation of Poochu,Pasai, Kuli Neer practiced in traditional Vaithiyars	3	Experiential- Learning 10. 4	PSY- GUD	Knows- how	PrBL
CO1,CO2,CO3 ,CO4,CO5,CO 8	Demonstrate varmam pura maruthuvam (Poochu,Pasai,Kulineer) based on diseases conditions	5	Practical Training 10.3	PSY- GUD	Shows- how	D,DA
CO1,CO2,CO3	Perform for varmam pura maruthuvam (Poochu, Pasai, Kuli Neer) based on diseases	3	Experiential-	PSY-	Does	PER,DIS,

,CO4,CO5,CO 8	conditions		Learning 10. 5	GUD		CBL
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M 10 Unit 4 Varmam External Medicine Part IV

10.4.1. *Pugai* (Medicated Fume) 10.4.1.1. *Pugai* II 10.4.1.2. *Varma Sanni Pugai* 10.4.2. *Nasiyam* (Liquid Nasal Application) 10.4.2.1. *Nasiyam* III 10.4.3. *Nasikaparanam* (Powdered Nasal Application) 10.4.3.1. *Nasiththool* III 10.4.3.2. *Nasiththool* VIII 10.4.4. *Oothal* (Medicated Aerosol) 10.4.4.1. *Oothal* II & III 10.4.5. *Kalikkam* (Medicated Eye Salve) 10.4.5.1. *Mizhaku Kalikkam*

References: 1,2,3,4,5,7,8,9,10,15,19,20,21,22,26,28,29,30,31,32,38,51,52,56,62

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3 ,CO4,CO5,CO 8	Describe method of application of varmam pura marutnthugal (<i>Pugai</i> , <i>Nasiyam</i> , <i>Nasikaparanam</i> , <i>Oothal</i> , <i>Kalikkam</i>)	2	Lecture	CK	Know	L&PPT ,L
CO1,CO2,CO3 ,CO4,CO5,CO 8	Compile Documentation of (<i>Pugai</i> , <i>Nasiyam</i> , <i>Nasikaparanam</i> , <i>Oothal</i> , <i>Kalikkam</i>) practiced in traditional <i>Vaithiyars</i>	3	Experiential- Learning 10. 6	PSY- GUD	Knows- how	DIS,DA
CO1,CO2,CO3 ,CO4,CO5,CO 8	Demonstrate varmam pura maruthuvam (<i>Pugai</i> , <i>Nasiyam</i> , <i>Nasikaparanam</i> , <i>Oothal</i> , <i>Kalikkam</i>) based on diseases conditions	5	Practical Training 10.4	PSY- GUD	Shows- how	BS,D,DIS ,DA
CO1,CO2,CO3 ,CO4,CO5,CO 8	Perform varmam pura maruthuvam (<i>Pugai</i> , <i>Nasiyam</i> , <i>Nasikaparanam</i> , <i>Oothal</i> , <i>Kalikkam</i>) based on diseases conditions	3	Experiential- Learning 10. 7	PSY- GUD	Does	PrBL

Practical Training Activity

Practical Training 10.1 : Varmam pura maruthuvam (*Thalam*, *Tharai*, *Thuvalai*) based on diseases conditions

Total activity - 5 hours

Activity 1 Brainstroming (1 hr)

The students divided into small groups for each group teacher should discuss types, mechanism, pharmacological activities of ingredient used in Thalam, Tharai, Thuvalai procedure, equivalent procedure in another system of medicines, method of preparation, application by reviewing recent research articles in this topic. (1 hour)

Activity 2 : Demonstration (1 hr)

Teacher should demonstrate Drug identification, Purification, method of preparation and application of Thalam, Tharai, Thuvalai through PPT/Video clips

Activity 3. Demonstration (2 hours 45 min)

Step 1. The teacher will perform identification of raw drugs, purification methods (1 hr)

Step 2 : The teacher will assist the students will perform identification of raw drugs, purification methods, (1 hr)

Step 2 : The student will demonstrate method of preparation and application in front of teacher (45 mins)

Activity 4: Discussion - 15 min

The teacher conduct a group discussion to review the practical session. and encourage the student will take a notes in their log book

Practical Training 10.2 : Varmam pura maruthuvam (Kizhi Parigaram) based on diseases conditions

Total activity - 5 hours

Activity 1 Brainstorming (1 hr)

The teacher will divide the students divided into small groups for each group teacher should discuss types, mechanism, pharmacological activities of ingredient used in Kizhi Parigaram procedure, equivalent procedure in another system of medicines, method of preparation, application by reviewing recent research articles in this topic. (1 hour)

Activity 2 : Demonstration (1 hr)

Teacher should demonstrate Drug identification, Purification, method of preparation and application of Kizhi Parigaram through PPT/Video clips

Activity 3. Drug Analysis (2 hrs 45 min)

Step 1 : The Students will perform identification of raw drugs, purification methods,

Step 2 : The student will demonstrate method of preparation and application in front of teacher

Activity 4: Discussion (15 min)

The teacher conduct a group discussion to review the practical session

Practical Training 10.3 : Varmam pura maruthuvam (Poochu, Pasai, Kulineer) based on diseases conditions

Total activity - 5 hours

Activity 1. Brainstorming (1 hr)

The teacher will divide the students divided into small groups for each group teacher should discuss the method of preparation, method of preparation and application by reviewing recent research articles in this topic. (1 hour)

Activity 2 : Demonstration (1 hr)

Step 1: Students are divided into small group, for each group (15 min)
 Step 2: Teacher should demonstrate Drug identification, Purification, method of preparation and application of Poochu, Pasai, Kulineer through PPT/Video clips (45 min)
 Activity 3. Drug Analysis (2 hrs 30 min)
 Step 1 : The Students will perform identification of raw drugs, purification methods,
 Step 2 : The student will demonstrate method of preparation and application in front of teacher
 Activity 4: Discussion (30 min)
 The teacher conduct a group discussion to review the practical session

Practical Training 10.4 : Varmam pura maruthuvam (Pugai, Nasiyam, Nasikaparanam, Oothal, Kalikkam) based on diseases conditions

Total activity - 5 hours
 Activity 1 Brainstroming (1hr)
 The students divided into small groups for each group teacher should discuss the method of preparation, method of preparation and application by reviewing recent research articles in this topics. (1 hour)
 Activity 2 : Demonstration (1hr)
 Step 1: Students are divided into small group, for each group (15 min)
 Step 2: Teacher should demonstrate Drug identification, Purification, method of preparation and application of Pugai, Nasiyam, Nasikaparanam, Oothal, Kalikkam through PPT/Video clips (45 min)
 Activity 3. Demonstration on models (2 hrs 30 min)
 Step 1 : The Students will perform identification of raw drugs, purification methods,
 Step 2 : The student will demonstrate method of preparation and application in front of teacher
 Activity 4: Discussion (30 min)
 The teacher conduct a group discussion to review the practical session

Experiential learning Activity

Experiential-Learning 10.1 : Thalam, Tharai, Thuvalai external therapy documentation from traditional Vaithiyars

Total activity - 4 hour
 Activity 1: Project based learning (3.00 hrs)
 The teacher should divide the students into small groups, instructed to do following activities in rotatory manner
 Group 1: Raw drug identification and analysis of its properties.
 Group 2: Preparation of various forms of Thalam, Tharai, Thuvalai
 Group 3 : Observe method of application and techniques of Thalam, Tharai, Thuvalai

Activity 2: Discussions (1 hour)

Each group are allowed to discuss the observed methods to their colleagues in front of teacher or make case study about ethnopractices of Thalam, Tharai, Thuvalai

Experiential-Learning 10.2 : Varmam pura maruthuvam (Thalam, Tharai, Thuvalai) based on diseases conditions

Total activity hour - 4 hours

Activity 1: Discussion - 1 hr

Step 1: The Students divided into small groups for each group, teacher should discuss and allot different varmam pura maruthuvam therapies such as Thalam, Tharai, Thuvalai

Group 1: Performe Varmam Puramaruthuvam - Thalam for specific condition

Group 2: Performe Varmam Puramaruthuvam - Tharai for specific condition

Group 3: Performe Varmam Puramaruthuvam - Thuvalai for specific condition

Activity 2. Case- Based Learning (2 hrs)

Step 1: Greet the patient and Get the consent from patient

Step 2: Selection of patient with suitable criteria by history taking and general and systemic examination

Step 3: Diagnose the patient with positive radiological and serological findings

Step 4: Provide Varmam Pura maruthuvam Thalam, Tharai, Thuvalai for different case

Step 5: analyse the prognosis by using assessment criteria

Activity 3. Presentation -(60 min)

Student will present case presentation or case series to their colleagues through ppt/video clips / or make a manuscript and submit it to scopus indexed journal

Experiential-Learning 10.3 : Kizhi Parigaram Documentation from traditional Vaithiyars

Total activity - 6 hour

Activity 1: Project based learning (5.00 hrs)

The teacher should divide the students into small groups, instructed to do following activities in rotatory manner

Group 1: Raw drug identification and analysis of its properties.

Group 2 : Preparation of various forms of Kizhi Parigaram

Group 3 : Observe method of application and techniques of Kizhi Parigaram

Activity 2 : Discussion(1 hour)

Each group are allowed to discuss the observed methods to their colleagues in front of teacher or make case study about ethnopractices of Kizhi Parigaram

Experiential-Learning 10.4 : Poochu, Pasai, Kuli Neer Documentation from practiced in traditional Vaithiyars

Total activity - 3 hour

Activity 1: Project based learning -(2.30 hrs)

The teacher should divide the students into small groups,instructed to do following activities in rotatary manner

Group 1: Raw drug identification and analysation of its properties.

Group 2 : Preparation of various forms of Poochu,Pasai, Kuli Neer

Group 3 : Observe method of application and techniques of Poochu,Pasai, Kuli Neer

Group 4 : Observe life style management and preventive care used in traditional methods

Activity 2 :Discussion (30 min)

Each group are allowed to discuss the observed methods to their colleagues infront of teacher or make case study about ethnopractices of Poochu,Pasai, Kuli Neer

Experiential-Learning 10.5 : Varmam pura maruthuvam (Poochu, Pasai, Kuli Neer) based on diseases conditions

Total activity hour - 3 hours

Activity 1: Discussion - 15 min

Step 1: The Students divided into small groups for each group, teacher should discuss and allot different varmam pura maruthuvam therapies such as Poochu, Pasai, Kuli Neer

Group 1: Performe Varmam Puramaruthuvam -Poochu for spetic condition

Group 2: Performe Varmam Puramaruthuvam - Pasai for spetic condition

Group 3: Performe Varmam Puramaruthuvam - Kuli Neer for spetic condition

Activity 2. Case- Based Learning (2 hrs)

Step 1: Greet the patient and Get the consent from patient

Step 2: Selection of patient with suitable criteria by history taking and general and systemic examination

Step 3 : Diagnose the patient with positive radiological and serological findings

Step 4: Provide Varmam Pura maruthuvam Poochu, Pasai, Kuli Neer for different case

Step 5: Analyse the prognosis by using assessment criteria

Activity 3. Presentation -(45 min)

The student will present case presentation or case series to their colleagues through ppt/video clips / or make a manuscript and submit it to scopus indexed journal

Experiential-Learning 10.6 : Pugai, Nasiyam ,Nasikaparanam, Oothal, Kalikkam Documentation from practiced in traditional Vaithiyars

Total activity - 3 hour

Activity 1: Drug Analysis (2.30 hrs)

The teacher should divide the students into small groups,instructed to do following activities in rotatary manner

Group 1: Raw drug identification and analysis of its properties. Group 2 : Preparation of various forms of Pugai, Nasiyam ,Nasikaparanam, Oothal, Kalikkam Group 3 : Observe method of application and techniques of Pugai, Nasiyam ,Nasikaparanam, Oothal, Kalikkam Group 4 : Observe life style management and preventive care used in traditional methods Activity 2: Discussions (30 min) Each group are allowed to discuss the observed methods to their colleagues in front of teacher or make case study about ethnopractices of Pugai, Nasiyam ,Nasikaparanam, Oothal, Kalikkam	
Experiential-Learning 10.7 : Varmam pura maruthuvam (Pugai, Nasiyam, Nasikaparanam, Oothal, Kalikkam) based on diseases conditions	
Total activity hour - 3 hours Activity 1: Discussion - 15 min The Students divided into small groups for each group, teacher should discuss and allot different varmam pura maruthuvam therapies such as Pugai, Nasiyam, Nasikaparanam, Oothal, Kalikkam Group 1: Performe Varmam Puramaruthuvam - Pugai for specific condition Group 2: Performe Varmam Puramaruthuvam - Nasiyam for specific condition Group 3: Performe Varmam Puramaruthuvam - Nasikaparanam for specific condition Group 4: Performe Varmam Puramaruthuvam - Oothal for specific condition Group 5: Performe Varmam Puramaruthuvam - kalikkam for specific condition Activity 2. Case- Based Learning (2 hrs) Step 1: Greet the patient and Get the consent from patient Step 2: Selection of patient with suitable criteria by history taking and general and systemic examination Step 3 : Diagnose the patient with positive radiological and serological findings Step 4: Provide Varmam Pura maruthuvam Pugai, Nasiyam, Nasikaparanam, Oothal, Kalikkam for different case Step 5: analyse the prognosis by using assessment criteria Activity 3. Case presentation (45 min) The student will present case presentation or case series to their colleagues through ppt/video clips / or make a manuscript and submit it to scopus indexed journal	
Modular Assessment	
Assessment method	Hour
INSTRUCTIONS Conduct a structured modular assessment. Assessment will be for 50 marks.Keep a structured marking pattern. Use different assessment methods in each	4

module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6C

Each scholar will critic analysis a paper based on the toxic studies/ journal writing - 40 Marks

and

Spotters of raw drugs - 10 marks

Or

Any practical in converted form can be taken for assessment (25 marks)

and

Any of the experiential as portfolio/reflection/presentations can be taken as an assessment (25 marks)

Semester No : 4

Module 11 : Therapeutic Application of Varmam Points

Module Learning Objectives

(At the end of the module, the students should be able to)

Describe ethical guidelines for *varmam* therapy

Interpret *varmam* protocol for *vadu varmam*, *thattu varmam*, *aadhara varmam*, *ul varmam*, *odukki varmam*

Conduct case series or case studies to evaluate the effectiveness of *varmam* points

M 11 Unit 1 Ethical Guidelines of Varmam Application

11.1.1. Ethical guidelines of *varmam* therapeutic application of *adangal*, *Ilakku murai*, *thadaval*, *thirumal muraigal*

References: 1,2,3,7,28,29,30,31,39,51,52,53,54,55,56,57,58,59,60,61,62,68,100,101,102,103

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO6 ,CO7,CO8	Describe ethical guidelines of <i>varmam</i> therapeutic application for <i>adangal</i> , <i>Ilakku murai</i> , <i>thadaval</i> , <i>thirumal</i> .	3	Lecture	AFT-RES	Knows-how	L&GD,L

M 11 Unit 2 Application of Varmam Points

11.2.1. Region wise application of *thodu varmam* – head and neck, upper limb, chest, abdomen and pelvis, lower limb 11.2.2. Therapeutic application of *padu varmam*, *thattu varmam*, *aadhara varmam*, *ul varmam*, *odukki varmam*

References: 1,2,3,4,5,6,7,8,10,13,19,21,25,28,29,30,31,38,39,51,52,53,54,55,56,57,58,59,60,61,62,68,100,101,102,103

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO6,CO7,CO8	Describe therapeutic application of region-wise classification of <i>thodu varmam</i> – head and neck, upper limb, chest, abdomen and pelvis, lower limb	4	Lecture	AFT-RES	Knows-how	L,L&PPT
CO1,CO2,CO6,CO7,CO8	Describe therapeutic application of <i>padu varmam</i> , <i>thattu varmam</i> , <i>aadhara varmam</i> , <i>ul varmam</i> , <i>odukki varmam</i>	3	Lecture	AFT-RES	Knows-how	L&GD,L
CO1,CO2,CO6,CO7,CO8	Demonstrate region wise application of <i>thodu varmam</i> on the basis of disease aspect	10	Practical Training 11.1	PSY-GUD	Shows-how	D-BED,CBL
CO1,CO2,CO6,CO7,CO8	Demonstrate <i>Padu varmam</i> , <i>Thattu varmam</i> application on the basis of disease aspect	5	Practical Training 11.2	PSY-GUD	Shows-how	CBL,D-BED
CO1,CO2,CO6,CO7,CO8	Demonstrate <i>aadhara varmam</i> , <i>ul varmam</i> , <i>odukki varmam</i> application on the basis of disease aspect	5	Practical Training 11.3	PSY-GUD	Shows-how	BS,D-M,D,DIS
CO1,CO2,CO6,CO7,CO8	Execute document of <i>thodu varmam</i> application practiced in traditional <i>vaithiyas</i>	10	Experiential-Learning 11.1	PSY-ADT	Knows-how	DIS,FV
CO1,CO2,CO6,CO7,CO8	Execute document of <i>padu varmam</i> , <i>thattu varmam</i> , <i>aadhara varmam</i> , <i>ul varmam</i> , <i>odukki varmam</i> application practiced in traditional <i>vaithiyas</i>	8	Experiential-Learning 11.2	PSY-ADT	Knows-how	FV,DIS
CO1,CO2,CO6,CO7,CO8	Perform therapeutic <i>varmam</i> application practiced in traditional <i>vaithiyas</i>	8	Experiential-Learning 11.	PSY-GUD	Shows-how	DIS,D

			3			
Practical Training Activity						
Practical Training 11.1 : Application of <i>thodu varmam</i> on the basis of disease aspect						
Total activity - 10 hours Activity 1 Brainstroming (1 hr) Step 1: Students divided into small groups for each group teacher should discuss the <i>thodu varmam</i>, mechanism (based on <i>naadi</i> pathway, equivalent procedure in another system of medicines by reviewing recent research articles in this topics. (1 hour) Activity 2 : Demonstration -(4 hr) Step 1: Students are divided into small group, for each group Step 2: Teacher should demonstrate <i>thodu varmam</i>, mechanism (based on <i>naadi</i> pathway, equivalent procedure in another system of medicines through PPT/Video clips Activity 3. Demonstration Bedside (4 .30 hours) Step 1 : The Students will demonstrate location of <i>thodu varmam</i> Step 2 : The student will demonstrate method of application of <i>thodu varmam</i> Step 3 : The Student will demonstrate how to observe <i>naadi</i> and saravottam changes during application of <i>varmam</i> Activity 4: Discussion (30 min) The teacher conduct a group discussion to review the practical session and asses the student based on 1) Basics of thoduvarmam 2) Mechanism 3) Contra-indication 4) Methods of application						
Practical Training 11.2 : <i>Padu varmam, thattu varmam</i> application on the basis of disease aspect						
Total activity - 5 hours Activity 1 Brainstroming 1 hour Step 1: Students divided into small groups for each group teacher should discuss the <i>padu varmam, thattu varmam</i>, mechanism (based on <i>naadi</i> pathway, equivalent procedure in another system of medicines by reviewing recent research articles in this topics. (1 hour) Activity 2 : Demonstration - 1 hour Step 1: Students are divided into small group, for each group (15 min) Step 2: Teacher should demonstrate <i>padu varmam, thattu varmam</i>, mechanism (based on <i>naadi</i> pathway, equivalent procedure in another system of medicines through PPT/Video clips (45 min)						

Activity 3. Demonstration Bedside (2 hrs 30 min)

Step 1 : The students will demonstrate location of *padu varmam*, *thattu varmam*

Step 2 : The student will demonstrate method of application of *padu varmam*, *thattu varmam*

Step 3 : The Student will demonstrate how to observe naadi and saravottam changes during application of *varmam*

Activity 4: Discussion - 30 min

The teacher conduct a group discussion to review the practical session

Practical Training 11.3 : Aadhara varmam, ul varmam, odukki varmam application based on the disease aspect

Total activity - 5 hours

Activity 1. Brainstorming (1 hr)

The teacher will divide the students divided into small groups for each group teacher should discuss the region-wise Aadhara varmam, ul varmam, odukki varmam, mechanism (based on naadi pathway, equivalent procedure in another system of medicines by reviewing recent research articles in this topics. (1 hour)

Activity 2 : Demonstration (1 hr)

Step 1: Students are divided into small group, for each group (15 min)

Step 2: Teacher should demonstrate region-wise Aadhara varmam, ul varmam, odukki varmam, mechanism (based on naadi pathway, equivalent procedure in another system of medicines through PPT/Video clips (45 min)

Activity 3. Demonstration on Model (2 hrs 30 min)

Step 1 : The Students will demonstrate location of Aadhara varmam, ul varmam, odukki varmam

Step 2 : The student will demonstrate method of application of Aadhara varmam, ul varmam, odukki varmam

Step 3 : The Student will demonstrate how to observe naadi and saravottam changes during application of varmam

Activity 4: Discussion - 30 min

The teacher conduct a group discussion to review the practical session

Experiential learning Activity

Experiential-Learning 11.1 : Documentation of *thodu varmam* application methods from traditional *vaithiyas*

Total activity hour : 10 hours

Activity 1: Field visit (9 hrs)

The teacher should divide the students into small groups,instructed to do following activities in rotatary manner

Group 1: Observe the locating *thodu varmam* points practiced in traditional practioner

Group 2 : Observe therapeutic application of *thodu varmam* points

Group 3 : Observe application methods and techniques of *thodu varmam* points

Group 4 : Observe life style management and preventive care used in traditional methods Activity 2: Discussion (1 hr) Each group are allowed to discuss the observed methods to their colleagues in front of teacher or make case study about ethnopractices of <i>thodu varmam</i> application	
Experiential-Learning 11.2 : Documentation of <i>padu varmam</i>, <i>thattu varmam</i>, <i>aadhara varmam</i>, <i>ul varmam</i>, <i>odukki varmam</i> application practiced in traditional <i>vaithiyas</i>.	
Total activity hour : 8 hours Activity 1: Field visit - (7 hrs) The teacher should divide the students into small groups, instructed to do following activities in rotatory manner Group 1: Observe the location, therapeutic application, method of application of <i>padu varmam</i> practiced in traditional practioner Group 2 : Observe the location, therapeutic application, method of application of <i>thattu varmam</i> practiced in traditional practioner Group 3 : Observe the location, therapeutic application, method of application of <i>aadhara varmam</i> practiced in traditional practioner Group 4 : Observe the location, therapeutic application, method of application of <i>ul varmam</i> practiced in traditional practioner Group 5 : Observe the location, therapeutic application, method of application of <i>odukki varmam</i> practiced in traditional practioner Activity 2: Discussion (1 hr) Each group are allowed to discuss the observed methods to their colleagues in front of teacher or make case study about ethnopractices of <i>varmam</i> application	
Experiential-Learning 11.3 : Enlist the documented therapeutic <i>varmam</i> application practiced in traditional <i>vaithiyars</i>	
Total activity hour : 8 hours Activity 1: Demonstration (7 hrs) The teacher should divide the students into small groups, instructed to do following activities in rotatory manner Group 1: Observe the locating <i>varmam</i> points practiced in traditional practioner Group 2 : Observe therapeutic application of <i>varmam</i> points Group 3 : Observe application methods and techniques of <i>varmam</i> points Group 4 : Observe life style management and preventive care used in traditional methods Activity 2: Discussion (1 hr) Each group are allowed to discuss the observed methods to their colleagues in front of teacher or make case study about ethnopractices of <i>varmam</i> application	
Modular Assessment	
Assessment method	Hour
INSTRUCTIONS	4

Conduct a structured modular assessment. Assessment will be for 50 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6C

Each scholar should present the *varmam* procedure which is documented from traditional *varmam* practitioners/*vaithiyars* through ppt to their colleagues - 50 Marks

The scholar will be assessed by

- Quality of work
- Explanation based on *Siddha* principle
- Hypothesis/ Mechanism of *varmam* application of documented *varmam* from practitioners/*vaithiyars*

Or

Any practical in converted form can be taken for assessment (25 marks)

and

Any of the experiential as portfolio/reflection/presentations can be taken as an assessment (25 marks)

Module 12 : Varmam Clinical Protocol

Module Learning Objectives

(At the end of the module, the students should be able to)

Describe Clinical application of systemic and general wellness for *varmam* points

Interpret *varmam* for wellness and prevention, clinical management.

Conduct case series or case studies to evaluate effectiveness of *varmam* used in general and systemic wellness

M 12 Unit 1 Varmam for Systemic Wellness

12.1.1. *Varmam* for CNS wellness 12.1.2. *Varmam* for RS wellness 12.1.3. *Varmam* for CVS wellness 12.1.4. *Varmam* for GIT wellness 12.1.5. *Varmam* for Genito urinary wellness 12.1.6. *Varmam* for Endocrine wellness 12.1.7. *Varmam* for Eye wellness 12.1.8. *Varmam* for ENT wellness

References: 1,2,3,4,5,7,8,9,10,11,12,19,25,28,29,30,31,38,39,51,52,53,54,56,57,58,59,60,61,62,68,69

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO6 ,CO7,CO8	Describe varmam protocol for CNS, Endocrine wellness	2	Lecture	CK	Know	L&PPT ,L
CO1,CO2,CO6 ,CO7,CO8	Describe varmam protocol for RS and CVS wellness	1	Lecture	CK	Know	L,L&PPT
CO1,CO2,CO6 ,CO7,CO8	Describe varmam protocol for GIT, Genito urinary wellness	1	Lecture	CC	Knows- how	L&PPT ,L
CO1,CO2,CO6 ,CO7,CO8	Describe varmam Protocol for Eye and ENT wellness	1	Lecture	CK	Know	L&PPT ,L
CO1,CO2,CO6 ,CO7,CO8	Demonstrate varmam application for CNS, RS, CVS and Endocrine wellness	5	Practical Training 12.1	PSY- GUD	Shows- how	CBL,D- BED
CO1,CO2,CO6 ,CO7,CO8	Demonstrate varmam application for GIT, Genito-urinary, Eye and ENT wellness	5	Practical Training 12.2	PSY- GUD	Shows- how	D-M,D-B ED,DIS,B S
CO1,CO2,CO6 ,CO7,CO8	Execute Document of varmam protocol Systemic wellness followed by traditional vaithiyas	5	Experiential- Learning 12. 1	PSY- GUD	Does	DIS,FV
CO1,CO2,CO6 ,CO7,CO8	Perform varmam clinical protocol for systemic wellness to other health care professions	8	Experiential- Learning 12. 2	PSY- GUD	Does	D-BED

M 12 Unit 2 Varmam for General Wellness

12.2.1. *Varmam* for Palliative Care 12.2.2. *Varmam* for Geriatric Care 12.2.3. *Varmam* for Special Children Care 12.2.4. *Varmam* for Rehabilitation 12.2.5. *Varmam* for Post-Natal Care 12.2.6. *Varmam* for Speech Disorder 12.2.7. *Varmam* for Emergency Management 12.2.8. *Varmam* for Pain Management

References: 1,2,3,4,5,7,8,9,17,19,25,28,29,30,31,51,52,53,54,56,57,58,59,60,61,62,100,101,102,103

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO6 ,CO7,CO8	Describe varmam for Geriatric care, Palliative care	1	Lecture	CK	Know	L&PPT ,L
CO1,CO2,CO6 ,CO7,CO8	Describe varmam for Post natal and special children care	2	Lecture	CK	Know	L,L&PPT
CO1,CO2,CO6 ,CO7,CO8	Describe varmam for speech disorder and pain management	1	Lecture	CK	Know	L&PPT ,L
CO1,CO2,CO6 ,CO7,CO8	Describe varmam for Rehabilitation, Emergency Management	1	Lecture	CK	Know	L,L&PPT
CO1,CO2,CO6 ,CO7,CO8	Demonstrate varmam for Geriatric care, Palliative care	2	Practical Training 12.3	PSY- GUD	Shows- how	DIS,D-B ED,BS,D
CO1,CO2,CO6 ,CO7,CO8	Demonstrate varmam for Post natal and special children care	2	Practical Training 12.4	PSY- GUD	Shows- how	DIS,D,D- BED,BS
CO1,CO2,CO6 ,CO7,CO8	Demonstrate varmam for speech disorder and pain management	2	Practical Training 12.5	PSY- GUD	Shows- how	DIS,D-B ED,D,BS
CO1,CO2,CO6 ,CO7,CO8	Demonstrate varmam for Rehabilitation, Emergency Management	4	Practical Training 12.6	PSY- GUD	Shows- how	D,DIS,D- BED,BS
CO1,CO2,CO6 ,CO7,CO8	Perform case study or case series of wellness and prevention in PHC/GH/Rehabilitation Centre	8	Experiential- Learning 12. 3	PSY- GUD	Does	CBL,RLE ,PER,FV
CO1,CO2,CO6 ,CO7,CO8	Perform Varmam protocol for general wellness to health care professionals	5	Experiential- Learning 12. 4	PSY- GUD	Shows- how	

Practical Training Activity

Practical Training 12.1 : Varmam application for CNS, RS, CVS and Endocrine wellness

Total activity hours- 5

Activity 1 Brainstroming (10 min)

Step 1: Students divided into small groups for each group teacher should discuss the Varmam application for CNS, RS, CVS and Endocrine wellness mechanism (based on naadi pathway, equivalent procedure in another system of medicines by reviewing recent research articles in this topics.

Activity 2 : Demonstration (1 hr)

Step 1: Students are divided into small group, for each group

Step 2: Teacher should demonstrate Varmam application for CNS, RS, CVS and Endocrine wellness, mechanism (based on naadi pathway, equivalent procedure in another system of medicines through PPT/Video clips

Activity 3. Demonstration Bedside (3 hrs 30 min)

Step 1 : The Students will demonstrate location of Varmam application for CNS, RS, CVS and Endocrine wellness

Step 2 : The student will demonstrate method of application of Varmam application for CNS, RS, CVS and Endocrine wellness

Step 3 : The Student will demonstrate how to observe naadi and saravottam changes during application of varmam

Activity 4: Discussion (20 min)

The teacher conduct a group discussion to review the practical session and assess based on

- 1) Mechanism of varmam by suitable evitance
- 2) Contra-indication of varmam by suitable evitance
- 3) Methods of application of varmam by suitable evitance

Practical Training 12.2 : Varmam application for GIT, Genito-urinary, Eye and ENT wellness

Total activity hours - 5

Activity 1 Brainstroming (10 min)

Step 1: Students divided into small groups for each group teacher should discuss the Varmam application for GIT, Genito-urinary, Eye and ENT wellness mechanism (based on naadi pathway, equivalent procedure in another system of medicines by reviewing recent research articles in this topics.

Activity 2 : Demonstration (1 hr)

Step 1: Students are divided into small group, for each group

Step 2: Teacher should demonstrate Varmam application for GIT, Genito-urinary, Eye and ENT wellness, mechanism (based on naadi pathway, equivalent procedure in another system of medicines through PPT/Video clips

Activity 3. Demonstration on models (3 hrs 30 min)

Step 1 : The Students will demonstrate location of Varmam application for GIT, Genito-urinary, Eye and ENT wellness

Step 2 : The student will demonstrate method of application of Varmam application for GIT, Genito-urinary, Eye and ENT wellness

Step 3 : The Student will demonstrate how to observe naadi and saravottam changes during application of varmam

Activity 4: Discussion (20 min)

The teacher conduct a group discussion to review the practical session and assess based on

- 1) Mechanism of varmam by suitable evitance
- 2) Contra-indication of varmam by suitable evitance
- 3) Methods of application of varmam by suitable evitance

Practical Training 12.3 : Varmam for Geriatric care, Palliative care

Total activity hours- 2

Activity 1 Brainstroming (10 min)

Step 1: Students divided into small groups for each group teacher should discuss the Varmam for Geriatric care, Palliative care, mechanism (based on naadi pathway, equivalent procedure in another system of medicines by reviewing recent research articles in this topics.

Activity 2 : Demonstration (30 min)

Step 1: Students are divided into small group, for each group

Step 2: Teacher should demonstrate Varmam for Geriatric care, Palliative care, mechanism (based on naadi pathway, equivalent procedure in another system of medicines through PPT/Video clips

Activity 3 Post practical session (1 hours)

Step 1 : The Students will demonstrate location of Varmam for Geriatric care, Palliative care

Step 2 : The student will demonstrate method of application of Varmam for Geriatric care, Palliative care

Step 3 : The Student will demonstrate how to observe naadi and saravottam changes during application of varmam

Activity 4: Discussion (20 min)

The teacher conduct a group discussion to review the practical session and assess based on

- 1) Mechanism of varmam by suitable evitance
- 2) Contra-indication of varmam by suitable evitance
- 3) Methods of application of varmam by suitable evitance

Practical Training 12.4 : Varmam for postnatal and special children's care

Total activity hours - 2

Activity 1 Brainstroming (10 min)

Step 1: Students divided into small groups for each group teacher should discuss the Varmam for postnatal and special children's care, mechanism (based on naadi pathway, equivalent procedure in another system of medicines by reviewing recent research articles in this topics.

Activity 2 : Demonstration (30 min)

Step 1: Students are divided into small group, for each group

Step 2: Teacher should demonstrate Varmam for postnatal and special children's care, mechanism (based on naadi pathway, equivalent procedure in another system of medicines through PPT/Video clips

Activity 3. Demonstration Bedside (1 hours)

Step 1 : The Students will demonstrate location of Varmam for postnatal and special children's care

Step 2 : The student will demonstrate method of application of Varmam for postnatal and special children's care

Step 3 : The Student will demonstrate how to observe naadi and saravottam changes during application of varmam

Activity 4: Discussion (20 min)

The teacher conduct a group discussion to review the practical session and assess based on

1) Mechanism of varmam by suitable evitance

2) Contra-indication of varmam by suitable evitance

3) Methods of application of varmam by suitable evitance

Practical Training 12.5 : Varmam for speech disorder and pain management

Total activity hours - 2

Activity 1 Brainstroming (10 min)

Step 1: Students divided into small groups for each group teacher should discuss the Varmam for speech disorder and pain management, mechanism (based on naadi pathway, equivalent procedure in another system of medicines by reviewing recent research articles in this topics.

Activity 2 : Demonstration (30 min)

Step 1: Students are divided into small group, for each group

Step 2: Teacher should demonstrate Varmam for speech disorder and pain management mechanism (based on naadi pathway, equivalent procedure in another system of medicines through PPT/Video clips

Activity 3. Demonstration Bedside (1 hours)

Step 1 : The Students will demonstrate location of Varmam for speech disorder and pain management

Step 2 : The student will demonstrate method of application of Varmam for speech disorder and pain management

Step 3 : The Student will demonstrate how to observe naadi and saravottam changes during application of varmam

Activity 4: Discussion (20 min)

The teacher conduct a group discussion to review the practical session and assess based on

1) Mechanism of varmam by suitable evitance

- 2) Contra-indication of varmam by suitable evitance
- 3) Methods of application of varmam by suitable evitance

Practical Training 12.6 : Varmam for Rehabilitation, Emergency Management

Total activity hours - 4

Activity 1 Brainstroming (30 min)

The teacher will divided the students into small groups for each group teacher should discuss the Varmam for Rehabilitation, Emergency Management mechanism (based on naadi pathway, equivalent procedure in another system of medicines by reviewing recent research articles in this topics.

Activity 2 : Demonstration (1 hr)

Step 1: Students are divided into small group, for each group (15 min)

Step 2: Teacher should demonstrate Varmam for Rehabilitation, Emergency Management mechanism (based on naadi pathway, equivalent procedure in another system of medicines through PPT/Video clips (45 min)

Activity 3. Demonstration Bedside (2 hrs)

Step 1 : The Students will demonstrate location of Varmam for Rehabilitation, Emergency Management

Step 2 : The student will demonstrate method of application of Varmam for Rehabilitation, Emergency Management

Step 3 : The Student will demonstrate how to observe naadi and saravottam changes during application of varmam

Activity 4: Discussion (30 min)

The teacher conduct a group discussion to review the practical session and assess based on

- 1) Mechanism of varmam by suitable evitance
- 2) Contra-indication of varmam by suitable evitance
- 3) Methods of application of varmam by suitable evitance

Experiential learning Activity

Experiential-Learning 12.1 : Documentation of varmam protocol Systemic wellness followed by traditional vaithiyas

Total activity hours : 5

Activity 1: Field visit (4 hrs)

The teacher should divide the students into small groups,instructed to do following activities in rotatary manner

Group 1: Observe the location of varmam protocol Systemic wellness practiced in traditional practioner

Group 2 : Observe the therapeutic application of varmam protocol Systemic wellness practiced in traditional practioner

Group 3 : Observe the method of application of varmam protocol Systemic wellness practiced in traditional practioner

Activity 2: Discussion (1 hr)

Each group are allowed to discuss the observed methods to their colleagues in front of teacher or make case study about ethnopractices of varmam application

Experiential-Learning 12.2 : Varmam clinical protocol for systemic wellness to other health care professions

Total activity hours : 8

Activity 1 : Kinesthetic learning (5 hr 30 mins)

Step 1: The Student will make a varmam clinical protocol for systemic wellness under the guidance of teacher (2 hrs)

Step 2 : The Student will conduct hands on training of application of varmam clinical protocol for systemic wellness to UG students or health care professional (1hr)

Step 3: The session concludes with a Q & A to clarify doubts and reinforce understanding(2hrs)

Step 4: The students submit their protocol and feed back about this session (30 min)

Activity 2. Demonstration Bedside (2 hrs 30 mins)

The students will demonstrate the varmam treatment procedures based on their protocol for systemic wellness to other health care professions to CRRRI students

Experiential-Learning 12.3 : Wellness and prevention in PHC/GH/Rehabilitation Centre

Total activity hours :- 8

Activity 1: Case based learning (5 hrs)

Step 1: The Student will prepare a varmam protocol for wellness and prevention under the guidance of teacher (2 hrs)

Step 2: The Student perform varmam application for wellness and prevention to the patients who reports in PHC/GH/Rehabilitation centre & make a data for performed cases (2 hrs)

Step 3: The Student will randomly select the patient and apply the varmam points for particular duration(30 min)

Step 4: The Student will record the patient improvement by assessment scale (30 min)

Activity 2. Presentations (3 hrs)

The student will submit and present their document to teacher and share knowledge to their colleagues / prepare manuscript and submit to indexed journal (3 hrs)

Experiential-Learning 12.4 : Varmam protocol for general wellness to health care professionals

Total activity hours :- 5

Activity 1 : Kinesthetic learning (5hrs)

Step 1: The Student will make a Varmam Protocol for general wellness under the guidance of teacher (2 hrs)

Step 2 : The Student will conduct hands on training of application of varmam for general wellness to UG students or health care professional (1 hr)

Step 3: The session concludes with a Q & A to clarify doubts and reinforce understanding (1 hr)

Step 4: The students submit their protocol and feed back about this session (1 hr)

Modular Assessment	
Assessment method	Hour
INSTRUCTIONS Conduct a structured modular assessment. Assessment will be for 50 marks .Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6C Each scholar will publish a paper in Scopus-indexed journals based on clinical studies of <i>varmam</i> treatment for any general/systemic disease- 50 Marks Or Any practical in converted form can be taken for assessment (25 marks) and Any of the experiential as portfolio/reflection/presentations can be taken as an assessment (25 marks)	4
Semester No : 5	
Module 13 : Therapeutic application of adangal	
Module Learning Objectives (At the end of the module, the students should be able to) Describe Clinical application of <i>adangal</i> for various diseases Conduct case series or case studies to evaluate effectiveness of <i>adangal</i> application Apply therapeutic knowledge of <i>adangal</i> Explain emergency management of <i>adangal murai</i>	
M 13 Unit 1 Classification of Adangal 13.1.1. Region wise Classification 13.1.2. Numerical classification 13.1.3. Terminological classification 13.1.4. Classification based on groups 13.1.5. Major group <i>adangal</i> 13.1.5.1. <i>Paduvarma adangal</i> – 12 13.1.5.2. <i>Peradangal</i> – 13 13.1.5.3. <i>Ubadesa adangal</i> – 16 13.1.5.4. <i>Kai Kanda adangal</i> – 29 13.1.5.5. <i>Sitradangal</i> – 51	

13.1.5.6. *Adangal* – 51 13.1.5.7. *Adangal* - 56 13.1.5.8. *Adangal* - 64 13.1.5.9. *Adangal* – 224 13.1.6. Minor group *adangal* 13.1.6.1. *Vayaga adangal* - 5 13.1.6.2. *Paatha adangal* - 5 13.1.6.3. *Aathara adangal* - 6 13.1.6.4. *Kai kavuli adangal* - 4 13.1.6.5. *Ullankai adangal* - 3 13.1.6.6. *Thiravukol adangal* - 5 13.1.6.7. *Panja kalai adangal* - 5 13.1.6.8. *Panja mudichu adangal* - 5 13.1.6.9. *Laada adangal* - 11 13.1.6.10. *Pinkazhuthu adangal*

References: 1,2,3,4,5,6,7,28,29,30,31,33,38,39,51,52,53,54,56,57,58,59,60,61,62,67,68,100,101,102,103,104

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3	Describe regional classification of adangal	5	Lecture	CK	Know	L,L&PPT
CO1,CO2,CO3	Demonstrate therapeutic application of major group of adangal	5	Practical Training 13.1	PSY-GUD	Shows-how	CBL
CO1,CO2,CO3	Demonstrate therapeutic application of minor group of adangal	5	Practical Training 13.2	PSY-GUD	Shows-how	CBL
CO1,CO2,CO3	Perform application of adangal for disease condition	7	Experiential-Learning 13.1	PSY-GUD	Does	D-BED,CBL
CO1,CO2,CO3	SOP for adangal application for disease conditions	6	Experiential-Learning 13.2	PSY-GUD	Does	D-BED

M 13 Unit 2 Adangal Application for Various Disorders

13.2.1. *Adangal Maruthuvam* for Regional Symptoms 13.2.1.1. Head and neck symptoms, ENT symptoms, Genito urinary symptoms, GIT symptoms. 13.2.2. *Adangal Maruthuvam* for General Symptomatology 13.2.2.1. *Adangalkal* for fits, Fainting, Delirium, Breathing Difficulty, Palpitation, Shivering, Thermo regulation, Regulation of BP, Regulation of Heart rate and Pulse rate, Regulation of SpO₂, Regulation of naadi, Regulation of *vaayu*, Hemorrhage and acute pain management

References: 1,2,3,4,7,17,19,21,25,28,29,30,31,39,51,52,53,56,57,58,59,60,61,68,100,101,102,103

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3	Describe adangal maruthuvam for regional symptoms and general symptomatology	5	Lecture	CC	Knows-how	L&PPT ,L
CO1,CO2,CO3	Demonstrate adangal maruthuvam for regional symptoms	5	Practical Training 13.3	PSY-GUD	Knows-how	CBL
CO1,CO2,CO3	Demonstrate adangal maruthuvam for general symptomatology	5	Practical Training 13.4	PSY-GUD	Shows-how	CBL
CO1,CO2,CO3	Perform Therapeutic application of adangal muraigal	4	Experiential-Learning 13.3	PSY-GUD	Does	PrBL,D
CO1,CO2,CO3	Execute document the adangal murai used in emergency management	4	Experiential-Learning 13.4	PSY-GUD	Does	CBL,PrBL
CO1,CO2,CO3	Document the methods practiced by traditional vaithiyars	5	Experiential-Learning 13.5	PSY-GUD	Does	DIS,SDL, D

Practical Training Activity

Practical Training 13.1 : Therapeutic application of major group of adangal

Total activity hour - 5 hours

Activity: 1 Case based learning (5hrs)

Step 1 : The teacher will explain introduction, objective of practical session (10 min)

Step 2 : The teacher will list out material has been used in this session (10 min)

Step 3 : The teacher will explain indication, contraindication and safety measures for the practical session (10 min)

Step 4 : The teacher will demonstrate history taking, General examination, radiological findings, differential diagnosis to rule out exact cause of the disease (30 min)

Step 5 : The teacher will demonstrate Patient Positioning, method of application, duration and frequency of application based on various case scenario / model / with student's volunteer / demonstration video clips (3 hour)

Step 6 : The teacher assess student by conduct K-L or conduct real life experience or Case presentation or Bed side presentation to review the practical session or Direct observational procedural skill (1 hour)

Practical Training 13.2 : Therapeutic application of minor group of adangal

Total activity hour - 5 hours

Activity 1. Case based learning (5hrs)

Step 1 : The teacher will explain introduction, objective of practical session (10 min)

Step 2 : The teacher will list out material has been used in this session (10 min)

Step 3 : The teacher will explain indication, contraindication and safety measures for the practical session (10 min)

Step 4 : The teacher will demonstrate history taking, General examination, radiological findings, differential diagnosis to rule out exact cause of the disease (30 min)

Step 5 : The teacher will demonstrate Patient Positioning, method of application, duration and frequency of application based on various case scenario / model / with student's volunteer / demonstration video clips (3 hour)

Step 6 : The teacher assess student by conduct K-L or conduct real life experience or Case presentation or Bed side presentation to review the practical session or Direct observational procedural skill (1 hour)

Practical Training 13.3 : Adangal maruthuvam for regional symptoms

Total activity hour - 5

Activity 1:Case based learning (5 hrs)

Step 1: The teacher will explain introduction, objective of practical session (10 min)

Step 2: The teacher will list out material has been used in this session (10 min)

Step 3: The teacher will explain indication, contraindication and safety measures for the practical session (10 min)

Step 4: The teacher will demonstrate history taking, General examination, radiological findings, differential diagnosis to rule out exact cause of the disease (30 min)

Step 5: The teacher will demonstrate Patient Positioning, method of application, duration and frequency of application based on various case scenario / model / with student's volunteer / demonstration video clips (3 hour)

Step 6: The teacher assess student by conduct K-L or conduct real life experience or Case presentation or Bed side presentation to review the practical session or Direct observational procedural skill (1 hour)

Practical Training 13.4 : Adangal maruthuvam for general symptomatology

Total activity hour - 5

Activity 1: Case based learning (5 hrs)

Step 1: The teacher will explain introduction, objective of practical session (10 min)

Step 2: The teacher will list out material has been used in this session (10 min)

Step 3: The teacher will explain indication, contraindication and safety measures for the practical session (10 min)

Step 4: The teacher will demonstrate history taking, General examination, radiological findings, differential diagnosis to rule out exact cause of the disease (30 min)

Step 5: The teacher will demonstrate Patient Positioning, method of application, duration and frequency of application based on various case scenario / model / with student's volunteer / demonstration video clips (3 hour)

Step 6: The teacher assess student by conduct K-L or conduct real life experience or Case presentation or Bed side presentation to review the practical session or Direct observational procedural skill (1 hour)

Experiential learning Activity

Experiential-Learning 13.1 : Application of adangal for disease condition

Total activity: 7 hour

Activity 1. Case based learning (7 hrs)

The teacher provides overview of Application of adangal for disease condition under the supervision of teacher students conducting procedural application of adangal for disease condition with different case scenario by using PPT or videoclips or Simualted patient in OPD /IPD setting.

Step for Conducting Therapeutic application procedure of adangal murai used in various disease condition

Step 1 : Student will explain the purpose of the examination (20 min)

Step 2 : Student will ask the patient explain the chief complaint and obtain detailed history of present illness (20 min)

Step 3 : Student will inquire about Past medical history and current medication of the patient. (20 min)

Step 4: Student will demonstrate general & systemic examination, serological & radiological findings, special test, Line of treatment. (2 hour)

Step 5: Student develop treatment plan for particular cases, specific adangal technique, treatment frequency and duration using standardized form. (2 hour)

Step 6 : The students conducting procedural application of adangal for disease condition with different case scenario by using PPT or videoclips or Simualted patient in OPD /IPD setting. (1 hour)

Step 7 : Students will demonstrate two or three different scenario-based examination through role plays or make a case presentation with his/her PG colleagues or UG students.(30 minutes)

Step 8: student performance assessed by Direct observational procedural skill(30 minutes)

Experiential-Learning 13.2 : SOP for adangal application for disease conditions

Total activity - 6 hours

Activity 1. Demonstration (6 hrs)

Step 1: The student will define the purpose of the SOP and specifying the therapeutic application of the diseases (30 min)

Step 2: The student will explain the list of equipment's and material used for the treatment (30 min)

- Step 3: The student specifies the pre-treatment procedure like patient assessment, informed consent, patient preparation, indication and contra indication treatment planning (30 min)
- Step 4: The student elaborates detailed sequential instruction for performing the therapeutic application (2 hour)
- Step 5: The student emphasis on safety measures to prevent adverse events or complication during procedure (30 min)
- Step 6: The student will develop post treatment procedure like follow up instruction (1 hour)
- Step 7: The student will develop detailed documentation of the treatment session (1 hour)
- Step 8: The student performance assessed by development of SOP documentation or team-based project work

Experiential-Learning 13.3 : Therapeutic application of adangal muraigal

Total activity hour - 4 hours

Activity 1: Demonstration (4 hrs)

The teacher provide overview of adangal murai used in various diseases, under the supervision of teacher students conducting procedural application of adangal murai used in various diseases

Procedural application conducted to PG colleagues or UG students with different case scenario by using PPT or videoclips or Simualted patient in OPD /IPD setting.

Step for Conducting Therapeutic application of adangal murai

Step 1: Student select patient with the complaints of indicated clinical symptoms for thadavu muraigal (30 min)

Step 2: Student obtain neccessary consent for using patient data in this study (30 min)

Step 3: Student Document patient history, assessment findings, relevant medical documents and treatment progression and outcomes. (30 min)

Step 4: Student develop treatment plan for particular cases, specific adangal technique, treatment frequency and duration using standardized form. (2-hour 30 min)

Step 5: at the end of the session conduct Q & A clarify their doubts

Experiential-Learning 13.4 : Document the adangal murai used in emergency management

Total activity - 4 hours

Activity 1 : Case Based Learning (4 hrs)

Step 1: The teacher provide overview of adangal murai used in emergency management under the supervision of teacher students conducting procedural application of adangal murai used in emergency management to PG colleagues or UG students with different case scenario by using PPT or videoclips or Simualted patient in OPD /IPD setting (30 mins)

Step for Conducting Therapeutic application procedure of adangal murai used in emergency management

Step 2: Student select patient with the complaints of indicated clinical symptoms for emergency conditions (10 min)

Step 3: Student obtain neccessary consent for using patient data in this study (20 min)

Step 4: Student Document patient history, assessment findings, relevant medical documents and treatment progression and outcomes. (30 min)

Step 5: Student develop treatment plan for particular cases, specific adangal technique, treatment frequency and duration using standardized form. (2 hour)

Step 6: Student will share knowledge to colleagues or prepare manuscript published their article in scopus indexed journal (30 mins)

Experiential-Learning 13.5 : Document methods practiced by traditional vaithiyars

Total activity hour - 5 hours

Activity 1. Self-Directed Learning (3 hrs)

The teacher will provide an overview of adangal murai and they will arrange a field visit or CME in experienced traditional vaithiyars in this field.

Step 1: Prior to the visit student should know about the basic principles of adangal murai and observe how the traditional vaithiyar assesses the patient by using Naadi and saraottam and determines the appropriate diagnosis, line of treatment based on specific condition. (1 hour)

Step 2: Student observe method of application, specific varmam point stimulation during therapy, oil selection and their preparations. (2 hour)

Activity 2.?? Demonstration(30 min)

If vaithiyar allows, student can practice basic techniques and emphasize the proper hand positioning, pressure control under their supervision

Activity 3. Discussion (1 hr 30 mins)

Step 1: student facilitate a discussion with the vaidhiyar to clarify any questions and gain deeper insight (30 min)

Step 2: student should compile a document their observation techniques.

Step 3: student can be assessed by direct observational procedural skill or video clips or ethnography study report

Modular Assessment

Assessment method

Hour

INSTRUCTIONS

Conduct a structured modular assessment. The assessment will be for 50 marks .Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6C

Each scholar will do the case presentation through ppt - 20Marks

the scholar will assessed by

- History taking
- General and systemic examination finding
- *Siddha* diagnostic tools and findings
- Serological and radiological findings
- Assessment of case who treated *adangal*

and

4

Each scholar will do the case presentation through ppt - 30Marks

the scholar will assessed by

- History taking
- General and systemic examination finding
- *Siddha* diagnostic tools and findings
- Serological and radiological findings
- Assessment of cases, who treated by *adangals* which documentation from traditional *varmam* practitioners

Or

Any practical in converted form can be taken for assessment (25 marks)

and

Any of the experiential as portfolio/reflection/presentations can be taken as an assessment (25 marks)

Module 14 : Therapeutic Application of Ilakku Murai and Thiravukol (Varmam Retrieving Techniques)

Module Learning Objectives

(At the end of the module, the students should be able to)

Describe application of *varmam ilakku murai*

Perform different types of *padu varmam*, *thodu varmam*, *imkanda ilakku murai*

Apply therapeutic knowledge of *padu varmam*, *thodu varmam*, *im kanda ilakku murai*

M 14 Unit 1 Varmam ilakku murai

14.1.1. *Padu varmam ilakku murai* 14.1.2. *Thodu varmam iIakku murai* 14.1.3. *Im Kandam Ilakku Murai* 14.1.3.1. *Varmam* retrieving methods for head and neck
14.1.3.2. *Varmam* retrieving methods for thorax, abdomen and pelvis 14.1.3.3. *Varmam* retrieving methods for upper limb and lower limb

References: 1,2,3,4,5,6,7,8,9,10,13,14,18,19,20,21,24,25,28,29,30,31,38,39,51,52,53,54,55,56,57,58,59,60,61,62,63,67,68,69,99,100,101,102,103

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3	Describe <i>padu varmam</i> and <i>thodu varmam ilakku murai</i>	3	Lecture	CK	Know	L&PPT ,L
CO1,CO2,CO3	Describe <i>Iymkanda Ilakku murai</i>	2	Lecture	CK	Know	L,L&PPT
CO1,CO2,CO3	Demonstrate <i>Padu varmam</i> and <i>iymkanda Ilakku murai</i>	5	Practical Training 14.1	PSY- GUD	Shows- how	CBL
CO1,CO2,CO3	Demonstrate <i>thodu varmam ilakku murai</i>	5	Practical Training 14.2	PSY- GUD	Shows- how	D
CO1,CO2,CO3	Perform <i>padu varmam ilakku murai</i> for disease condition	7	Experiential- Learning 14. 1	PSY- GUD	Does	CBL
CO1,CO2,CO3	Perform <i>thodu varmam ilakku murai</i> for disease condition	6	Experiential- Learning 14. 2	PSY- GUD	Does	CBL

M 14 Unit 2 Varmam Thiravu Kol

14.2.1. Definition of *varmam thiravukol* 14.2.2. Classification of *thiravukol* 14.2.3. Application method of *thiravukol* 14.2.4. Retrieving Methods for Specific Conditions 14.2.4.1. Pregnant women, Lactating mothers, children and Infants & neonatal

References: 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,18,19,21,25,26,28,29,30,31,38,39,51,52,53,54,56,57,58,59,60,61,62,67,68,99,100,101,102,103

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3	Describe definition and classification of <i>thiravukol</i>	2	Lecture	CK	Know	L&PPT ,L
CO1,CO2,CO3	Describe application methods of <i>thiravukol</i>	1	Lecture	CK	Know	L,L&PPT

CO1,CO2,CO3	Describe retrieving methods for specific condition	2	Lecture	CK	Know	L&PPT ,L
CO1,CO2,CO3	Demonstrate retrieving methods of specific conditions (pregnant women, lactating mothers)	5	Practical Training 14.3	PSY-GUD	Shows-how	CBL
CO1,CO2,CO3	Demonstrate retrieving methods of specific conditions (children and infants & neonatal)	5	Practical Training 14.4	PSY-GUD	Shows-how	D
CO1,CO2,CO3	Develop case study for specific retrieving techniques (any 2)	7	Experiential-Learning 14.3	PSY-GUD	Does	PrBL
CO1,CO2,CO3	Develop case study for <i>thiravukol</i> methods	6	Experiential-Learning 14.4	PSY-GUD	Does	PrBL

Practical Training Activity

Practical Training 14.1 : *Padu varmam* and *iymkanda Ilakku murai*

Total activity - 5 hours

Activity -1 Case based learning (5 hrs)

Step 1: The teacher will explain introduction, objective of practical session (10 min)

Step 2: The teacher will list out material has been used in this session (10 min)

Step 3: The teacher will explain indication, contraindication and safety measures for the practical session (10 min)

Step 4: The teacher will demonstrate history taking, General examination, radiological findings, differential diagnosis to rule out exact cause of the disease (30 min)

Step 5: The teacher will demonstrate Patient Positioning, method of application, duration and frequency of application based on various case scenario / model / with student's volunteer / demonstration video clips (3 hour)

Step 6: The teacher assess student by conduct K-L or conduct real life experience or Case presentation or Bed side presentation to review the practical session or Direct observational procedural skill (1 hour)

Practical Training 14.2 : *Thodu varmam ilakku murai*

Total activity -5 hours

Activity 1 - Demonstration

Step 1: The teacher will explain introduction, objective of practical session (10 min)

Step 2: The teacher will list out material has been used in this session (10 min)

Step 3: The teacher will explain indication, contraindication and safety measures for the practical session (10 min)

Step 4: The teacher will demonstrate history taking, general examination, radiological findings, differential diagnosis to rule out exact cause of the disease (30 min)

Step 5: The teacher will demonstrate patient positioning, method of application, duration and frequency of application based on various case scenario / model / with student's volunteer / demonstration video clips (3 hour)

Step 6: The teacher assess student by conduct K-L or conduct real life experience or case presentation or bed side presentation to review the practical session or direct observational procedural skill (1 hour)

Practical Training 14.3 : Retrieving methods of specific conditions (pregnant women, lactating mothers)

Total activity - 5 hours

Activity - 1 Case Based Learning (5 hrs)

Step 1: The teacher will explain introduction, objective of practical session (10 min)

Step 2 : The teacher will list out material has been used in this session (10 min)

Step 3 : The teacher will explain indication, contraindication and safety measures for the practical session (10 min)

Step 4: The teacher will demonstrate history taking, general examination, radiological findings, differential diagnosis to rule out exact cause of the disease (30 min)

Step 5: The teacher will demonstrate patient positioning, method of application, duration and frequency of application based on various case scenario / model / with student's volunteer / demonstration video clips (3 hour)

Step 6: The teacher assess student by conduct K-L or conduct real life experience or case presentation or bed side presentation to review the practical session or direct observational procedural skill (1 hour)

Practical Training 14.4 : Retrieving methods of specific conditions (children and infants & neonatal)

Total activity hour - 5 hours

Activity 1: Demonstration (5hrs)

Step 1: The teacher will explain introduction, objective of practical session (10 min)

Step 2: The teacher will list out material has been used in this session (10 min)

Step 3: The teacher will explain indication, contraindication and safety measures for the practical session (10 min)

Step 4: The teacher will demonstrate history taking, general examination, radiological findings, differential diagnosis to rule out exact cause of the disease (30 min)

Step 5: The teacher will demonstrate patient positioning, method of application, duration and frequency of application based on various case scenario / model / with

student's volunteer / demonstration video clips (3 hour)

Step 6 : The teacher assess student by conduct K-L or conduct real life experience or case presentation or bed side presentation to review the practical session or direct observational procedural skill (1 hour)

Experiential learning Activity

Experiential-Learning 14.1 : Padu varmam ilakku murai for disease condition

Total activity hour - 7

Activity 1 : Case based learning (7hrs)

The teacher provide overview of Padu varmam ilakku murai under the supervision of teacher students conducting procedural application of Padu varmam ilakku murai to PG collegeues or UG students with different case scenario by using PPT or videoclips or Simualted patient in OPD /IPD setting.

Step for Conducting Therapeutic application procedure of Padu varmam ilakku murai

Step 1: Student explain patient assessment, history taking, General examination and systemic examination, diagnosis of this specific condition (1 hour)

Step 2: Student explain preparation and material used for this procedural session (1 hour)

Step 3: The student will demonstrate Patient Positioning, method of Hand Placement, application method, duration and frequency of application based on various case scenario / model / students' volunteer / demonstration video clips (4 hour)

Step 4: Teacher will assess the student by Direct observation procedural skill or Case presentation or clinical records (1 hour)

Experiential-Learning 14.2 : Thodu varmam ilakku murai for disease condition

Total activity - 6 hours

Activity 1: Case based learning (6 hrs)

The teacher provide overview of *thodu varmam ilakku murai*, under the supervision of teacher students conducting procedural application of *thodu varmam ilakku murai* to PG collegeues or UG students with different case scenario by using PPT or videoclips or simualted patient in OPD /IPD setting.

Step for conducting therapeutic application procedure of *thodu varmam ilakku murai*

Step 1: Student explain patient assessment, history taking, general examination and systemic examination, diagnosis of this specific condition (1 hour)

Step 2: Student explain preparation and material used for this procedural session (1 hour)

Step 3: The student will demonstrate patient positioning, method of hand placement, application method, duration and frequency of application based on various case scenario / model / students' volunteer / demonstration video clips (3 hour)

Step 4: Teacher will assess the student by direct observation procedural skill or case presentation or clinical records (1 Hour)

Experiential-Learning 14.3 : Case study for specific retrieving techniques (any 2)

Total activity hour - 7 Activity 1: Project Based Learning (7hrs) Step 1: Student select patient with the complaints of indicated clinical symptoms for specific retrieving techniques (1 hour) Step 2: Student obtain necessary consent for using patient data in this study (1 hour) Step 3: Student document patient history, assessment findings, relevant medical documents and treatment progression and outcomes. (2 hour) Step 4: Student develop treatment plan for particular cases, specific technique, treatment frequency and duration using standardized form. (3 hour) Step 5: Student performance assessed by published their article in scopus indexed journal	
Experiential-Learning 14.4 : Case study for <i>thiravukol</i> methods	
Total activity - 6 hours Activity 1: Project based learning (6hrs) Step 1: Student select patient with the complaints of indicated clinical symptoms for <i>thiravukol muraigal</i> (1 hour) Step 2: Student obtain necessary consent for using patient data in this study (1 hour) Step 3: Student document patient history, assessment findings, relevant medical documents and treatment progression and outcomes.(1 hour) Step 4: Student develop treatment plan for particular cases, specific technique, treatment frequency and duration using standardized form. (3 hour) Step 5: Student performance assessed by published their article in scopus indexed journal	
Modular Assessment	
Assessment method	Hour
INSTRUCTIONS Conduct a structured modular assessment. Assessment will be for 50 marks .Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6C Each scholar will do the case presentation through ppt - 50 Marks the scholar will assessed by • Describe the patient's complaints • History taking • General and systemic examination findings • <i>Siddha</i> diagnostic tools and findings • Serological and radiological findings • Explain affected adangal based on <i>mukkuttram</i> findings	4

- Assessment of cases, who treated by *varmam ilakku muraigal*

Or

Any practical in converted form can be taken for assessment (25 marks)

and

Any of the experiential as portfolio/reflection/presentations can be taken as an assessment (25 marks)

Semester No : 6

Module 15 : Varmam Thadaval Parigaram (Varmam Massage Techniques)

Module Learning Objectives

(At the end of the module, the students should be able to)

Describe definition, types and clinical application of *chavuttu thirumal*

Conduct case series or case studies to evaluate effectiveness of *chavuttu murai thirumal*

Apply the knowledge of *chavuttu thirumal*

M 15 Unit 1 Chavuttu Thirumal (Massage with Foot)

15.1.1. Definition of thirumal muraigal 15.1.2. Types of thirumal muraigal 15.1.3. Application of kai thirumal 15.1.4. Application of chavuttu thirumal

References: 1,2,3,4,5,6,7,8,9,10,13,14,17,18,19,21,22,23,24,25,26,28,29,30,31,33,38,39,51,52,53,54,55,56,57,58,59,60,61,62,63,67,68,100,101,102,103

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3,CO5,CO8	Describe definition and types of <i>thirumal muraigal</i>	2	Lecture	CC	Knows-how	L&PPT, L
CO1,CO2,CO3	Describe application of kai Thirumal and Chavuttu Thirumal	2	Lecture	CC	Knows-	L&PPT

,CO5,CO8					how	,L
CO1,CO2,CO3 ,CO5,CO8	Demonstrate the therapeutic application of kai Thirumal muraigal	5	Practical Training 15.1	PSY-GUD	Shows-how	CBL
CO1,CO2,CO3 ,CO5,CO8	Demonstrate the therapeutic application of chavuttu thirumal muraigal	5	Practical Training 15.2	PSY-GUD	Shows-how	D-BED,CBL,D
CO1,CO2,CO3 ,CO5,CO8	Develop Documentation of Chavuttu Thirumal practiced among traditional vaithiyars	4	Experiential-Learning 15.1	PSY-GUD	Does	PrBL
CO1,CO2,CO3 ,CO5,CO8	Perform therapeutic methods of chavuttu muraigal practiced among traditional vaithiyars	4	Experiential-Learning 15.2	PSY-GUD	Does	FV
CO1,CO2,CO3 ,CO5,CO8	Perform Case Study for Chavuttu Thirumal (Massage by foot pressure)	5	Experiential-Learning 15.3	PSY-ORG	Does	PrBL

M 15 Unit 2 Various Massage Techniques

15.2.1. *Pothu Varmam Thadavu Murai* 15.2.1.1. *Kandam thadavu murai* – Head, neck, upper limb, lower limb, thorax, abdomen and pelvis 15.2.1.2. *Paduvarma thadavu murai* 15.2.1.3. *Sarvaanga varmam thadavu murai* 15.2.1.4. *Aekaandha varmam thadavu murai* 15.2.1.5. *Narambu Ilakka thadavu murai* 15.2.2. *Soothira thadavu muraigal* 15.2.2.1. *Kadikaara soothiram* 15.2.2.2. *Karpa soothiram* 15.2.2.3. *Linga soothiram* 15.2.2.4. *Dasanaadi soothiram* 15.2.2.5. *Thooka narambu soothiram* 15.2.2.6. *Narambin soothiram* 15.2.2.7. *Mayakka soothiram* 15.2.3. *Thasa Naadi Pinnal Muraigal* 15.2.4. *Traditional Varmam Thadaval Techniques* 15.2.4.1. *Sadaayanthira kalam* 15.2.4.2. *Kathali vana thadaval* 15.2.4.3. *Kalai nivarthi thadaval* 15.2.4.4. *Visai ettram Irakkam thadaval* 15.2.4.5. *Eri kalai thoondal* 15.2.4.6. *Suththi tharai thadaval* 15.2.4.7. *Petti kaala thadaval* 15.2.4.8. *Abanan seeramaippu* 15.2.4.9. *Viyanan seeramaippu* 15.2.4.10. *Uthanan seeramaippu* 15.2.4.11. *Thandaga thoondal* 15.2.4.12. *Meltharai Iyakkam* 15.2.4.13. *Men thattal* 15.2.4.14. *Vala saari thadaval* 15.2.4.15. *Ida saari thadaval* 15.2.4.16. *Nettangam thadaval* 15.2.4.17. *Thandu vada thadaval* 15.2.4.18. *Nenjanai thadaval* 15.2.4.19. *Nettiluppu thadaval* 15.2.4.20. *Pujavari thadaval* 15.2.4.21. *Kaazhuthurai thadaval* 15.2.4.22. *Naavaari thadaval* 15.2.4.23. *Vayitru thadaval* 15.2.4.24. *Vila vattam thadaval* 15.2.4.25. *Nattelpootu thadaval* 15.2.4.26. *Vattathiruppi thadaval* 15.2.4.27. *Vala kan thadaval* 15.2.4.28. *Ida kan thadaval* 15.2.4.29. *Muzhangal mootu thadaval* 15.2.4.30. *Thalai vatta thadaval* 15.2.4.31. *Thandu vada pithukka thadaval* 15.2.4.32. *Sirupura thadaval* 15.2.4.33. *Kuruthi maral thadaval* 15.2.4.34. *Agankaal thadaval* 15.2.4.35. *Purankaal thadaval* 15.2.4.36. *Kanukaal thadaval* 15.2.4.37. *Kai chakkaram* 15.2.4.38. *Kaal chakkaram* 15.2.4.39. *Netri thadaval* 15.2.4.40. *Muga thadaval* 15.2.4.41.

Nankoor thadaval 15.2.4.42. Kai thadaval 15.2.4.43. Kona nilai thadaval 15.2.4.44. Anu udal thadaval 15.2.4.45. Aadhara thadaval 15.2.4.46. Tharai thadaval 15.2.4.47. Panchatchara thadaval 15.2.4.48. Mulaikuru thadaval

References: 1,2,3,4,5,6,7,8,9,10,13,14,15,18,19,21,25,26,28,29,30,31,35,38,39,51,52,53,54,55,56,57,58,59,60,61,62,67,68,71,74,99,100,101,102,103

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3,CO5,CO8	Describe Pothu Varmam Thadavu Muraigal	2	Lecture	CC	Knows-how	L&PPT, L
CO1,CO2,CO3,CO5,CO8	Describe Soothira Thadavu Muraigal	2	Lecture	CC	Knows-how	L, L&PPT
CO1,CO2,CO3,CO5,CO8	Describe Thasa Naadi Pinnal Muraigal	2	Lecture	CC	Knows-how	L, L&PPT
CO1,CO2,CO3,CO5,CO8	Demonstrate Pothu Varmam Thadaval and Soothira Thadavu Muraigal	3	Practical Training 15.3	PSY-GUD	Shows-how	D-BED, CBL, D
CO1,CO2,CO3,CO5,CO8	Demonstrate of Thasa Naadi Pinnal Murai	3	Practical Training 15.4	PSY-GUD	Shows-how	CBL
CO1,CO2,CO3,CO5,CO8	Demonstrate <i>varmam thadaval muraigal</i> of traditional <i>vaithiyars</i>	4	Practical Training 15.5	PSY-GUD	Shows-how	PER, D-BED, D
CO1,CO2,CO3,CO5,CO8	Perform therapeutic application of <i>thadavu muraigal</i>	4	Experiential-Learning 15.4	PSY-GUD	Does	CBL
CO1,CO2,CO3,CO5,CO8	Perform case study of therapeutic application of <i>thadavu muraigal</i>	5	Experiential-Learning 15.5	PSY-GUD	Does	Mnt, D-M, RLE, SIM, D-BED
CO1,CO2,CO3,CO5,CO8	Perform <i>thadavu muraigal</i> practiced among traditional <i>vaithiyars</i>	4	Experiential-Learning 15.	PSY-GUD	Does	FV, DIS

			6			
Practical Training Activity						
Practical Training 15.1 : Therapeutic application of Kai Thirumal muraigal						
Total activity - 5 Hrs Activity 1: Case based learning (5hrs) Step 1: The teacher will explain introduction,objective of practical session (10 min) Step 2: The teacher will list out material has been used in this session (10 min) Step 3: The teacher will explain indication, contraindication and safety measures for the practical session (10 min) Step 4: The teacher will demonstrate history taking, General examination, radiological findings,differential diagnosis to rule out exact cause of the disease (30 min) Step 5: The teacher will demonstrates Patient Positioning,method of Hand Placement,application Method, duration and frequency of application based on various case scenario / model / students volunteer / demonstration video clips (3 hour) Step 6: The teacher assess student by conduct K-L or conduct real life experience or Case presentation or Bed side presentation to review the practical session (1 hour)						
Practical Training 15.2 : Therapeutic application of chavuttu thirumal						
Total activity : 5hrs Activity 1: Case based learning (5hrs) Step 1: The teacher will explain introduction,objective of practical session (10 min) Step 2: The teacher will list out equipments and material has been used in this session (10 min) Step 3 : The teacher will explain indication, contraindication and safety measures for the practical session (10 min) Step 4 : The teacher will demonstrate history taking, General examination, radiological findings,differential diagnosis to rule out exact cause of the disease (30 min) Step 5 : The teacher will demonstrates Patient Positioning, application Method, duration and frequency of application based on various case scenario / model / with students volunteer / demonstration video clips (3 hour) Step 6 : The teacher assess student by conduct K-L or conduct real life experience or Case presentation or Bed side presentation to review the practical session (1 hour)						
Practical Training 15.3 : Pothu Varmam Thadaval and Soothira Thadavu Muraigal						
Total activity - 3 Hours Activity 1: Case based learning (3hrs) Step 1: The teacher will explain introduction,objective of practical session (10 min) Step 2: The teacher will list out material has been used in this session (10 min)						

Step 3: The teacher will explain indication, contraindication and safety measures for the practical session (10 min)

Step 4: The teacher will demonstrate history taking, General examination, radiological findings,differential diagnosis to rule out exact cause of the disease (30 min)

Step 5: The teacher will demonstrates Patient Positioning,method of Hand Placement,application Method, duration and frequency of application based on various case scenario / model / with students volunteer / demonstration video clips (1 hour)

Step 6: The teacher assess student by conduct K-L or conduct real life experience or Case presentation or Bed side presentation to review the practical session (1 hour)

Practical Training 15.4 : Thasa Naadi Pinnal Murai

Total activity - 3 Hours

Activity 1: Case based learning (3 hrs)

Step 1: The teacher will explain introduction,objective of practical session (10 min)

Step 2: The teacher will list out equipments and material has been used in this session (10 min)

Step 3: The teacher will explain indication, contraindication and safety measures for the practical session (10 min)

Step 4: The teacher will demonstrate history taking, General examination, radiological findings,differential diagnosis to rule out exact cause of the disease (30 min)

Step 5: The teacher will demonstrates Patient Positioning,method of Hand Placement,application Method, duration and frequency of application based on various case scenario / model / with students volunteer / demonstration video clips (1 hour)

Step 6: The teacher assess student by conduct K-L or conduct real life experience or Case presentation or Bed side presentation to review the practical session (1 hour)

Practical Training 15.5 : *Varmam thadaval muraigal* of traditional vaithiyars

Total activity- 4 hours

Activity 1: Demonstration (4hrs)

Step 1: The teacher will explain introduction,objective of practical session (10 min)

Step 2: The teacher will list out material , indication, contraindication and safety measures for the practical session (10 min)

Step 3: The teacher will demonstrate history taking, General examination, radiological findings,differential diagnosis to rule out exact cause of the disease (10 min)

Step 4 : The teacher will demonstrates Patient Positioning,method of Hand Placement,application Method, duration and frequency of application based on various case scenario / students volunteer / demonstration video clips / CME (3 hour)

Step 5: The teacher assess student by conduct K-L or conduct real life experience or Case presentation or Bed side presentation to review the practical session (30 min)

Experiential learning Activity

Experiential-Learning 15.1 : Documentation of Chavuttu Thirumal practiced among traditional vaithiyars

Total activity hour: 4

Activity 1: Project based learning

The teacher will provide an overview of Chavuttu Thirumal and they will arrange a field visit or CME in experienced traditional vaithiyars in this field.

Pre visit reflection

Step 1: Prior to the visit student should know about the basic principles of Chavuttu Thirumal and Observe how the traditional vaithiyar assesses the patient by using Naadi and saraottam and determines the appropriate diagnosis, line of treatment based on specific condition.(30 min)

Step 2 : Student observe method of application, specific varmam point stimulation during therapy, oil selection and their preparations.(2 hours)

Hands -on Practice

Step 3 : If vaithiyar allows,student can practice basic techniques and emphasize the proper Foot positioning,pressure control under their supervision (30 min)

Post visit reflection

Step 4 : student facilitate a discussion with the vaidhiyar to clarify any questions and gain deeper insight (30 min)

Step 5: student should compile a document their observation techniques.(30 min)

Step 6 : student can assessed by direct observational procedural skill or video clips or ethnography study report,record keeping,log book

Experiential-Learning 15.2 : Therapeutic methods of chavuttu Thirumal practiced among traditional vaithiyars

Total activity hour: 4

Activity 1: Field Visit (4hrs)

The teacher will provide an overview of Chavuttu Thirumal and they will arrange a field visit or CME in experienced traditional vaithiyars in this field.

Pre visit reflection

Step 1: Prior to the visit student should know about the basic principles of chavuttu thirumal and Observe how the traditional vaithiyar assesses the patient by using Naadi and saraottam and determines the appropriate diagnosis, line of treatment based on specific condition.(30 min)

Step 2 : Student observe method of application, specific varmam point stimulation during therapy, oil selection and their preparations.(2 hour)

Hands -on Practice

Step 3 : If vaithiyar allows,student can practice basic techniques and emphasize the proper foot positioning,pressure control under their supervision (1 hour)

Post visit reflection

Step 4 : student facilitate a discussion with the vaidhiyar to clarify any questions and gain deeper insight (30 min)

Step 5: student should compile a document their observation techniques.

Step 6 : student can assessed by direct observational procedural skill or video clips or ethnography study report

Experiential-Learning 15.3 : Case study of Chavuttu Thirumal (Massage by Foot Pressure)

Total activity hour: 5 hrs

Activity 1: Project based learning (5 hrs)

- Step 1: Prior to the study Student select patient with the complaints of indicated clinical symptoms for Chavuttu Thirumal in OPD and IPD settings (30 min)
- Step 2: Student obtain necessary consent for using patient data in this study (30 min)
- Step 3 : Student Document patient history,assessment findings,relevant medical documents and treatment progression and outcomes.(1 hour)
- Step 4 : Student develop treatment plan for particular cases, specific massage technique,treatment frequency and duration using standardized form.(2 hour)
- Step 5 : Student can develop article in relationship between musculoskeletal anatomy, physiological effects and importance of pressure points and energy channel activation by using chavuttu thirumal. (1 hour)
- Step 6 : Student published their article in scopus indexed journal

Experiential-Learning 15.4 : Therapeutic application of *thadavu muraigal*

Total activity : 4 hrs

Activity 1: Case based learning (4 hrs)

The teacher provide overview of *thadavu muraigal*, under the supervision of teacher students conducting procedural application of *thadavu muraigal* to PG collegeues or UG students with different case scenario by using PPT or videoclips or Simualted patient in OPD /IPD setting.

Step for Conducting therapeutic application procedure of *thadavu muraigal*

Step 1 : Student explain patient assessment, history taking, general examination and systemic examination, diagnosis of this specific condition (30 min)

Step 2 : Student explain preparation and material used for this procedural session (30 min)

Step 3 : The student will demonstrates patient positioning,method of hand placement,application method, duration and frequency of application based on various case scenario / model / students volunteer / demonstration video clips (3 hour)

Step 4: Teacher will assess the student by Direct observation procedural skill or Case presentation or clinical records

Experiential-Learning 15.5 : Case study of therapeutic application of *thadavu muraigal*

Total activity : 5 hrs

Activity 1: Case based learning (5 hrs)

Step 1: Student select patient with the complaints of indicated clinical symptoms for *thadavu muraigal* (30 min)

Step 2: Student obtain necessary consent for using patient data in this study (30 min)

Step 3 : Student Document patient history,assessment findings,relevant medical documents and treatment progression and outcomes. (1 hour)

Step 4 : Student develop treatment plan for particular cases, specific massage technique,treatment frequency and duration using standardized form. (3 hour)

Step 5 : Student published their article in scopus indexed journal

Experiential-Learning 15.6 : *Thadavu muraigal* practiced among traditional vaithiyars

Total activity hour - 4

Activity 1. Field Visit (2 hrs)

The teacher will provide an overview of *varmam thadavu muraigal* and they will arrange a field visit or CME in experienced *traditional vaithiyars* in this field.

Activity 2. Discussion (2 hrs)

Step 1: Prior to the visit student should know about the basic principles of *thadavu muraigal* and Observe how the traditional *vaithiyar* assesses the patient by using *naadi* and *saraottam* and determines the appropriate diagnosis, line of treatment based on specific condition.(30 mins)

Step 2 : Student observe method of application, specific *varmam* point stimulation during therapy, oil selection and their preparations.(30 mins)

Step 3 : student can practice basic techniques and emphasize the proper hand positioning,pressure control under their supervision (30 min)

Step 4 : student facilitate a discussion to clarify any questions and gain deeper insight,compile a document their observation techniques.(30 min)

Modular Assessment

Assessment method

Hour

INSTRUCTIONS

Conduct a structured modular assessment. Assessment will be for 50 marks .Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6C

Each scholar will do the case presentation through PPT - 30 Marks

the scholar will assessed by

- History taking
- General and systemic examination finding
- *Siddha* diagnostic tools and findings
- Serological and radiological findings
- Assessment of cases, who treated by *chavuttu muraigal*

and

Each scholar will explain/demonstrate any one *chavattu murai* and the mechanism of corresponding *chavattu murai*- 20 marks

Or

Any practical in converted form can be taken for assessment (25 marks)

and

Any of the experiential as portfolio/reflection/presentations can be taken as an assessment (25 marks)

4

Module 16 : Iluvai Parigaram (Traction Methods)

Module Learning Objectives**(At the end of the module, the students should be able to)**Describe definition, types and clinical application of *iluvai parigaram*Conduct case series or case studies to evaluate effectiveness of *iluvai parigaram*Apply the knowledge of *iluvai parigaram* to modern traction methods**M 16 Unit 1 Basics of Iluvai Parigaram**16.1.1. Definition of *Iluvai (Neetchi muraigal)* Traction 16.1.2.Types of *Iluvai murai* (Manual, Mechanical Traction) 16.1.3. Indication and contra Indication of *Iluvai murai* (Traction) 16.1.4. Musculo skeletal examination**References:** 10,11,13,17,39,71,84,85,86

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3 ,CO4,CO5,CO 8	Describe definition and types of Iluvai (neetchi muraigal) - traction methods	2	Lecture	CC	Knows- how	L&PPT ,L
CO1,CO2,CO3 ,CO4,CO5,CO 8	Describe indication and contraindication of <i>iluvai parigaram</i> (traction therapy)	3	Lecture	CC	Knows- how	L,L&PPT
CO1,CO2,CO3 ,CO4,CO5,CO 8	Demonstrate the manual methods of <i>iluvai parigaram</i> (traction methods)	5	Practical Training 16.1	PSY- GUD	Shows- how	D-BED,D -M,D,RL E,CBL
CO1,CO2,CO3 ,CO4,CO5,CO	Demonstrate the mechanical methods of <i>iluvai parigaram</i>	5	Practical Training 16.2	PSY- GUD	Shows- how	CBL,D,D- BED

8						
CO1,CO2,CO3,CO4,CO5,CO8	Perform musculo skeletal examination	6	Experiential-Learning 16.1	PSY-GUD	Shows-how	RLE,RP,D-BED,D,L_VC
CO1,CO2,CO3,CO4,CO5,CO8	Perform traditional traction methods	7	Experiential-Learning 16.2	PSY-GUD	Shows-how	FV,CBL
M 16 Unit 2 Traction Methods 16.2.1. Application of <i>Iluvai muraigal</i> (Traditional Traction Technique) 16.2.1.1. Degenerative disc disease, 16.2.1.2. Sciatica, 16.2.1.3. Herniated disc, 16.2.1.4. Stenosis, Spondylitis 16.2.2. Stretching and Strengthen exercise References: 9,10,12,13,71,84,85,86,89,90,91,105,106,107,108,109,110,111						
3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3,CO4,CO5,CO8	Describe application of <i>iluvai muraigal</i>	3	Lecture	CC	Knows-how	L,L&PPT
CO1,CO2,CO3,CO4,CO8	Describe about stretching and strengthen exercise	2	Lecture	CC	Knows-how	L&PPT,L
CO1,CO2,CO3,CO4,CO5,CO8	Demonstrate the traditional traction methods for sciatica, spondylitis	5	Practical Training 16.3	PSY-GUD	Shows-how	D-M,D
CO1,CO2,CO3,CO4,CO5,CO8	Demonstrate the traditional traction methods for herniated disc,stenosis	5	Practical Training 16.4	PSY-GUD	Shows-how	D
CO1,CO2,CO3	Perform traditional traction methods for sciatica, spondylitis, stenosis, herniated disc	6	Experiential-	PSY-	Shows-	D-BED,F

,CO4,CO5,CO6,CO8			Learning 16.3	GUD	how	V,L_VC,CBL,RLE
CO1,CO2,CO3,CO4,CO5,CO6,CO8	Perform case series or case study for traditional traction methods	7	Experiential-Learning 16.4	PSY-GUD	Shows-how	SDL,FV

Practical Training Activity

Practical Training 16.1 : Manual methods of *iluvai parigaram* (traction methods)

Total activity : (5 hrs)

Activity 1: Demonstration (5 hrs)

Step 1: The teacher will explain introduction,objective of practical session (20 min)

Step 2: The teacher will list out equipments and material has been used in this session (20 min)

Step 3: The teacher will explain indication, contraindication and safety measures for the practical session (20 min)

Step 4: The teacher will demonstrate history taking, general examination, radiological findings,differential diagnosis to rule out exact cause of the disease (1 hour)

Step 5: The teacher will demonstrates patient positioning,method of hand placement,application of traction, duration and frequency of application based on various case scenario / model / with students volunteer / demonstration video clips (2 hour)

Step 6: The teacher conduct Kinesthetic learning or conduct real life experience to review the practical session (1 hour)

Practical Training 16.2 : Mechanical methods of *iluvai parigaram* (traction methods)

Total activity : (5 hrs)

Activity 1: Demonstration(5 hrs)

Step 1: The teacher will explain introduction,objective of practical session (20 min)

Step 2: The teacher will list out equipments and material has been used in this session (20 min)

Step 3: The teacher will explain indication, contraindication and safety measures for the practical session (20 min)

Step 4: The teacher will demonstrate history taking, general examination, radiological findings, differential diagnosis to rule out exact cause of the disease (1 hour)

Step 5: The teacher will demonstrates patient positioning,method of hand placement,application of traction, duration and frequency of application based on various case scenario / model / with students volunteer / demonstration video clips (2 hour)

Step 6: The teacher conduct Kinesthetic learning or conduct real life experience or case presentation or bed side demonstration to review the practical session (1 hour)

Practical Training 16.3 : Traditional traction methods for sciatica, spondylitis

Total activity : (5 hrs)

Activity 1: Demonstration (5hrs)

Step 1: The teacher will explain introduction,objective of practical session (10 min)

Step 2: The teacher will list out equipments and material has been used in this session (10 min)

Step 3: The teacher will explain indication, contraindication and safety measures for the practical session (10 min)

Step 4: The teacher will demonstrate history taking, general examination, radiological findings,differential diagnosis to rule out exact cause of the disease (30 min)

Step 5: The teacher will demonstrates patient positioning,method of hand placement,application of traction, duration and frequency of application based on various case scenario / model / with students volunteer / demonstration video clips / Presentation (3 hour)

Step 6 : The teacher assess student by conduct, Kinesthetic learning or conduct real life experience or case presentation or bed side learning / role plays to review the practical session (1 hour)

Practical Training 16.4 : Traditional traction methods for herniated disc,stenosis

Total activity : 5 hrs

Activity 1: Demonstration (5 hrs)

Step 1: The teacher will explain introduction,objective of practical session (10 min)

Step 2: The teacher will list out equipments and material has been used in this session (10 min)

Step 3: The teacher will explain indication, contraindication and safety measures for the practical session (10 min)

Step 4: The teacher will demonstrate history taking, general examination, radiological findings,differential diagnosis to rule out exact cause of the disease (30 min)

Step 5: The teacher will demonstrates patient positioning,method of hand placement,application of traction, duration and frequency of application based on various case scenario / model / with students volunteer / demonstration video clips (3 hour)

Step 6: The teacher assess student by conduct K-L or conduct real life experience or case presentation or bed side presentation to review the practical session (1 hour)

Experiential learning Activity

Experiential-Learning 16.1 : Musculo skeletal examination

Total activity : (6 hrs)

Activity 1:Case based learning (6 hrs)

Step 1 : Student will explain the purpose of the examination (20 min)

Step 2 : Student will ask the patient expalin the cheif complaint and obtain detailed history of present illness (20 min)

Step 3 : Student will inquire about past medical history and current medication of the patient. (20 min)

Step 4 : Student will demonstrate general & systemic examination, serological & radiological findings,range of movement,special test, functional assessment,line of

treatment.(1 hour)

Step 5 : Students will demonstrate two or three different scenario based examination through role plays or make a case presentation with his/her PG colleagues or UG students.(2 hours).

Step 6: Student will record the findings in the form of clinical diary or video clips or case study or case series (2 hours)

Experiential-Learning 16.2 : Traditional traction methods

Total activity - 7 hours

Activity 1 - Case based learning (7 hrs)

Step 1 : Lecturer should identify reputable traditional traction practitioner in target region, lecturer should facilitate introduction between the student and get the consent from the practitioner to observe their practice (30 min)

Step 2 : student will observe traditional traction methods and understand cultural context of these practices. (30 min)

Step 3 : student should observe patient assessment methods,application of traction by using traditional tools, use of any accompany therapies.(3 hour)

Step 4 : student will make frame work for comparing traditional traction methods and modern techniques (30 min)

Step 5 : student will create relevant anatomy and biomechanics to provide clarity about traditional traction methods in modern scientific approach (30 min)

Step 6: student should document their observation techniques in clinical record or video clips or report or case presentation or ethnography studies (2 hour)

Experiential-Learning 16.3 : Traditional traction methods for sciatica, spondylitis, stenosis, herniated disc

Total activity hour: 6

Activity 1: Field Visit (3 hrs)

Step 1 : Student should identify traditional practitioner with experience in this condition

Step 2 : student should observe patient assessment methods,application of traction techniques by using traditional tools, use of any accompany therapies for the disease of sciatica, spondylitis, stenosis, herniated disc .(3 hour)

Activity 2: Self-Directed Learning (3hrs)

Step 3 : student will make frame work for comparing traditional traction methods and modern techniques (1hr)

Step 4 : student will create relevant anatomy, biomechanics and line of treatment to provide clarity about traditional traction methods in modern scientific approach (1hr)

Step 5: student should document their observation techniques in clinical record or video clips or report or case presentation or ethnography studies (1 hour)

Experiential-Learning 16.4 : Case series or case study for traditional traction methods

Total activity hour: 7

Activity 1: Field Visit (3 hrs)

Step 1 : Student should identify traditional practitioner with experience in this condition

Step 2 : student should observe patient assessment methods,application of traction techniques by using traditional tools, use of any accompany therapies. (3 hrs)

Activity 2: Self-Directed Learning (4 hrs)

Step 1 : student will make frame work for comparing traditional traction methods and modern techniques (1 hr)

Step 2 : student will create relavant anatomy, biomechanics and line of treatment to provide clarity about traditional traction methods in modern scientific approach (1 hr)

Step 3: student should document their observation techniques in team based project work or case study clinical record or video clips or report or ethnography studies (2 hour)

Modular Assessment

Assessment method	Hour
INSTRUCTIONS Conduct a structured modular assessment. Assessment will be for 50 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6C Each scholar will do the case presentation through PPT - 30 Marks the scholar will assessed by • History taking • General and systemic examination finding • <i>Siddha</i> diagnostic tools and findings • Serological and radiological findings • Demonstration of traction methods at the bedside and Each scholar will explain/demonstrate examination of the joint, any traction methods - 20 marks Or Any practical in converted form can be taken for assessment (25 marks) and Any of the experiential as portfolio/reflection/presentations can be taken as an assessment (25 marks)	4

Paper No : 3 VARMA KAAYA MARUTHUVA IYAL(MANAGEMENT OF SIDDHA VARMAM TRAUMATOLOGY						
Semester No : 3						
Module 17 : Introduction to varmam injuries & medicines used in varmam injuries						
Module Learning Objectives (At the end of the module, the students should be able to) Describe the different types of <i>varmam</i> injuries, various causes, mechanisms, signs and symptoms of <i>varmam</i> injuries. Enumerate the basic principles and equipment required for <i>varmam</i> management Perform <i>ilakkumuraigal</i> for various <i>varmam</i> injuries. Discuss and apply the various internal & external medicines						
M 17 Unit 1 Classification 17.1. Introduction and classification of <i>varmam</i> injuries 17.1.1 Classification of <i>varmam</i> injuries 17.1.2 Etiology of <i>varmam</i> injuries						
References: 1,3,4						
3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe the different types, causes, mechanism, signs and symptoms of <i>varmam</i> injuries.	1	Lecture	CC	Knows-how	L,L&PPT
CO4,CO5,CO8	Demonstrate specific <i>ilakkumuraigal</i> and treatment to each <i>varmam</i> injuries	2	Practical Training 17.1	PSY-GUD	Shows-how	D,D-BED
CO4,CO5,CO8	Appraise the proficiency in performing treatment for <i>varmam</i> injuries	2	Experiential-Learning 17.	PSY-MEC	Shows-how	CBL

			1			
M 17 Unit 2 General principles of fracture management 17.2. Mechanism of fracture management 17.2.1. Closed reduction 17.2.2. Manipulation 17.2.3. Immobilisation 17.2.4. Open reduction References: 104						
3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe the general principle of fracture management in <i>varmam</i> injuries	1	Lecture	CC	Knows-how	L,L&PPT
CO4,CO5,CO8	Demonstrate the fracture management for a specific condition with a patient.	2	Practical Training 17.2	PSY-GUD	Shows-how	D-M
CO4,CO5,CO8	Apply and analysis the fracture management in clinical conditions	4	Experiential-Learning 17.2	PSY-MEC	Does	DIS,FV,R P
M 17 Unit 3 Equipments required for fracture management 17.3.Equipments required for fracture management References: 104						
3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe the equipment that is required for fracture management.	1	Lecture	CC	Knows-how	L&PPT
CO4,CO5,CO8	Demonstrate the application of equipments that are used for fracture management	2	Practical Training 17.3	PSY-GUD	Shows-how	BS,D
CO4,CO5,CO8	Analyze the fracture and apply appropriate equipment usage in clinical condition	4	Experiential-	PSY-	Shows-	D-M,FV,

			Learning 17.3	MEC	how	DIS
M 17 Unit 4 Internal medicines for Fracture management 17.4.1. <i>Chooranam</i> (Powder) 17.4.2. <i>Nei</i> (Ghee) 17.4.3. <i>Kudineer</i> (Decoctions) 17.4.4. <i>Ennaigal</i> (Oils) References: 19,20,28,29,34,62,104						
3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe the internal medicine for the management of <i>varmam</i> injuries.	3	Lecture	CC	Knows-how	L&PPT
CO4,CO5,CO8	Demonstrate the method of preparation of internal medicines for the management of fracture.	6	Practical Training 17.4	PSY-GUD	Knows-how	PAL,LS,BS
CO4,CO5,CO8	Evaluate the efficacy of internal medicines for the management of <i>varmam</i> injuries.	8	Experiential-Learning 17.4	PSY-MEC	Does	CBL,D-BED,PER,D
M 17 Unit 5 External medicines used in Fracture management 17.5.1. <i>Ennaigal</i> (Oils) 17.5.2. <i>Pootchu</i> (Liquid poultice) 17.5.3. <i>Thoovalai</i> (Paste Massage) 17.5.4. <i>Ottradam</i> (Foementation) 17.5.5. <i>Kizhi</i> (Medicated pouch) 17.5.6. <i>Pasai</i> (Embrocation) 17.5.7. <i>Tharai</i> (Oil pouring method) References: 19,28,29,37,104						
3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe the external medicine for the management of <i>varmam</i> injuries	4	Lecture	CC	Knows-how	L,L&PPT
CO4,CO5,CO8	Demonstrate the method preparation of external medicines for fracture management which should be given for <i>varmam</i> injuries.	8	Practical Training 17.5	PSY-GUD	Shows-how	D,BS,CBL

CO4,CO5,CO8	Evaluate the efficacy of external medicines used for the management of <i>varmam</i> injuries.	8	Experiential-Learning 17.5	PSY-MEC	Does	D,SDL,CBL,PER
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Practical Training Activity

Practical Training 17.1 : Management of *varmam* injuries through *ilakkumuraigal*

Total activity:2 hrs

Activity : Demonstration (2 hrs)

Step 1. The teacher will locate the specific *varmam* points affected and determine the severity of the injury (30 mins)

Step 2. The teacher will demonstrate specific *ilakkumurai* techniques which help in restoring energy flow (1 hr)

Step 3. The teacher will teach students the importance of correct posture and body alignment during recovery (30 mins)

Step 4. The student will observe, repeat and record his/her observations for that specific injury. (30 mins)

Practical Training 17.2 : Management of fracture through *varmam* techniques

Total activity:2 hrs

Activity 1. Demonstration on model (2 hrs)

Step 1. The Teacher will teach students to assess the fracture by identifying the type of fracture, determining the location of the fracture, checking for any complications such as open wounds, bleeding, or nerve involvement and observing pain levels, swelling, and deformity. (30 mins)

Step 2. The teacher will instruct students to use their thumbs, palms, or fingers to gently apply pressure on the *varmam* points around the fractured area to ease the pain and improve circulation.(1 hr)

Step 3. The teacher will teach students to position the fractured limb in a way that helps prevent movement and allows proper alignment of the bone and to provide support to the fractured area using bandages or splints.(30 mins)

Practical Training 17.3 : Application of equipment in the management of fracture

Total activity: 2 hrs

Activity 1: Brainstorming (30 mins)

The teacher will give a brief lecture to the students on the different types of equipment used in fracture management, their purposes, and how they help in healing fractures.

Activity 2: Demonstration (1 hr 30 min)

Step 1: The teacher will demonstrate to casting equipment while incorporating *varmam* techniques to enhance bone healing.(1 hr)

Step 2: Teach students how to apply orthopaedic braces for fractures and integrate *varmam* practices to support post-fracture rehabilitation. (30 mins)

Practical Training 17.4 : Internal medicines for the management of *varmam* injuries.

Total activity: 6 hrs

Activity 1: Brainstorming (3 hrs)

The Teacher will explain through the lecture on the importance of internal medicines in treating *varmam* injuries and the selection of herbs, minerals and animal products used in the management of fractures

Activity 2: Library Session (2 hrs)

The teacher guides the student to collect the data about varmam-based internal and external medicines for various varmam injuries

Activity 3: Peer Assisted Learning (1 hrs)

The teacher guides the student to get varmam and various injuries related to varmam articles

Practical Training 17.5 : External medicines for the management of *varmam* injuries.

Total activity hours: 8

Activity 1: Brainstorming (3 hrs)

The teacher will give a brief lecture on the importance of external medicines in treating *varmam* injuries, preparation of the external medicines that can help heal fractures, dislocations, and energy blockages caused by *varmam* injuries.

Activity 2: Demonstration (2 hrs)

The teacher will demonstrate to the students the selection of herbs, minerals, and animal products used in the management of fractures

Activity 3: Case-Based Learning (3 hrs)

Step 1: The teacher will guide the students on administering the prepared medicines, including the timing for optimal effect, at the bedside (2hrs)

Step 2: The teacher will assess the student based on their log book (1 hr)

Experiential learning Activity

Experiential-Learning 17.1 : *Ilakkumuraigal* for *varmam* injuries

Total activity hours: 2

Students will visit experienced practitioners of *siddha* medicine to demonstrate treatment techniques on real patients with *varmam* injuries. (1 hr)

Students will have case studies with *varmam* injuries, where students will analyze and practice diagnosing and treating different injuries. Students will present the location of injury, symptoms, and *ilakkumurai* techniques. (45 mins)

Students will have group discussions where they can share their experiences of treating *varmam* injuries, discussing their challenges, what worked well, and areas for improvement. (15 mins)

Experiential-Learning 17.2 : Techniques for effective management of fracture

Total activity: 4 hrs

Activity 1. Field Visit (2 hrs)

Step 1. The students will visit *siddha* or traditional practitioners specialising in fracture management, where they can observe the techniques being used in real time and learn how to assess fractures, apply *varmam* techniques, and combine modern splinting or casting methods with *siddha* practices.

Step 2. The students will visit hospitals or clinics, where they can observe conventional fracture management (e.g., setting, casting, or surgical interventions) and compare it with traditional methods.

Activity 2. Roleplay (1 hr)

The Students will create small groups where students take turns practising fracture management techniques. One student can act as a “patient” with a simulated fracture, and the others can practice techniques such as splinting and *varmam* application.

Activity 3. Discussions (1 hr)

Students will be involved in small groups, where each group discusses a different case and presents its findings and recommended treatments, which fosters collaborative learning and critical thinking. (1 hr)

Experiential-Learning 17.3 : Equipment for the management of fractures

Total activity: 4 hrs

Activity 1: Demonstration on models(1 hr)

The Students will demonstrate applying casts on models or mannequins, focusing on the proper alignment of fractures to avoid complications.

Activity 2: Field visit (1 hr)

Students will visit clinics or hospitals where both orthopaedic equipment and Varmam therapy are used to treat fractures, observe real cases and understand how experienced practitioners use both methods effectively.

Activity 3: Discussions (2 hrs)

Step 1. The students will have group discussions where they can share their experiences with the class and have them reflect on how the combination of equipment and Varmam techniques might improve the healing process in fracture management.

Step 2. The students will maintain a logbook and document how the Varmam healing techniques complement the application of the modern equipment.

Experiential-Learning 17.4 : Internal medicines for the management of *varmam* injuries

Total activity: 8 hrs

Activity 1: Presentations (2 hrs)

The student will describe the concept of *varmam* injuries (trauma to vital energy points in the body) and the role of internal medicines to CRRI (2 hrs)

Activity 2: Demonstration (2 hrs)

The Student will demonstrate how to prepare the patient for internal therapy and demonstrate internal therapy at the bedside(2 hrs)

Activity 3: Demonstration on bedside (2 hrs)

The students will demonstrate the different types of internal medicines used in treating *varmam* injuries and demonstrate how each type of formulation is prepared, administered and monitored for efficacy

Activity 4: Case-Based Learning (2 hrs)

The Student will share real case studies where patients were treated with internal medicines for *varmam* injuries and explain the pre-treatment condition, the medicine used and the outcome throughout the treatment.

Experiential-Learning 17.5 : External medicines used for the management of *varmam* injuries

Total activity hours: 8

Activity 1. Presentations (2 hrs)

The student will describe the concept of *varmam* injuries (trauma to vital energy points in the body) and the role of external medicines in CRRI

Activity 2. Self-Directed Learning (2 hrs)

The students will learn about the different types of external medicines used in treating *varmam* injuries and demonstrate how each type of formulation is prepared, administered and monitored for efficacy through

Activity 3. Case-Based Learning (2 hrs)

The student will share real case studies of patients treated with external medicines for *varmam* injuries and explain the pre-treatment condition, the medicine used, and the outcome throughout the treatment.

Activity 4. Demonstrations (2 hrs)

The student will demonstrate how to prepare the patient for external therapy and demonstrate external therapy at the bedside

Modular Assessment

Assessment method

Hour

INSTRUCTIONS

Conduct a structured modular assessment. Assessment will be for 50 marks . Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6C

Each scholar will do the case presentation through ppt - 30 Marks

the scholar will assessed by

- History taking
- General and systemic examination finding

4

- Siddha diagnostic tools and findings
- Serological and radiological findings
- Demonstration of traction methods at the bedside

and

Each scholar will explain/demonstrate examination of the joint, any traction methods - 20 marks

or

Any practical in converted form can be taken for assessment (25 marks)

and

Any of the experiential activities, such as portfolio/reflection/presentations, can be taken as an assessment (25 marks)

Module 18 : Injuries of head & face and its varmam management

Module Learning Objectives

(At the end of the module, the students should be able to)

Describe various types of injuries to the head and face and its causes, and the mechanism of injury.

Identify the fracture sites through clinical examination and radiological investigations

Demonstrate immobilisation technique and *varmam* management for various injuries

M 18 Unit 1 Thalai Kaayangal

18.1.1 *Kabala kaayangal* (Injuries to the skull) 18.1.2. *Mandai utchi elumbu murivugal* (Fracture of parietal bone) 18.1.3. *Pidari elumbu murivu* (Fracture of Occipital bone) 18.1.4. *Kathalivana eadu* (Craniocerebral trauma) 18.1.5. *Lada maiya norunkal* (Brain damage)

References: 19,20,24,28

3A	3B	3C	3D	3E	3F	3G
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CO4,CO5,CO8	Describe the various types of head injuries and its management	5	Lecture	CC	Knows-how	L&PPT, L_VC, L
CO4,CO5,CO8	Demonstrate the <i>varmam</i> management for various types of the head injuries	10	Practical Training 18.1	PSY-GUD	Shows-how	BS,X-Ray, D,D-M
CO4,CO5,CO8	Perform reduction techniques and <i>varmam</i> management for injury of the skull bones	10	Experiential-Learning 18.1	PSY-MEC	Does	D,X-Ray, RP,CBL, SDL
CO4,CO5,CO8	Evaluate the efficacy of internal & external medicines for treating the skull bone fracture	4	Experiential-Learning 18.2	PSY-MEC	Shows-how	CBL,DIS, PL

M 18 Unit 2 Muga Kaayangal

18.2.1. *Thilartha poruthu murivu* (Fracture of nasal notch) 18.2.2. *Nasi elumbu murivu* (Fracture of nasal bone) 18.2.3. *Aakirana bala kaayam* (Injuries to the nasal bridge) 18.2.4. *Alavellu murivu* (Fracture of mandible) 18.2.5. *Keel-alavu vilagal* (Dislocation and subluxation of mandible)

References: 19,20,28,29

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe the various types of facial injuries and their management	5	Lecture	CC	Knows-how	L,L&PPT, L_VC
CO4,CO5,CO8	Demonstrate <i>varmam</i> management for various types of the facial bone injuries	10	Practical Training 18.2	PSY-GUD	Shows-how	DIS,BS,D, X-Ray
CO4,CO5,CO8	Perform reduction techniques and <i>varmam</i> management for injury of the facial bones	8	Experiential-Learning 18.3	PSY-MEC	Does	X-Ray,D, CBL,RP
CO4,CO5,CO8	Evaluate the efficacy of internal & external medicines for treating the facial bone fracture.	4	Experiential-Learning 18.	PSY-MEC	Does	PL,CBL

			4			
Practical Training Activity						
Practical Training 18.1 : <i>Varmam</i> management for the head injuries						
Total activity: 10 hrs Activity 1. Brainstorming (3 hrs) The teacher will describe the signs, symptoms, mechanism, pathophysiology, examination (general, systemic, neurological examination), serological and radiological findings, line of treatment of various systems of medicine Activity 2. X-ray Identification (2 hrs) The teacher illustrated the radiological findings of various head injuries, and explain the the symptoms based on the findings Activity 3. Demonstration (2 hrs) The teacher will demonstrate the various head injuries and the complications of various head injuries based on <i>siddha</i> principles, multiple treatments in the <i>siddha</i> aspect (emergency management, internal medicine, external medicines, external therapies, <i>siddhar</i> yoga therapy). Activity 4. Demonstration on the model (3 hrs) Step 1. The teacher will demonstrate the various <i>varmam</i> therapies and illustrate the mechanism of action for <i>varmam</i> points manipulation (2 hrs) Step 2. The teacher will assess the student based on a discussion about the management of head injuries in a broad spectrum aspect, along with <i>varmam</i> management (1 hr)						
Practical Training 18.2 : <i>Varmam</i> management for the facial bone injuries						
Total activity: 10 hrs Activity 1. Brainstorming (4 hrs) Step 1. The teacher will describe the signs, symptoms, mechanism, pathophysiology, examination (general, systemic, neurological examination), serological and radiological findings, line of treatment of various systems of medicine (3 hrs) Step 2. The teacher describes the various facial injuries and the complications of various facial injuries based on <i>siddha</i> principles, various treatments in <i>siddha</i> aspect (emergency management, internal medicine, external medicines, external therapies, <i>siddha</i> yoga therapy) (2 hours). Activity 2: X-ray Identification (2hrs) The teacher will illustrated the radiological findings of various head injuries and correlate the syptoms with the findings (2 hours), Activity 3: Demonstration (3 hrs) The teacher will demonstrate the various <i>varmam</i> therapies and illustrate the mechanism of action for <i>varmam</i> points manipulation. Activity 4: Discussions (1 hr) The teacher assesses the student based on the discussion about the management of facial injuries in a broad spectrum, along with <i>varmam</i> managemen						

Experiential learning Activity

Experiential-Learning 18.1 : *Varmam* management for injury to the skull bones

Total activity:10 hrs

Activity 1. Roleplays (2 hours)

The students separate themselves into two groups and perform the roleplay about skull skull-injured person, first aid, clinical presentation, and critical management.

Activity 2. X-ray illustration (2 hours)

Step 1. The student will illustrate the radiological findings for various skull fractures (1 hr)

Step 2. The student will correlate the radiological findings with clinical symptoms along with examinations (1 hr)

Activity 3. Demonstration (2 hours)

The student demonstrates to examine the patient, prepare to the patient and the traditional bone setting techniques along with *varmam* application for skull injuries

Activity 4. Case-Based Learning (3 hours)

The students present the case studies about skull bone injuries, first aid for these conditions, alternative medicine treatment along with recent advanced techniques and the traditional bone setting methods to final year students along with various medical systems

Activity 5. Self-directed Learning (1 hr)

The students will assist the final year students and encourage them to perform the *varmam* point application in an emergency condition

Experiential-Learning 18.2 : Assess the efficacy of *varmam* medicine for the skull bone injury

Total activity:4 hrs

Activity 1. Case-Based Learning (1 hr)

Step 1. Divide into small groups of 3-4 students.

Step 2. Provide each group with a case study of a patient with a skull fracture.

Step 3. Analyse the case study

Activity 2. Peer Learning(2 hrs)

1. Attend a lecture on internal medicine treatment options (30 mins).

2. Work in pairs to research a specific internal medicine treatment option. (30 mins)

3. Create a poster or handout outlining the benefits, risks, and contraindications.(1 hr)

Activity 3. Discussions (1 hr)

The student will have a discussion with their colleagues about the recent advanced management techniques for the skull bone injury

Experiential-Learning 18.3 : *Varmam* management for injury of the facial bones

Total activity: 8 hrs Activity 1. Roleplays (2 hours) The students separate themselves into two groups and perform the roleplay about facial injured person, first aid, clinical presentation, and critical management Activity 2. X-ray Identification (2 hours) The student will illustrate the radiological findings for various facial bone fracture, correlate the features with the radiological findings Activity 3. Demonstration (2 hours) The student demonstrated the traditional bone setting techniques along with <i>varmam</i> application for facial bone injuries Activity 4. Case-Based Learning (2 hours) The students present the case studies to final year students along with various medical system treatments	
Experiential-Learning 18.4 : The efficacy of <i>varmam</i> medicine for the facial bone injury	
Total activity: 4 hrs Activity 1. Case-Based Learning (1 hr) Step 1. Divide into small groups of 3-4 students. Step 2. Provide each group with a case study of a patient with a facial bone fracture. Step 3. Analyse the case study Activity 2. Peer Learning (1 hr) Step 1. Attend a lecture on internal medicine treatment options Step 2. Work in pairs to research a specific internal medicine treatment option. Step 3. Create a poster or handout outlining the benefits, risks, and contraindications. Activity 3. Demonstration on models (2 hrs) The student will demonstrate the examination, radiological investigations, findings and recent advanced techniques of facial bone injuries	
Modular Assessment	
Assessment method	Hour
INSTRUCTIONS Conduct a structured modular assessment. The assessment will be for 50 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6C MCQ and Quiz = 5 marks Topic presentation - 5 marks	4

Collect the literary evidence and document it - 20 marks
 Demonstrate and teach the UG students on reduction techniques head and face- 10 marks
 Perform the reduction techniques of head and neck for 5 cases and document them = 10 marks
 or
 Any practical in converted form can be taken for assessment.(25 marks)
 and
 Any experiential, such as portfolios/reflections/presentations, can be taken as an assessment.(25 marks)

Semester No : 4

Module 19 : Atchu-Elumbu Kaayangal (Injuries of the Axial Skeleton)

Module Learning Objectives

(At the end of the module, the students should be able to)

- Describe the basic anatomy of the spine, pelvic bone, ribs, hyoid bone and sternum
- Management of various injuries through *varmam* manipulation
- Identification of fracture sites through clinical examination and radiological investigations

M 19 Unit 1 Nattellu Kaayangal

19 1.1. *Kaluthu nattellu kaayangal* (Injuries of the cervical spine) 19.1.2. *Maarubu nattellu kaayangal* (Injuries of the thoracic spine) 19.1.3. *Iduppu nattellu kaayangal* (Injuries of the lumbar spine) 19.1.4. *Nattallu-naduppoottu vilagal* (Subluxation of the lumbo sacral joint)

References: 19,28,29,36,62,104

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe etiology, mechanism, and <i>varmam</i> management for spinal Injuries.	3	Lecture	CK	Know	L&PPT ,L

CO4,CO5,CO8	Demonstrate manipulation techniques for injuries of cervical, thoracic and lumbar spine	6	Practical Training 19.1	PSY-GUD	Shows-how	D,BS
CO4,CO5,CO8	Perform reduction technique for <i>natellu kaayangal</i>	8	Experiential-Learning 19.1	PSY-MEC	Does	CBL

M 19 Unit 2 Complication of spinal cord injury

19.2.1. *Keel-vaasi mudam* (Traumatic paraplegia) 19.2.2 *Mael-vaasi mudam* (Traumatic quadriplegia) 19.2.3. *Veena thandu murivu* (Spinal cord Injury)

References: 104

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe the etiology, pathophysiology, and <i>varmam</i> management strategies for traumatic paraplegia and quadriplegia	3	Lecture	CC	Knows-how	L,L&PPT
CO4,CO5,CO8	Demonstrate manipulation techniques for traumatic spinal cord injuries	6	Practical Training 19.2	PSY-GUD	Shows-how	D-BED,C BL,BS
CO4,CO5,CO8	Compile traditional vaithiyar treatment protocols for traumatic paraplegia and quadriplegia.	8	Experiential-Learning 19.2	PSY-MEC	Does	DIS,PL,C BL,LS

M 19 Unit 3 Injuries of Ilium, Sacrum, Coccyx

19.3.1. *Chil-eumbu murivu* (Fracture of the Ilium) 19.3.2. *Nankana-poruthu naluval* (Subluxation of sacro-iliac joint) 19.3.3. *Moonaara kaayangal* (Sacral injuries) 19.3.4. *Kathir-moolam kaayangal* (Injury of the coccyx)

References: 19,20,28,36,62,104

3A	3B	3C	3D	3E	3F	3G
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CO4,CO5,CO8	Describe the mechanism of injury, classification, clinical features, investigations, and <i>varmam</i> management for the ilium, sacrum, coccyx, and sacroiliac joint.	2	Lecture	CC	Knows-how	L,L&PPT
CO4,CO5,CO8	Demonstrate manual therapy for sacrum, coccyx, and sacroiliac joint injuries	4	Practical Training 19.3	PSY-GUD	Shows-how	BS,D-BED
CO4,CO5,CO8	Apply the various traditional manual therapies for injuries to the sacrum, ilium, and coccyx.	6	Experiential-Learning 19.3	AFT-RES	Does	DIS,PER,D-M

M 19 Unit 4 Injuries of Rib, Hyoid, Sternum

19.4.1. *Vaari-ellu murivu* (Rib fracture) 19.4.2. *Vaari-poonell murivu* (Fracture & dislocation of the costo-vertebral joints and costo-transverse joints) 19.4.3. *Sankuthiri elumbu murivu* (Fracture of hyoid bone) 19.4.4. *Nenju elumbu kaayangal* (Injuries of the sternum)

References: 19,20,28,62,104

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe the anatomy, etiology, mechanism of injury, clinical features, investigation, and <i>varmam</i> management of rib, hyoid, and sternum bone injuries	2	Lecture	CK	Know	L,L&PPT
CO4,CO5,CO8	Demonstrate <i>varmam</i> management techniques for various injuries to the ribs, sternum, and hyoid Bone.	4	Practical Training 19.4	PSY-GUD	Knows-how	D-M,BS
CO4,CO5,CO8	Perform manipulation techniques for injuries to the ribs, sternum and hyoid bone	4	Experiential-Learning 19.4	PSY-MEC	Does	X-Ray,RP,CBL

Practical Training Activity

Practical Training 19.1 : Manipulation techniques for injuries to cervical, thoracic and lumbar spine

Total activity:6 hrs

Activity 1. Brainstorming (3 hrs)

The teacher will give a brief lecture on the mechanism, types, recent advances, management, along with traditional varmam management for cervical, thoracic and lumbar spine

Activity 2. Demonstration (2 hrs)

The teacher will demonstrate the examination of cervical, thoracic and lumbar spine, illustrate the radiological findings, and traditional bone setting methods

Activity 3. Kinesthetic Learning (1 hrs)

The teacher will demonstrate the physiotherapy techniques and the mechanism of these techniques for injuries to the cervical, thoracic and lumbar spine

Practical Training 19.2 : Manipulation techniques for traumatic paraplegia and quadriplegia

Total activity: 6 hrs

Activity 1. Brainstorming (2 hrs)

The teacher will give a brief lecture on signs, symptoms, mechanisms, treatment methods and physiotherapy management of traumatic paraplegia and quadriplegia

Activity 2. Case-Based Learning (2 hrs)

The teacher will present the case study about history, mechanisms, systemic, general, CNS examinations, serological, radiological findings, findings based on siddha principles and varmam manipulation techniques for paraplegia

Activity 3. Demonstration on bedside (2 hrs)

Step 1. The teacher will demonstrate the varmam therapy and physiotherapy techniques for the management of traumatic paraplegia (1hr)

Step 1. The teacher will demonstrate the varmam therapy and physiotherapy techniques for the management of traumatic quadriplegia(1hr)

Practical Training 19.3 : Manipulation techniques for sacrum, coccyx and sacroiliac joint injuries.

Total activity: 4 hrs

Activity 1. Brainstorming (2 hrs)

The teacher will give a brief lecture on definition, types, mechanism, signs, symptoms, serological, radiological findings and treatment of injuries to the sacrum, coccyx and sacroiliac joint injuries

Activity 2. Demonstration on models (2 hrs)

Step 1. The teacher will demonstrate the manipulation techniques for sacrum injuries on models. (40 mins)

Step 2. The teacher will demonstrate the manipulation techniques for coccyx injuries on models.(40 mins)

Step 3. The teacher will demonstrate the manipulation techniques for sacroiliac joint injuries on models.(40 mins)

Practical Training 19.4 : Varmam management for injuries to the ribs, sternum and hyoid bone

Total activity: 4 hrs

Activity 1. Brainstorming (2 hrs)

The teacher gives a brief lecture on anatomy, types of injuries, mechanism of injuries, radiological identification, varmam management and recent advances in techniques used in the treatment of injuries to the ribs, sternum and hyoid bone

Activity 2. Demonstration on models (2 hrs)

The teacher will demonstrate the traditional bone setting techniques along with varmam management for injuries to the ribs, sternum and hyoid bone

Experiential learning Activity

Experiential-Learning 19.1 : Apply varmam therapy for *nattellu kaayangal*

Total activity: 8 hrs

Activity 1. Roleplays (2 hrs)

The students separate themselves into two groups and perform the roleplay about *nattellu* injured person, first aid, clinical presentation, and critical management

Activity 2. X-ray Identification (2 hrs)

The student will illustrate the radiological findings for various *nattellu kaayangal*, correlate the findings with clinical symptoms

Activity 3. Demonstration on models (2 hrs)

The student demonstrates the examination, basic and advanced life support, the traditional bone setting techniques along with *varmam* application and physiotherapy procedures for *nattellu kaayangal*

Activity 4. Case-Based Learning (2 hrs)

The students present the case studies about history, examination, basic and advanced life support, the traditional bone setting techniques along with *varmam* application and physiotherapy procedures to final year students along with various medical system treatments

Experiential-Learning 19.2 : Manipulation techniques in the management of paraplegia and quadriplegia

Total activity: 8 hrs

Activity 1. Case-Based Learning (3 hrs)

The student will present case studies for signs, symptoms, history, general & systemic examination, serological and radiological findings, varmam and recent advanced techniques in the management of paraplegia

Activity 2. Peer Learnings (2 hrs)

The student will present case studies for signs, symptoms, history, general & systemic examination, serological and radiological findings, varmam and recent advanced techniques in the management of quadriplegia from the Scopus and WOS indexed journals

Activity 3. Library sessions (2 hrs)

The students will document the alternative system management for paraplegia and quadriplegia

Activity 4. Discussion (1hr)

Step 1. The students will have a group discussion based on their documentation related the alternative system management for paraplegia (30 min) Step 2. The students will have a group discussion based on their documentation related the alternative system management for quadriplegia(30 min)	
Experiential-Learning 19.3 : Traditional <i>varmam</i> procedures for sacrum, Ilium, and coccyx injuries	
Total activity: 6 hrs Activity 1. Presentation (2 hrs) The student presents the collected materials along with learning techniques, which were collected from traditional vaithiyars to their colleagues Activity 2. Discussion (2hrs) The students discussed with each other about the basic principle along with the symptoms, varmam management along with recent advance management and mechanism behinds varmam management Activity 3. Demonstration on models(2hrs) Step 1.The students will demonstrate the traditional bone setting methods along with varmam therapy for sacrum injuries (40 mins) Step 2.The students will demonstrate the traditional bone setting methods along with varmam therapy for Ilium injuries(40 mins) Step 3.The students will demonstrate the traditional bone setting methods along with varmam therapy forcoccyx injuries(40 mins)	
Experiential-Learning 19.4 : Manipulation techniques for hyoid bone & thoracic injuries	
Total activity: 4 hrs Activity 1. Roleplays (1 hr) The students separate themself into two groups and perform the roleplay about a thoracic injured person, first aid, clinical presentation, and critical management Activity 2. X-ray Identification (2 hr) Step 1. The student will illustrate the radiological findings for various thorax fractures (1hr) Step 2. The student will explain the mechanism and reson behind the hyoid bone fracture based on radiological findings (1 hr) Activity 3. Case-Based Learning (1 hr) The students present the case studies to final year students, along with various medical system treatments	
Modular Assessment	
Assessment method	Hour
INSTRUCTIONS Conduct a structured modular assessment. The assessment will be for 50 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6C	4

OBSE = 10 marks
 Each scholar should present the *varmam* management techniques, which are documented from traditional *varmam* practitioners/*vaithiyars* - 20 marks
 Paper publications - 10 marks
 Spot test = 5 marks
 Perform the reduction techniques for *atchu elumbu kaayangal* for 5 cases and document them = 10 marks
 or
 Any practical in converted form can be taken for assessment.(25marks)
 and
 Any experiential, such as portfolios/reflections/presentations, can be taken as an assessment.(25marks)

Module 20 : Varmam Management For Regional Injuries – Part -I Upper limb injuries

Module Learning Objectives

(At the end of the module, the students should be able to)

Describe the basic anatomy of shoulder joint, humerus, elbow joint, wrist joint, carpal bones and phalanges
 Identify the fracture sites through clinical examination and radiological investigations
 Demonstrate the application methods of *varmam* techniques based on the emergency aspect.

M 20 Unit 1 Thol poruthu kaayanagal

20.1.1. *Kaarai enbu murivu* (Fracture of the clavicle) 20.1.2. *Chippi mozhi kaarai poruthu kaayangal* (Injuries of the acromio clavicular joint) 20.1.3. *Nenju-kaarai poruthu kaayangal* (Injuries of the sterno clavicular joint) 20.1.4.*Chippi enbu kaayangal* (Injuries of the scapula) 20.1.5. *Thol-poruthu vilagal* (Dislocation of shoulder joint)

References: 19,20,28,29,36,62,104

3A	3B	3C	3D	3E	3F	3G
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CO4,CO5,CO8	Describe <i>kai kaayangal</i> through its causes, classification, mechanism of injuries, clinical features, investigations, complications, and <i>varmam</i> management.	3	Lecture	CC	Knows-how	L&PPT ,L
CO4,CO5,CO8	Demonstrate clinical examination, diagnosis, and <i>varmam</i> treatment for shoulder joint injuries.	6	Practical Training 20.1	PSY-GUD	Shows-how	D,X-Ray, D-BED,RP
CO4,CO5,CO8	Perform the reduction method for dislocation of shoulder joint, and <i>varmam</i> management.	8	Experiential-Learning 20.1	PSY-MEC	Shows-how	CBL

M 20 Unit 2 Puya kaayangal

20.2.1. *Puya enbu-maelmunai kaayangal* (Fracture of Proximal humerus) 20.2.2. *Puya enbu thandu paguthi mundakkai elumbu murivu* (Fracture of the shaft of the humerus)

References: 19,20,28,29,36,62,104

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe the <i>puyakaayangal</i> interms of etiology, mechanism of injury, clinical features, investigations and <i>varmam</i> management.	1	Lecture	CC	Knows-how	L,L&PPT
CO4,CO5,CO8	Demonstrate the reduction techniques and <i>varmam</i> management procedures for <i>puyakaayam</i>	2	Practical Training 20.2	PSY-GUD	Shows-how	D-BED
CO4,CO5,CO8	Develop diagnostic skills and <i>varmam management</i> techniques for fracture of the humerus	4	Experiential-Learning 20.2	PSY-MEC	Does	CBL

M 20 Unit 3 Mulankai mootu kaayangal

20.3.1. *Mulankai moottu vilagal* (Dislocation of elbow) 20.3.2. *Mulankai elumbu murivu* (Fracture of the forearm)

References: 19,28,36,104

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe the various injuries of the elbow, classification, causes, mechanism, clinical features, investigation and <i>varmam</i> management.	2	Lecture	CK	Know	L,L&PPT
CO4,CO5,CO8	Demonstrate the reduction technique procedure for <i>mulankai mootu kaayam</i> in <i>varmam</i> management	4	Practical Training 20.3	PSY-GUD	Knows-how	D-BED,B S,D
CO4,CO5,CO8	Identify various injuries and dislocation of the elbow and perform the treatment procedures	6	Experiential-Learning 20.3	PSY-MEC	Shows-how	D-BED,CB L

M 20 Unit 4 Manikkattu Kaayangal

20.4.1. *Manikkattu kaayangal* (Injuries of the wrist joint)

References: 19,20,28,29,36,62

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe brief about wrist anatomy, carpal bone injuries and dislocation, mechanism of injury , clinical features, investigation and <i>varmam</i> management	2	Lecture	CK	Know	L,L&PPT
CO4,CO5,CO8	Demonstrate the reduction techniques and procedures for <i>manikattukaayangal</i>	4	Practical Training 20.4	PSY-GUD	Shows-how	D,D-BED
CO4,CO5,CO8	Apply traditional approaches in the management of <i>manikattu kaayangal</i>	4	Experiential-Learning 20.4	PSY-MEC	Does	DIS,CBL, PER,D-BED

M 20 Unit 5 Ankai Kaayangal

20.5.1. *Karaba enbu murivu* (Fracture of metacarpals) 20.5.2. *Kai-viral kaayangal* (Injuries of the phalanx)

References: 19,20,28,29,62,104

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe the general principles, mechanism of injury, classification, clinical features, and investigations of hand injuries	2	Lecture	CK	Know	L&PPT ,L
CO4,CO5,CO8	Demonstrate various types of hand injuries, including phalangeal and metacarpal fractures, and their <i>varmam</i> management	4	Practical Training 20.5	PSY-GUD	Shows-how	BS,DIS,C BL
CO4,CO5,CO8	Identify various injuries and dislocation of the hand	4	Experiential-Learning 20.5	PSY-MEC	Shows-how	CBL,D,P ER,DIS

Practical Training Activity

Practical Training 20.1 : Examination and *varmam* management for shoulder joint injuries

Total activity : 6 hrs

Activity 1. Demonstration (2 hrs)

The staff demonstrate demonstrate, actions of muscles attached on humerus, the *varmam* technique and reduction methods in shoulder joint injuries, management of post fracture management

Activity 2. Demonstration Bedside (2hrs)

The staff will demonstrate about history takings, examination, interpret radiological findings, the *varmam* technique and reduction methods in dislocations of the shoulder joint.

Activity 3. Roleplays (2 hrs)

The staff encourage the student assist deliver their knowledge about the shoulder joint injuries by roleplay and act based on following criteria

- 1) Mechanism of fracture
- 2) Examination
- 3) Radiological investigations
- 4) Reduction techniques
- 5) physiotherapy techniques

Practical Training 20.2 : Reduction techniques and *varmam* management for *puyakaayam*

Total activity : 2 hrs

Activity: Demonstration (2 hrs)

Step 1. The teacher will identify and explain the location of the injury and explain its varmam management techniques.(15 min)

Step 2. The teacher will demonstrate physical examination techniques for assessing injury of puyakayam (45 min)

Step 3. The teacher will demonstrate a clinical examination for assessing injury of puyakayam (1 hr)

Practical Training 20.3 : Reduction technique for *mulankai mootu kaayam* in *varmam* management.

Total activity: 4 hrs

Activity 1. Brainstorming (2 hrs)

The teacher will identify and explain the location of the injury, history, mechanism, examination, radiological findings, management along with recent advance techniques of injuries in *mulankai mootu* and discuss the siddha approach to diagnosis and *varmam* treatment.

Activity 2. Demonstration bedside (2 hrs)

The teacher will demonstrate to patient's decubitus, a clinical examination, muscle action around the joint and the reduction technique for *mulankai mootu kaayam* (injury of elbow joint), post fracture complication along with recent advance management

Practical Training 20.4 : Management of the reduction technique for *manikattukaayangal*

Total activity: 4 hrs

Activity 1. Demonstration (2 hrs)

Step 1. The staff demonstrate systemic examination and first aid management of wrist joint injuries (1 hr)

Step 2. The staff demonstrate varmam management procedures of wrist joint injuries (1 hr)

Activity 2. Discussion (2 hrs)

The staff encourage the student to discuss about range of movements (ROM), examination finding for various injuries around the wrist joint, recent advanced management techniques, and post fracture complication along with management

Practical Training 20.5 : Varmam management for hand and finger trauma

Total activity: 4 hrs

Activity 1. Brainstorming (2hrs)

The teacher will give a brief lecture on definition, history, mechanism, examination, radiological findings, management along with recent advance techniques of hand injury and discuss the siddha approach to diagnosis and *varmam* treatment.

Activity 2. Case-Based Learning (1 hr)

The teacher will present a case study about history, mechanism, examination, radiological findings, management along with recent advance techniques of hand injury from

THE WOS/Scopus indexed journals and discuss the siddha approach to diagnosis and *varmam* treatment.

Activity 3. Discussion (1 hr)

The teacher will assess them by discussion by following criteria

- 1) Mechanism of injuries
- 2) Required radiological investigation with suitable positions
- 3) Differential diagnosis
- 4) Varmam management
- 5) recent advanced techniques

Experiential learning Activity

Experiential-Learning 20.1 : Management of shoulder dislocation

Total activity : 8 hrs

Activity 1. Case-Based Learning (2 hrs)

The student will present a series of case studies with varying shoulder joint fracture types. Students will work individually or in groups to analyse the cases, diagnose the fractures, and propose appropriate varmam treatments.

Activity 2. Demonstration Bedside (2 hrs)

The student will be applying the knowledge about history takings, examination, interpret radiological findings, the varmam technique and reduction methods in dislocations of the shoulder joint.

Activity 3. Discussions (2 hrs)

The student will discuss about the shoulder dislocation fracture by following criteria

- 1) Mechanism of fracture
- 2) Examination
- 3) Radiological investigations
- 4) Reduction techniques
- 5) Physiotherapy techniques

Activity 4. Presentations (2 hr)

Each student presents the shoulder dislocation - types-mechanism- radiological findings- treatment methods- physiotherapy techniques to their colleagues and make a discussion about the recent advances in shoulder dislocation

Experiential-Learning 20.2 : Varmam management for fracture of the humerus

Total activity: 4 hrs

Activity 1. Case-Based Learning (2 hrs)

The student will present a case study about history, mechanism, examination, radiological findings, management along with recent advance techniques for fracture of the humerus and discuss the Siddha approach to diagnosis and *varmam* treatment.

Activity 2. Demonstration (1 hr)

The student will demonstrate, actions of muscles attached on humerus, the *varmam* technique and reduction methods in patients with a fracture of the humerus, management of post fracture management

Activity 3. Discussion (1 hr)

The student will discuss about the humerus fracture by following criteria

- 1) Mechanism of fracture
- 2) Examination
- 3) Radiological investigations
- 4) Reduction techniques
- 5) physiotherapy techniques

Experiential-Learning 20.3 : Various injuries and dislocations of the elbow, and perform the treatment procedures

Total activity : 6 hrs

Activity 1. Simulation (2 hrs)

The student will examine the elbow joint, explain the muscles action in movements of the joint, illustrate the radiological findings, manipulation techniques for various injuries and dislocations of the elbow

Activity 2. Demonstration bedside (2 hrs)

The student will demonstrate the pre, post and operative procedures for the *varmam* technique and reduction methods in patients with elbow dislocation, physiotherapy management for post management complication

Activity 3. Presentations (2 hrs)

The student will present a case study about history, mechanism, examination, radiological findings, management along with recent advance techniques of the various injuries and dislocations of the elbow and discuss the Siddha approach to diagnosis and *varmam* treatment.

Experiential-Learning 20.4 : *varmam* management for *manikattu kaayangal*.

Total activity : 4 hrs

Activity 1. Case-Based Learning (1 hr)

Present a case study about history, mechanism, radiological findings, treatment modalities of wrist joint injury and discuss the Siddha approach to diagnosis and *varmam* treatment.

Activity 2. Discussion (1hr)

The students are divide into two groups and make a discussion about types, machanism, general and systemic examination, radiological and serological investigations, siddha princicple along with envagai thervu, varmam management

Activity 3. Demonstration bedside (1hr)

Step 1. The student will demonstrate the various varmam technique and reduction methods in patients with manikattu kaayangal (30 min)

Step 2. The student will demonstrate the various varmam technique and reduction methods in patients with manikattu kaayangal (30 min)

Activity 4. Presentation (1 hr)

The student will present a case study based on signs, symptoms, radiological findings, varmam management along with recent advances

Experiential-Learning 20.5 : Varmam management for injuries of the hand

Total hours - 4

Activity 1. Case-Based Learning (1 hr)

The student will present a case study about history, mechanism, examination, radiological findings, management alongwith recent advance techniques of hand injury and discuss the siddha approach to diagnosis and *varmam* treatment.

Activity 2. Demonstration (1 hr)

Conduct a hands-on workshop led by experienced Siddha practitioners, demonstrating how to manage various foot injuries using varmam techniques. highlight how theoretical knowledge translates into practical applications. Focus on external management techniques and holistic healing.

Activity 3. Discussion (1 hr)

Divide the students into small groups, and each group discusses their observations related to hand injuries. focus on identifying various types of injuries, such as fractures and dislocations of carpal bones, the carpal bones, and phalanges, and encourage peer discussion and sharing of knowledge.

Activity 4. Presentations (1 hr)

Each student presents the hand injuries - types-mechanism- radiological findings- treatment methods- physiotherapy techniques to their collueges and make a discussion about the recent advances in hand injuries

Modular Assessment

Assessment method

Hour

INSTRUCTIONS

Conduct a structured modular assessment. The assessment will be for 50 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6C

Case presentaion for injuries in upper limb bones -25 Marks

The scholar will be assessed by

4

- History taking
- General and systemic examination findings
- Siddha diagnostic tools and findings
- Serological and radiological findings
- varmam management

and

A topic presentation various traditional management techniques for injuries in upper limb bones -15Marks

and

Team-Based Learning (TBL) for shoulder joint dislocation and management - 10 marks

The student will be assessed by

- Examination of the shoulder joint
- Express the traditional traction, manipulation and *varmam* management for the dislocation of the shoulder joint
- Explain the recent advanced techniques about the dislocations of the shoulder joint

or

Any practical in converted form can be taken for assessment (25 marks)

and

Any of the experiential as portfolio/reflections/presentations, can be taken as an assessment (25 marks)

Semester No : 5

Module 21 : Varmam Management For Regional Injuries –Part II- Lower limb injuries

Module Learning Objectives

(At the end of the module, the students should be able to)

- Describes the basic anatomy of the hip joint, femur, knee joint, ankle joint and tarsal bones
- Identify the fracture sites through clinical examination and radiological investigations
- Demonstrate the application methods of *varmam* techniques based on the emergency aspect.

M 21 Unit 1 Iduppu paguthi kaayangal 21.1.1. <i>Iduppu poruthu vilagal</i> (Discolation of the hip joint) 21.1.2. <i>Nangana kundu naluval</i> (Subluxation of the hip joint) 21.1.3. <i>Kundumani vilagal</i> (Discolation of the hip joint) 21.1.4. <i>Urulai poottu vilagal</i> (Discolation of the hip joint) References: 19,20,28,29,55,62,104						
3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe hip joint injuries, including etiological factors, classification, mechanism of injury, investigations and <i>varmam</i> management.	2	Lecture	CC	Knows-how	LS,L_VC, L&PPT
CO4,CO5,CO8	Demonstrate clinical examination methods, recognize signs and symptoms, confirm diagnosis by imaging technology and provide <i>varmam</i> treatment procedures of hip joint injuries	4	Practical Training 21.1	AFT-CHR	Shows-how	PAL,X-Ray,D-BED
CO4,CO5,CO8	Apply the reduction methods for hip joint dislocations and femoral head fractures using <i>varmam</i> techniques	6	Experiential-Learning 21.1	PSY-MEC	Does	CBL,DIS,D,W,TBL
M 21 Unit 2 Thodai kaayangal 21.2.1. <i>Thodai thandu murivu</i> (Fracture of the shaft of the femur) References: 19,20,28,29,55,62,104						
3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe the <i>thodai kaayangal</i> (thigh injuries) in terms of etiology, mechanism of injury, clinical features, investigations, and <i>varmam</i> management.	2	Lecture	CC	Knows-how	L_VC,LS, L&PPT
CO4,CO5,CO8	Demonstrate reduction technique including manipulation, immobilisation and <i>varmam</i> management of <i>thodai kaayangal</i> (thigh injuries)	4	Practical Training 21.2	PSY-SET	Shows-how	PAL,D-BED,X-

						Ray
CO4,CO5,CO8	Apply the <i>varmam</i> manipulation techniques and reduction methods for femoral shaft fractures.	6	Experiential-Learning 21.2	PSY-MEC	Does	DIS,D,TB L,CBL,W
M 21 Unit 3 Mulankaal Muttu Kaayangal 21.3.1. <i>Chirattai elumbu murivu</i> (Fracture of the patella bone) 21.3.2. <i>Chirattai vilagal</i> (Dislocation of patella bone) References: 19,20,28,29,55,62,104						
3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe the various injuries of the <i>mulankaal muttu kaayangal</i> (knee joint injuries), classification, causes, mechanism ,clinical features, diagnosis and <i>varmam</i> management techniques.	2	Lecture	CC	Knows-how	L&GD,L &PPT ,L_VC
CO4,CO5,CO8	Demonstrate clinical signs,symptoms,integrated investigations and <i>varmam</i> management procedures of <i>mulankaal muttu kaayangal</i> (knee joint injuries).	4	Practical Training 21.3	PSY-SET	Shows-how	D-BED,P AL,X-Ray
CO4,CO5,CO8	Identify various injuries and dislocations of the knee joint. Demonstrate proficiency in performing <i>varmam</i> manipulation techniques and the reduction method for fracture and dislocation of the knee joint.	6	Experiential-Learning 21.3	PSY-MEC	Does	CBL,DIS, W,TBL,D
M 21 Unit 4 Kanukkaal Kaayangal 21.4.1. <i>Kaalkannu vilagal</i> (Dislocation of ankle joint) 21.4.2. <i>Kaal karandai naluval</i> (Subluxation of the ankle joint) 21.4.3. <i>Kuthi elumbu murivu</i> (Fracture of the calcaneum) References: 19,20,28,29,55,62,104						
3A	3B	3C	3D	3E	3F	3G

CO4,CO5,CO8	Describe study of ankle anatomy, tarsal bone injuries and dislocation, mechanism of injury, clinical features, diagnosis and varmam management.	2	Lecture	CK	Know	L&PPT ,L_VC,LS
CO4,CO5,CO8	Demonstrate reduction technique including manipulation, immobilisation and varmam management of tarsal bone fracture and dislocation	4	Practical Training 21.4	PSY-GUD	Shows-how	D-BED,X-Ray,SIM
CO4,CO5,CO8	Apply <i>varmam</i> manipulation techniques for reducing ankle joint dislocations and subluxations	4	Experiential-Learning 21.4	PSY-MEC	Does	W,CBL,D IS,D,TBL

M 21 Unit 5 Paatha kaayangal

21.5.1.*Kaal kulachi elumbu vilagal* (Dislocation of the tarsal bones) 21.5.2.*Padankaal viral poruthu kaayangal* (Injuries of the metatarsophalangeal joint) 21.5.3. *Padankaal nadu murivu* (Fracture of the metatarsal bones) 21.5.4.*Kaal viral murivu* (Fracture of the phalanx) 21.5.5.*Viral idai poruthu vilagal* (Dislocation of Interphangeal joints)

References: 19,20,28,29,55,62

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe general principles, mechanism of injury, classification, clinical features, investigation of patha kaayangal (foot injuries).	2	Lecture	CK	Know	LS,L&PP T ,L_VC
CO4,CO5,CO8	Identify various types of foot injuries, phalangeal, and metatarsal fractures through clinical signs,X-rays. Demonstrate varmam management of foot injuries.	4	Practical Training 21.5	PSY-GUD	Shows-how	D-BED,X-Ray,PAL
CO4,CO5,CO8	Identify various injuries and dislocation of the foot.	4	Experiential-Learning 21.5	PSY-MEC	Does	DIS,W,C BL,TBL, D

Practical Training Activity

Practical Training 21.1 : *Varmam* management for hip joint injuries

Total activity: 4 hrs

Activity 1. Demonstration (2 hrs)

The teacher will demonstrate clinical examination to elicit signs & symptoms and rule out etiological factors by taking a relevant entire history along with physical examination, and confirm diagnosis by imaging technology and show how to perform varmam management procedures of hip joint injuries

Activity 2. Self-Directed Learning (2 hrs)

The teacher will direct the students to apply varmam manipulation techniques for hip joint injuries and encourage them to record his/her logbooks

Practical Training 21.2 : Varmam management for *thodai kaayangal*(thigh injuries).

Total activity : 4 hrs

Activity 1. Demonstration (2 hrs)

The teacher will demonstrate clinical examination to elicit signs & symptoms and rule out etiological factors by taking a relevant history along with physical examination, and confirm diagnosis by imaging technology, provide opportunities for students to ask questions and discuss their observations, show how to apply reduction and immobilisation techniques through varmam management.

Activity 2. Peer-Assisted Learning (1 hr)

The staff assist the student to get various thigh injury-related case studies from the WOS/Scopus indexed databases

Activity 3. Discussion (1 hr)

The staff will assess the student based on their discussion and concluded their log book

Practical Training 21.3 : Varmam management for *mulankaal muttu kaayangal*(knee joint injuries)

Total activity: 4 hrs

Activity 1. Brainstorming (1 hrs)

The staff will give a brief lecture on knee joint examination, injuries and dislocation of knee joints and its management

Activity 2. Demonstration Bedside (2hrs)

The staff will demonstrate the varmam manipulation techniques for various types of injuries around the knee joint

Activity 3. Simulation (1 hr)

The staff will assist the student to examine and application of the varmam manipulation techniques for various types of injuries around the knee joint

Practical Training 21.4 : The clinical signs,symptoms and varmam management of tarsal bone fracture and dislocation

Total activity :4 hrs

Activity 1. Demonstration Bedside (1 hr)

The staff will demonstrate history taking, how to examine the tarsal bone fracture and dislocation of foot injuries, radiological findings and varmam manipulation techniques

for tarsal bone fracture and dislocation at the bedside

Activity 2. X-ray Identification (1 hr)

The staff will illustrate the radiological findings, explain about the importance of position, mechanical errors during the x-ray, and correlate the radiological findings along with clinical symptoms about tarsal bone fracture and dislocation

Activity 3. Simulation (2 hrs)

The staff will simulate the student to demonstrate the examination, the manipulation techniques, physiotherapy techniques for post fracture complication, methods to use aids (braces, prosthetics, etc.) for tarsal bone fracture and dislocation

Practical Training 21.5 : Varmam management of foot injuries.

Total activity : 4 hrs

Activity 1. Demonstration (2hrs)

The staff will demonstrate history taking, how to examine, radiological findings and application methods of varmam manipulation techniques, for the affected bones, joints of foot injuries, and at the bedside

Activity 2. Peer Learning (2 hrs)

The staff will present the case studies based on history, mechanism, examination, radiological findings, management along with recent advance techniques for fracture of foot injuries. discuss the siddha approach to diagnosis and varmam treatment.

Experiential learning Activity

Experiential-Learning 21.1 : Varmam management procedures for hip joint injuries

Total activity: 6 hrs

Activity 1. Case-Based Learning (2 hrs)

The students will present a series of case studies with varying hip joint fracture types, mechanisms of fractures, radiological findings and recent advance management of hip joint injuries and management for post fracture complications

Activity 2. Roleplays (2 hrs)

The students are divided into two groups, one group acts as doctors, who will deliver the examination findings, required serological, radiological investigations, and will express to handle the patient in emergencies, recent advance techniques, along with varmam management, another group act as a patient who express the mechanism of hip joint injury

Activity 3: Discussions (2 hrs)

The students are divided into small groups to discuss the hip joint injuries and alternative system management, along with recent advance techniques and their observations are noted in their logbook

Experiential-Learning 21.2 : *Varmam* management for *thodai kaayangal* (thigh injuries).

Total activity : 6 hrs

Activity 1. Presentations (2 hrs)

The student will present the case study based on complaints, history, general, systemic examination, mechanism, serological, radiological investigations, *varmam* management and recent advanced techniques for *thodai kaayangal* (thigh injuries).

Activity 2. Case-Based Learning (2 hrs)

The student will present the case study based on complaints, history, general systemic examination, mechanism, serological, radiological investigations, *varmam* management and recent advanced techniques for *thodai kaayangal* (thigh injuries) at the bedside

Activity 3. Demonstration (2 hrs)

The student will demonstrate the *varmam* management for *thodai kaayangal* (thigh injuries) to CRRI and final year students

Experiential-Learning 21.3 : *Varmam* management for knee joint injuries

Total activity: 6 hrs

Activity 1. Case-Based Learning (2 hrs)

The student will present a case study about history, mechanism, examination, radiological findings, management alongwith recent advance techniques for for knee joint injuries and discuss the siddha approach to diagnosis and *varmam* treatment..

Activity 2. Demonstration Bedside (2 hrs)

The student will demonstrate the *varmam* manipulation techniques for knee joint injuries and physiotherapy techniques for post-fracture complications for knee joint injuries

Activity 3. Peer Learning (2 hrs)

The student will present the case series about history, mechanism, examination, radiological findings, management alongwith recent advance techniques for fracture of the humerus and discuss the siddha approach to diagnosis and *varmam* treatment.recent advances in management/treatment for knee joint injuries from the wos/scopus indexed journals

Experiential-Learning 21.4 : *Varmam* management for ankle joint injury

Total activity : 4 hrs

Activity 1. Case-Based Learning (1hr)

The student will present a case study of history, mechanism, examination,radiological findings, management alongwith recent advance techniques for ankle joint injury and discuss the siddha approach to diagnosis and *varmam* treatment.

Activity 2. Demonstration (2 hrs)

The student will demonstrate, actions of muscles attached around the ankle joint, the varmam technique and reduction methods in ankle joint injury, management of post fracture management Activity 3. Discussion (1 hr) The students divide into small groups to discuss based on definition, mechanism, types, radiological and serological findings, siddha principles and varmam manipulation techniques along with recent advances	
Experiential-Learning 21.5 : <i>Varmam</i> management for injury of the foot	
Total activity : 4 hrs Activity 1. Case-Based Learning (1hr) Present a case study of a patient with foot injury and discuss the siddha approach to diagnosis and <i>varmam</i> treatment. Students will work individually or in groups to analyze the cases, diagnose the fractures, and propose appropriate <i>varmam</i> treatments. Activity 2. Demonstration (2 hr) Step 1. The student will conduct a workshop with live demonstration by experienced siddha practitioners to show how to manage a case of various foot injuries by combining theoretical knowledge with hands-on practice can effectively address with in the <i>varmam</i> management techniques, including external management Step 2. The student will be applying the <i>varmam</i> technique and reduction methods in patients with fracture and dislocation of tarsal bones, fracture of metatarsal bones and phalanges. Activity 3. Discussion (1hr) The student will discuss about the injury of the foot by following criteria 1) Mechanism of fracture 2) Examination 3) Radiological investigations 4) Reduction techniques 5) Physiotherapy techniques	
Modular Assessment	
Assessment method	Hour
INSTRUCTIONS Conduct a structured modular assessment. The assessment will be for 50 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6C Case presentation for injuries in lower limb bones -10 Marks The scholar will be assessed by	4

- History taking
- General and systemic examination findings
- Siddha diagnostic tools and findings
- Serological and radiological findings
- varmam management

and

Clinical video case presentation = 10 marks

and

Perform varmam manipulation techniques for the management of lower limb injuries for 5 cases and document them = 10 marks

and

Each scholar should present the *varmam* management for injuries of lower limbs, which is documented from traditional *varmam* practitioners/vaithiyars through ppt to their colleagues - 10 marks

Team-Based Learning (TBL) for lower limb injuries and *varmam* management - 10 marks

The student will be assessed by

- Examination of the affected bone or joint
- Demonstrate the application methods of varmam management techniques

or

Any practical in converted form can be taken for assessment (25 marks)

and

Any of the experiential as portfolio/reflections/presentations can be taken as an assessment (25 marks)

Module 22 : Varmam management for soft tissue injuries

Module Learning Objectives

(At the end of the module, the students should be able to)

Describe the location and symptoms of soft tissue injuries.

Demonstrate *varmam* Manipulation techniques for the management of soft tissue injuries.

Perform clinical examination for various soft tissue injuries in *varmam maruthuvam*.

M 22 Unit 1 Injury to head and neck

22.1.1. *Chenthanal varmam* 22.1.2. *Thilartha kala varmam* 22.1.3. *Mel inthiriya varmam*

References: 4,19,20,28,55,62

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe elaborately on location, symptoms and varmam management of soft tissue injuries in varmam maruthuvam.	1	Lecture	CK	Know	L&GD,L &PPT
CO4,CO5,CO8	Identify the location of soft tissue varmam injury. Perform history taking and clinical examinations, diagnosis and expert optimal possible varmam management.	2	Practical Training 22.1	PSY-GUD	Shows-how	PER,CD, D-BED
CO4,CO5,CO8	Conduct and carryout experiential study on soft tissue varmam injury and perform appropriate varmam management in different cases	3	Experiential-Learning 22.1	PSY-MEC	Does	RP,PL,C BL

M 22 Unit 2 Injury to abdomen and thorax:

22.2.1. *Nadu vayiru isangal* 22.2.2. *Ottueeral* 22.2.3. *Pithukaai* 22.2.4. *Peesam* 22.2.5. *Kozhikudavan varmam* 22.2.6. *Pagarchai varmam* 22.2.7. *Vittil varmam* 22.2.8. *Thiralu varmam* 22.2.9. *Ulkuthu varmam* 22.2.10. *Pathi – virathai varmam* 22.2.11. *Punal varmam* 22.2.12. *Pira – Veetchu varmam* 22.2.13. *Arana – vaal varmam* 22.2.14. *Thirivisai varmam* 22.2.15. *Karal – kalangi varmam* 22.2.16. *Etchi varmam* 22.2.17. *Inthiriya varmam* 22.2.18. *Koombiyangi varmam* 22.2.19. *Neruppu varmam* 22.2.20. *Kuda-kaari varmam* 22.2.21- *Alagai varmam*

References: 4,28,55,62

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe the location, symptoms and varmam management of soft tissue varmam	6	Lecture	CK	Know	L&PPT

	injuries.					,L&GD
CO4,CO5,CO8	Identify the location of soft tissue varmam injury. Perform history taking and clinical examinations, diagnosis and demonstrate optimal possible varmam management.	6	Practical Training 22.2	PSY-GUD	Shows-how	CBL,BS, PAL
CO4,CO5,CO8	Identify the location of soft tissue varmam injury. Perform history taking and clinical examinations, diagnosis and expert optimal possible varmam management.	6	Practical Training 22.3	PSY-GUD	Shows-how	CBL,PAL ,BS
CO4,CO5,CO8	Identify the location of soft tissue varmam injury and perform the appropriate varmam management	7	Experiential-Learning 22.2	PSY-MEC	Does	LS,D,RP, PL
CO4,CO5,CO8	Identify the location of soft tissue injury and perform the appropriate varmam management in different cases.	7	Experiential-Learning 22.3	PSY-MEC	Does	LS,D,PL

M 22 Unit 3 Injury to upper and lower limb

22.3.1. *Naal viral maththi keeral* 22.3.2. *Theeneri varmam* 22.3.3. *Paerellu varmam* 22.3.4 *Kavali varmam* 22.3.5. *Kathir – valai varmam* 22.3.6. *Thivalai varmam*

References: 4,19,20,55,62

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe the location, symptoms and varmam management of soft tissue varmam injuries.	3	Lecture	CK	Know	L&PPT ,L&GD
CO4,CO5,CO8	Identify the location of soft tissue varmam injury. Perform history taking and clinical examinations, diagnosis and demonstrate optimal possible varmam management.	6	Practical Training 22.4	PSY-GUD	Shows-how	D-BED,DIS
CO4,CO5,CO8	Identify the location of soft tissue varmam injury and perform the appropriate varmam management in different cases.	9	Experiential-Learning 22.4	PSY-MEC	Does	TBL,CD

Practical Training Activity

Practical Training 22.1 : Optimal possible varmam management for soft tissue injury

Total activity : 2 hrs

Activity 1. Demonstration (2 hrs)

Step 1. The teacher will demonstrate a clinical examination to elicit signs and symptoms and rule out etiological factors by taking a relevant history, along with a physical examination, and confirm the diagnosis and varmam management procedures.(1hr 30 min)

Step 2. Provide opportunities for students to ask questions and discuss their observations (30 min)

Practical Training 22.2 : Location of soft tissue varmam injury in upper limb and demonstration of appropriate varmam management.

Total activity:6 hrs

Activity 1. Brainstorming (2 hrs)

The teacher will give a brief lecture on soft tissue injuries based on history, mechanism, examination, radiological findings, management alongwith recent advance techniques for soft tissue injuries and discuss the siddha approach to diagnosis and *varmam* treatment. and recent advance management for soft tissue injuries

Activity 2. Case-Based Learning (2 hrs)

The teacher will present case studies for soft tissue injury based on alternative medicine management procedures, machanism of alternative medicine management procedures,

Activity 3. Peer-Assisted Learning (2 hrs)

The teacher will assist the student to get case studies from scopus indexed jornal and make a discussion about the article by folowing creteria

- 1) Machanism of injuries
- 2) Examination
- 3) Radiological investications
- 4) Reduction techniques
- 5) Physiotherapy techniques

Practical Training 22.3 : Location of soft tissue injury in lower limb and demonstration of appropriate varmam management

Total activity:6 hrs

Activity 1. Brainstorming (2 hrs)

The teacher will give a brief lecture on soft tissue injuries based on history, mechanism, examination, radiological findings, management alongwith recent advance techniques for soft tissue injuries and discuss the siddha approach to diagnosis and *varmam* treatment. and recent advance management for soft tissue injuries

Activity 2. Case-Based Learning (2 hrs)

The teacher will present case studies for soft tissue injury based on alternative medicine management procedures, mechanism of alternative medicine management procedures,

Activity 3. Peer-Assisted Learning (2 hrs)

The teacher will assist the student to get case studies from scopus indexed journal and make a discussion about the article by following criteria

- 1) Mechanism of injuries
- 2) Examination
- 3) Radiological investigations
- 4) Reduction techniques
- 5) Physiotherapy techniques

Practical Training 22.4 : Demonstration of appropriate varmam management for soft tissue injury.

Total activity : 6 hrs

Activity 1. Demonstration (2 hrs)

The teacher should demonstrate how to elicit clinical examination, and demonstrate the location of soft tissue varmam injury and explain its varmam management

Activity 2. Demonstration bedside (2 hrs)

The teacher will demonstrate actions of muscles attached at affected area, the varmam technique and reduction methods along with suitable physiotherapy techniques

Activity 3. Simulation (2 hrs)

The teacher will assist the student to apply the knowledge about history takings, examination, interpret radiological findings, the varmam technique and reduction methods in soft tissue injury.

Experiential learning Activity

Experiential-Learning 22.1 : Varmam management in different cases of soft tissue varmam injury

Total activity : 3hrs

Activity 1. Peer Learning (1 hr)

The student will collect the data from Scopus/WOS indexed journals based on soft tissue injury

Activity 2. Role-Playing (2 hrs)

The students can act out different scenarios to deliver their knowledge about the soft tissue varmam injuries by roleplay and act based on following criteria

- 1) Mechanism of injury
- 2) Examination
- 3) Radiological investigations
- 4) Reduction techniques

5) physiotherapy techniques

Experiential-Learning 22.2 : Management of soft tissue injury upper limb

Total activity: 7 hrs

Activity 1. Peer Learning (2 hrs)

The student will present case study about history, mechanism, examination, radiological findings, management alongwith recent advance techniques for soft tissue injuries from various scopus indexed journals and discuss the siddha approach to diagnosis and *varmam* treatment

Activity 2. Demonstration (2 hrs)

The student will demonstrate actions of muscles attached in affected area, the appropriate general and systemic examination, the varmam technique and reduction methods along with suitable physiotherapy techniques to CRRI students

Activity 3. Library session (2 hrs)

The student will collect the following things

1. The various case studies for soft tissue injuries
2. Varmam internal, external medicines along with the mechanism of action
3. Various external therapies
4. the data for aids to use soft tissue injuries

Activity 4. Debate (1 hr)

The student will make a debate about various varmam management, uses of aids, modern advance management techniques for soft tissue injuries

Experiential-Learning 22.3 : Management of soft tissue injuries in lower limb

Total activity: 7 hrs

Activity 1. Peer Learning (2 hrs)

The student will present case study about history, mechanism, examination, radiological findings, management alongwith recent advance techniques for soft tissue injuries from various scopus indexed journals and discuss the siddha approach to diagnosis and *varmam* treatment

Activity 2. Demonstration (2 hrs)

The student will demonstrate actions of muscles attached in affected area, the appropriate general and systemic examination, the varmam technique and reduction methods along with suitable physiotherapy techniques to CRRI students

Activity 3. Library session (2 hrs)

The student will collect the following things

1. The various case studies for soft tissue injuries

2. Varmam internal,external medicines along the the mechanism of action

3. Various external therapies

4. the data for aids to use soft tissue injuries

Activity 4. Debate (1 hr)

The student will make a debate about various varmam management, uses of aids, modern advance management techniques for soft tissue injuries

Experiential-Learning 22.4 : Varmam management for soft tissue injury

Total activity: 9 hrs

Activity 1. Presentations (1 hr 30min)

The student will present a case study about history, mechanism, examination, radiological findings, management alongwith recent advance techniques for fracture of the humerus and discuss the siddha approach to diagnosis and *varmam* treatment.

Activity 2. Demonstration (2 hrs)

The student will demonstrate, actions of muscles attached in affected area, the varmam technique and reduction methods management for soft tissue injury

Activity 3. Libraray session (2 hrs)

The student will document the internal, external meditions for various soft tissue injuries, enlist the medicine and catagory based on their ingradients, preparation methods, *suvai, veeriyam, prabavam*

Activity 4. Simulation (2 hrs)

The students will simulate/demonstrate the clinical examination, radiological interpetation, varmam management procedues along with physiotherapy techniques for suitable soft tissue injuries

Activity 5. Debate (1 hr 30min)

The students will conduct a debate about the siddha principles, varmam management procedues, diagnostic manner, and the recent advance in management for various soft tissue injuries

Modular Assessment

Assessment method	Hour
INSTRUCTIONS Conduct a structured modular assessment. The assessment will be for 50 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6C Clinical case presentation of soft tissue injuries = 15 marks Making models and charts of soft tissue location = 5 marks The scholar is assessed by:	4

1) Quality of work
2) Explanation based on siddha varmam maruthuvam principle
Team-Based Learning (TBL) for soft tissue injuries and varmam management - 10 marks

The scholar will be assessed by

- History taking
- General and systemic examination finding
- Clinical examination of various soft tissue injuries.
- Siddha diagnostic tools and findings
- varmam management

Collect the literary evidence and document it - 5 marks

Demonstrate and teach the UG students on soft tissue injuries - 5 marks

Perform varmam manipulation techniques for the management of soft tissue injuries for 5 cases and document them = 10 marks
or

Any practical in converted form can be taken for assessment(25 marks).

and
Any experiential, such as portfolios/reflections/presentations, can be taken as an assessment (25 marks).

Semester No : 6

Module 23 : Varmam management for nerve injuries

Module Learning Objectives

(At the end of the module, the students should be able to)

Describe the etiology, types, clinical features and *varmam* technique for nerve injuries of head, neck, abdomen, pelvis, upper limb, lower limb and peripheral nerves
Identify the nerve injuries through clinical examinations and symptoms
Manipulation of *varmam* technique for various nerve injuries

M 23 Unit 1 Nerve Injuries of Head and Neck

23.1.1. *Keeri* (External jugular vein) 23.1.2. *Uthiram parathi* (Left common carotid artery) 23.1.3. *Kootchal* (Greater occipital nerve) 23.1.4. *Kambi* (Temporal branch of facial nerve) 23.1.5. *Pagalozhi* (Supra trochlear nerve) 23.1.6. *Kannoli* (Supra orbital nerve) 23.1.7. *Pootha* (Supra orbital nerve) 23.1.8. *Thudi* (Supra orbital nerve) 23.1.9. *Thaaru* (Lacrimal nerve) 23.1.10. *Pidari* (Cervical plexus) 23.1.11. *Neer koori* (Glossopharyngeal nerve) 23.1.12. *Pathiri* (External laryngeal nerve)

References: 4,19,55,62

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe the location, clinical features, diagnosis and varmam management for nerve injuries of head and neck	2	Lecture	CK	Know	L,L&PPT
CO4,CO5,CO8	Identify the location of nerve injury in <i>varmam</i> . Perform history taking and clinical examinations, diagnosis and expert optimal possible <i>varmam</i> management for nerve injuries of head and neck	4	Practical Training 23.1	PSY-GUD	Shows-how	D-BED,D IS,PAL
CO4,CO5,CO8	Develop efficiency in performing the <i>varmam</i> technique for the management of nerve injuries of head and neck	6	Experiential-Learning 23.1	PSY-MEC	Does	CBL,TBL

M 23 Unit 2 Nerve Injuries of Thorax

23.2.1. *Uthira* (Aorta) 23.2.2. *Vil* (Long thoracic nerve) 23.2.3. *Akkini* (Internal thoracic nerve) 23.2.4. *Thaamarai* (Subcostal T10 nerve) 23.2.5. *Villu* (Subcostal T 7 nerve) 23.2.6. *Pathini* (Eighth intercostal nerve) 23.2.7. *Uthira parathi* (Left common carotid artery) 23.2.8. *Uthira janni* (Inferior vena cava) 23.2.9. *Ilaval* (Intercostal nerve) 23.2.10. *Eakaasi* (Anterior cutaneous branch of intercostal nerve) 23.2.11. *Kukkuda* (T12 spinal cord segment nerve) 23.2.12. *Karu-manthi* -(Hepatic plexus) 23.2.13. *Mel varna* (Supra clavicular nerve) 23.2.14. *Karal virithaan* (Abdominal branch of phrenic nerve) 23.2.15. *Seetha(mel)* (Posterior cutaneous branches of dorsal rami C4-T6) 23.2.16. *Koombu narambu* (Thoracic nerve T9) 23.2.17. *Mayir kootchal* (Sub costal T 7 nerve) 23.2.18. *Oodu* (Long thoracic nerve) 23.2.19. *Ulkodi* (Thoracic nerve T 8) 23.2.20. *Athisara* -(Thoracic abdominal nerve T8) 23.2.21. *Kathir pesi* (Thoraco dorsal nerve) 23.2.22. *Uyir Narambu* (Lesser occipital nerve) 23.2.23. *Kunukkellu* (Thoracic nerve T9)

References: 4,19,55,62

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe the location, clinical features, diagnosis and <i>varmam</i> management for nerve injuries of thorax	2	Lecture	CK	Know	L&PPT ,L
CO4,CO5,CO8	Identify the location of nerve injury in <i>varmam</i> . Perform history taking and clinical examinations, diagnosis and expert optimal possible <i>varmam</i> management for nerve injuries of thorax.	4	Practical Training 23.2	PSY-GUD	Shows-how	DIS,D,SIM
CO4,CO5,CO8	Perform proficiency in performing the <i>varmam</i> technique for the management of nerve injuries of thorax	6	Experiential-Learning 23.2	PSY-MEC	Does	SDL,CBL ,DIS

M 23 Unit 3 Nerve Injuries of Abdomen and pelvis

23.3.1. *Peesa Narambu* (Ilio inguinal nerve) 23.3.2. *Mael uri* (Greater splanchnic nerve) 23.3.3. *Neer* (Pelvic nerve) 23.3.4. *Kottai-kai narumbu* (Posterior scrotal nerve) 23.3.5. *Guru-boga* (Ilio hypogastric nerve) 23.3.6. *Keel varna* (Pudendal nerve) 23.3.7. *Kuyil Narambu* (Splenic plexus) 23.3.8. *Kozhuthu Narambu* (Greater splanchnic nerve) 23.3.9. *Kudukkai* (Dorsal nerve of clitoris) 23.3.10. *Poonthurumbal* (Ilio hypogastric nerve) 23.3.11. *Vaasal narambu* (Inferior rectal nerve) 23.3.12. *Uri narambu* (Genitofemoral nerve) 23.3.13. *Paaloonti* (Genital branch of genitofemoral nerve) 23.3.14. *Saaya narambu* (Coccygeal nerve) 23.3.15. *Thavalai Narambu* (Perineal nerve) 23.3.16. *PinMudichu* (lumbosacral) 23.3.17. *Pusal thiri Narambu* (Dorsal nerve of penis) 23.2.18. *Therai* (Coeliac plexus) 23.2.19. *Kundisangal* (Sacral nerve) 23.2.20. *Surakaari* (Splanchnic nerve) 23.2.21. *Irai mali* (Anterior vagal trunk) 23.2.22. *Poovalasan* (Anterior cutaneous branch of ventral rami of T6-T12)

References: 4,19,28,55,62

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe the location, clinical features, diagnosis and <i>varmam</i> management for nerve injuries of abdomen and pelvis	2	Lecture	CK	Know	L&GD,L
CO4,CO5,CO8	Identify the location of nerve injury in <i>varmam</i> . Perform history taking and clinical examinations, diagnosis and expert optimal possible <i>varmam</i> management for nerve injuries of abdomen and pelvis	4	Practical Training 23.3	PSY-GUD	Shows-how	D,SIM,DIS

CO4,CO5,CO8	Perform proficiency in performing the varmam technique for the management of nerve injuries of abdomen and pelvis	4	Experiential-Learning 23.3	PSY-MEC	Does	SDL,CBL
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M 23 Unit 4 Nerve Injuries of Upper limb and lower limb

23.4.1. Mel varna (Supraclavicular nerve) 23.4.2. *Mundirukki* (Axillary nerve) 23.4.3. *Neer-pisi* (Lumbar nerve) 23.4.4. *Kural* (Brachial plexus) 23.4.5. *Suvaasappal* (Sacral plexus) 23.4.6. *Sirasathi* (Median nerve)

References: 4,19,55,62

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe the location, clinical features, diagnosis and varmam management for nerve injuries of Upper limb and lower limb	2	Lecture	CK	Know	L,L&PPT
CO4,CO5,CO8	Identify the location of nerve injury in varmam. Perform history taking and clinical examinations, diagnosis and expert optimal possible varmam management for nerve injuries of upper limb and lower limbs.	4	Practical Training 23.4	PSY-GUD	Shows-how	D,LS,X-Ray,DIS
CO4,CO5,CO8	Perform proficiency in performing the varmam technique for the management of nerve injuries of Upper limb and lower limb	6	Experiential-Learning 23.4	PSY-MEC	Does	SDL,D-BED,PER

M 23 Unit 5 Peripheral nerve injuries

23.5.1. Anatomy and structure of nerve 23.5.2. Classification 23.5.3. Clinical examination 23.5.4. Diagnostic test 23.5.5. *Varmam* management.

References: 4,84,85,86

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe the structure of neurons, anatomy of peripheral nervous system, clinical examination,diagnostic test and varmam management for peripheral nerve injuries.	2	Lecture	CK	Know	L&PPT ,L

CO4,CO5,CO8	Demonstrate the clinical examination and varmam manipulation techniques for specific peripheral nerve injuries.	4	Practical Training 23.5	PSY-GUD	Shows-how	SIM,D,DI S
CO4,CO5,CO8	Develop proficiency in performing clinical assessment,diagnosing and varmam management skills clinically for specific peripheral nerve injuries.	4	Experiential-Learning 23.5	PSY-MEC	Does	CD,CBL

Practical Training Activity

Practical Training 23.1 : Varmam management for nerve injuries in the head and neck

Total activity: 4hrs

Activity 1. Demonstration (2 hrs)

The teacher will demonstrate the clinical examination of nerve injuries in the head and neck and explain its varmam management techniques

Activity 2. Discussion (1 hr)

The teacher makes a discussion by divide students into small groups to discuss their observations. Ask them to identify the various nerve injuries. Provide opportunities for students to ask questions and discuss their observations.

Activity 3. Simulation (1hr)

The teacher will assess the student to perform varmam management procedures, and encourage students to explore additional resources to deepen their knowledge. The student will observe, repeat and record his/her observations for that specific injury.

Practical Training 23.2 : Varmam management techniques for thoracic nerve injuries

Total activity: 4hrs

Activity 1. Demonstration (2 hrs)

The teacher will demonstrate the clinical examination of thoracic nerve injury and explain its varmam management techniques

Activity 2. Discussion (1 hr)

The teacher makes a discussion by divide students into small groups to discuss their observations. Ask them to identify the various nerve injuries. Provide opportunities for students to ask questions and discuss their observations.

Activity 3. Simulation (1hr)

The teacher will assess the student to perform varmam management procedures, encourage students to explore additional resources to deepen their knowledge. The student will observe, repeat and record his/her observations for that specific injury.

Practical Training 23.3 : Varmam-related nerve injuries in the abdominal and pelvic regions.

Total activity: 4hrs

Activity 1. Demonstration (2 hrs)

The teacher will demonstrate the mechanism, the examination, relations of affected naadi, varmam therapy for nerve injury in the abdominal and pelvic regions, explain the varmam management techniques mechanism

Activity 2. Discussion (1 hr)

The teacher makes a discussion by divide students into small groups to discuss their observations. Ask them to identify the various nerve injuries. Provide opportunities for students to ask questions and discuss their observations.

Activity 3. Simulation (1 hr)

The teacher will assess the student to perform varmam management procedures, encourage students to explore additional resources to deepen their knowledge. The student will observe, repeat and record his/her observations for that specific injury.

Practical Training 23.4 : Varmam management for nerve injuries in the upper and lower limbs

Total activity : 4 hrs

Activity 1. Demonstration (2 hr)

The teacher will demonstrate the mechanism, the examination, relations of affected naadi, varmam therapy for nerve injury in the upper and lower limbs and explain the varmam management techniques mechanism

Activity 2. Library Session (1 hr)

The teacher will assist the student in collecting the data about internal and external medicines and other external therapies for the treatment of nerve injuries in the upper and lower limbs

Activity 3. Discussion (1 hr)

The teacher will divide students into small groups to discuss their observations. Ask them to identify the various nerve injuries. Provide opportunities for students to ask questions and discuss their observations.

Practical Training 23.5 : Varmam techniques for peripheral nerve injuries

Total activity: 4hrs

Activity 1. Demonstration (2 hrs)

The teacher will demonstrate, the clinical examination of nerve injury, power, tone and actions of muscles supplied the affected nerve, the varmam technique along with physiotherapy management, role of aids

Activity 2. Discussion (1 hr)

The teacher makes a discussion by divide students into small groups to discuss their observations. Ask them to identify the various nerve injuries, provide opportunities for students to ask questions and discuss their observations.

Activity 3. Simulation (1hr)

The teacher will assess the student to perform varmam management procedures, encourage students to explore additional resources to deepen their knowledge. The student will observe, repeat and record his/her observations for that specific injury.

Experiential learning Activity

Experiential-Learning 23.1 : Varmam management of nerve injuries of head and neck

Total activity : 6 hrs

Activity 1: Self-Directed Learning (2 hrs)

The scholar will be able to observe the various nerve injuries through live demonstrations on models/ patient, Encourage them to note key features, Students will work individually or in groups to analyze the cases, and will be able to perform the clinical examinations for nerve injuries of specific peripheral nerve injuries.and confirm the diagnosis, and apply varmam manipulation techniques in many patients with the specific condition.

Activity 2. Case-Based Learning (2 hrs)

The student will present the case series based on varmam manipulation techniques on at least 5 patients and document pre- and post-treatment assessment. Compare the pre- and post-treatment assessment and evaluate the efficacy of varmam management.

Activity 3. Discussion (2 hrs)

Step 1. The student will collect the data for recent advance management for injuries of head and neck (1 hr)

Step 2. The student will make a discussion based on their colleted data and varmam management and concluded in thier log book (1 hr)

Experiential-Learning 23.2 : Varmam management for nerve injuries of thorax

Total activity : 6 hrs

Activity 1: Self-Directed Learning (2 hrs)

The scholar will be able to observe the various nerve injuries through live demonstrations. Encourage them to note key featuresCBL-Students will work individually or in groups to analyze the cases, and will be able to perform the clinical examinations for nerve injuries of specific peripheral nerve injuries.and confirm the diagnosis, and apply varmam manipulation techniques in many patients with the specific condition.

Activity 2. Case-Based Learning (2 hrs)

The student will present the case series based on varmam manipulation techniques on at least 5 patients and document pre- and post-treatment assessment. Compare the pre- and post-treatment assessment and evaluate the efficacy of varmam management.

Activity 3. Discussion (2 hrs)

Step 1. The student will collect the data for recent advance management for injuries of thorax (1 hr)

Step 2. The student will make a discussion based on their colleted data and varmam management and concluded in thier log book (1 hr)

Experiential-Learning 23.3 : Varmamr management for nerve injuries of abdomen and pelvis

Total activity : 4 hrs

Activity 1: Self-Directed Learning (2 hrs)

The scholar will be able to observe the various nerve injuries through live demonstrations. Encourage them to note key feature, they will work individually or in groups to analyze the cases, and will be able to perform the clinical examinations for nerve injuries of the abdomen and pelvis and confirm the diagnosis, and apply varmam manipulation techniques in many patients with the specific condition.

Activity 2. Case-Based Learning (2 hrs)

The student will present the case series based on varmam manipulation techniques on at least 5 patients and document pre- and post-treatment assessment. Compare the pre- and post-treatment assessment and evaluate the efficacy of varmam management.

Experiential-Learning 23.4 : Varmam management for nerve injuries of upper limb and lower limb.

Total activity: 6 hrs

Activity 1. Self-Directed Learning (2 hrs)

The student will be present the note the key features about the results for examination, prognosis chart of the conditions in the duration of varmam treatment for nerve injuries of upper limb and lower limb.

Activity 2. Demonstration Bedside (2hrs)

The Student will be performing the clinical tests for nerve injuries of head and neck, confirm the diagnosis, and applying varmam manipulation techniques in many patients with the specific condition. Each student is to perform varmam manipulation techniques.on at least 5 patients and document pre andadvised post treatment assessment. Compare the pre- and post-treatment assessment and evaluate the efficacy of varmam management. presentation skill also.

Activity 3. Presentations (2hrs)

Each student presents the hand injuries - types-mechanism- radiological findings- treatment methods- physiotherapy techniques to their collueges and make a discussion about the recent advances in nerve injuries of upper limb and lower limb.

Experiential-Learning 23.5 : Varmam management for specific peripheral nerve injuries.

Total activity : 4 hrs

Activity 1: Self-Directed Learning (2 hrs)

The scholar will be able to observe the various nerve injuries through live demonstrations. Encourage them to note key featuresCBL-Students will work individually or in groups to analyze the cases, and will be able to perform the clinical examinations for nerve injuries of specific peripheral nerve injuries.and confirm the diagnosis, and apply varmam manipulation techniques in many patients with the specific condition.

Activity 2. Case-Based Learning (2 hrs)

The student will present the case series based on varmam manipulation techniques on at least 5 patients and document pre- and post-treatment assessment. Compare the pre- and post-treatment assessment and evaluate the efficacy of varmam management.

Modular Assessment

Assessment method	Hour
INSTRUCTION: Conduct a structured modular assessment. The assessment will be for 50 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the Table 6C Debate = 5 marks Making models and charts of nerve injury location = 5 marks The scholar is assessed by: 1) Quality of work 2) Explanation based on <i>siddha varmam maruthuvam</i> principle MCQ and Quiz = 5 marks Topic presentation - 5 marks OBSE for Nerve injuries and <i>varmam management</i> = 15marks Collect the literary evidence and document it - 5 marks Perform <i>varmam</i> manipulation techniques for the management of nerve injuries for 5 cases and document them = 10marks or Any practical in converted form can be taken for assessment (25marks). and Any experiential, such as portfolios/reflections/presentations can be taken as an assessment (25marks).	4

Module 24 : Varmam management for Sports injuries

Module Learning Objectives

(At the end of the module, the students should be able to)

Describe the causes, clinical symptoms, mechanism and management of various sports injuries

Conduct clinical examination for injury to the ligaments of the knee and shoulder

Identify ligaments affected based on clinical findings, radiological investigations and symptoms
 Manage sports injuries through *varmam* technique, internal medicines, external medicines and rehabilitation

M 24 Unit 1 Injuries to muscles and tendons

24.1.1. Contusion 24.1.2. Wound 24.1.3. Strain 24.1.4. Cramps

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe the causes, clinical symptoms, mechanism of injury and <i>varmam</i> management for muscle and tendon injuries.	3	Lecture	CK	Know	L&PPT ,L
CO4,CO5,CO8	Perform the management by <i>varmam</i> therapy along with internal and external medications for muscle and tendon injuries.	6	Practical Training 24.1	PSY-GUD	Shows-how	DIS,D-BED
CO4,CO5,CO8	Perform proficiency in performing <i>varmam</i> therapy and medicine preparations for muscle and tendon injury	8	Experiential-Learning 24.1	PSY-MEC	Does	PL,CD,CBL

M 24 Unit 2 Injuries to ligaments

24.2.1. Sprain around the shoulder, elbow, wrist, hip, knee, ankle 24.2.2. Ligament injury around the shoulder, elbow,wrist, hip, knee, ankle

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe the ligaments around the joints, mechanism of injury, clinical features, clinical test, <i>varmam</i> manipulation, medications and rehabilitation	3	Lecture	CK	Know	L&PPT ,L

CO4,CO5,CO8	Demonstrate the clinical tests for ligaments around the joints, <i>varmam</i> manipulation techniques and medications for ligament injuries.	6	Practical Training 24.2	PSY-GUD	Shows-how	PER,D-BED,DIS
CO4,CO5,CO8	Perform the clinical tests and <i>varmam</i> manipulation for injury to ligaments	8	Experiential-Learning 24.2	PSY-MEC	Shows-how	PL,ML,CBL,CD

M 24 Unit 3 Injuries to the cartilage

24.3.1. Shoulder 24.3.2. Hip 24.3.3. Knee

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe the causes, clinical symptoms, mechanism of injury and <i>varmam</i> management for injuries to cartilages.	2	Lecture	CK	Know	L&PPT,L
CO4,CO5,CO8	Demonstrate the clinical tests for injuries to the cartilage, <i>varmam</i> manipulation technique and medications for injury to cartilage	4	Practical Training 24.3	PSY-GUD	Shows-how	DIS,D-BED,PAL
CO4,CO5,CO8	Perform the clinical tests and <i>varmam</i> manipulation for injuries to cartilage.	6	Experiential-Learning 24.3	PSY-MEC	Shows-how	ML,CD,J C,CBL

M 24 Unit 4 Fractures and Dislocation

24.4.1. Etiology 24.4.2. Investigation 24.4.3. Reduction 24.4.4. Immobilisation 24.4.5. Rehabilitation

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Describe the causes, clinical symptoms, mechanism of injury and management for	2	Lecture	CK	Know	L&PPT

	fracture in sports					,L
CO4,CO5,CO8	Demonstrate the clinical tests for fracture in sports, <i>varmam</i> manipulation technique and medications for fracture during sports	4	Practical Training 24.4	PSY-GUD	Shows-how	PAL,DIS, D-BED,X-Ray
CO4,CO5,CO8	Perform the clinical tests and <i>varmam</i> manipulation for fracture during sports	4	Experiential-Learning 24.4	PSY-MEC	Shows-how	TBL,JC,C BL,ML,C D

Practical Training Activity

Practical Training 24.1 : Management of muscle and tendon injuries through *varmam* therapy

Total activity: 6 hrs

Activity 1. Demonstration (2 hrs)

The teacher will demonstrate the clinical examination of muscle and tendon injuries. and explain its *varmam* management techniques

Activity 2. Discussion (2 hr)

The teacher makes a discussion by divide students into small groups to discuss their observations. Ask them to identify the various muscle and tendon injuries, provide opportunities for students to ask questions and discuss their observations.

Activity 3. Simulation (2 hr)

The teacher will assess the student to perform *varmam* management procedures, encourage students to explore additional resources to deepen their knowledge. The student will observe, repeat and record his/her observations for that specific injury.

Practical Training 24.2 : *Varmam* manipulation techniques for ligament injuries.

Total activity: 6 hrs

Activity 1. Demonstration (2 hrs)

The teacher will demonstrate the clinical examination of ligament injuries. and explain its *varmam* management techniques

Activity 2. Discussion (2 hr)

The teacher makes a discussion by divide students into small groups to discuss their observations. Ask them to identify the various ligament injuries., provide opportunities for students to ask questions and discuss their observations.

Activity 3. Simulation (2 hr)

The teacher will assess the student to perform *varmam* management procedures, encourage students to explore additional resources to deepen their knowledge. The student

will observe, repeat and record his/her observations for that specific injury.

Practical Training 24.3 : *Varmam* manipulation techniques for cartilage injuries

Total activity: 4hrs

Activity 1. Demonstration (2 hrs)

The teacher will demonstrate the clinical examination of cartilage injuries and explain its varmam management techniques

Activity 2. Discussion (1 hr)

The teacher makes a discussion by divide students into small groups to discuss their observations. Ask them to identify the various cartilage injuries, provide opportunities for students to ask questions and discuss their observations.

Activity 3. Simulation (1hr)

The teacher will assess the student to perform varmam management procedures, encourage students to explore additional resources to deepen their knowledge. The student will observe, repeat and record his/her observations for that specific injury.

Practical Training 24.4 : *Varmam* manipulation techniques for sports-related fractures

Total activity: 4hrs

Activity 1. Demonstration (2 hrs)

The teacher will demonstrate the clinical examination of sports-related fractures and explain its varmam management techniques

Activity 2. Discussion (1 hr)

The teacher makes a discussion by divide students into small groups to discuss their observations. Ask them to identify the various sports-related fractures, provide opportunities for students to ask questions and discuss their observations.

Activity 3. Simulation (1hr)

The teacher will assess the student to perform varmam management procedures, encourage students to explore additional resources to deepen their knowledge. The student will observe, repeat and record his/her observations for that specific injury.

Experiential learning Activity

Experiential-Learning 24.1 : *Varmam* management for muscle and tendon Injury

Total activity: 8hrs

Activity 1. Self-Directed Learning (2 hrs)

The student will be able to observe the various muscle and tendon Injury injuries through live demonstration, note the key features

Activity 2. Demonstration Bedside (2hrs)

The Student will be performing the clinical examination for muscle and tendon Injury, confirming the diagnosis, and applying varmam manipulation techniques in many patients with the specific condition. Each student is to perform varmam manipulation techniques. on at least 5 patients and document pre- and post-treatment assessment. Compare the pre- and post-treatment assessment and evaluate the efficacy of varmam management. presentation skills also.

Activity 3. Presentations (2hrs)

The student will present his/her observation in the class, and the outcome will be discussed with the teacher, taking classes for UG students about their case studies

Activity 4. Simulation (2 hrs)

The student will simulate as traditional bone setting techniques for various muscle and tendon Injury

Experiential-Learning 24.2 : Varmam management for injury to ligaments

Total activity: 8 hrs

Activity 1. Self-Directed Learning (2 hrs)

The student will be able to observe the various ligaments injuries through live demonstration, note the key features

Activity 2. Demonstration Bedside (2hrs)

The Student will be performing the clinical examination for injury to ligaments, confirming the diagnosis, and applying varmam manipulation techniques in many patients with the specific condition. Each student is to perform varmam manipulation techniques. on at least 5 patients and document pre- and post-treatment assessment. Compare the pre- and post-treatment assessment and evaluate the efficacy of varmam management. presentation skills also.

Activity 3. Presentations (2hrs)

The student will present his/her observation in the class, and the outcome will be discussed with the teacher, taking classes for UG students about their case studies

Activity 4. Simulation (2 hrs)

The student will simulate as traditional bone setting techniques for various ligament injuries

Experiential-Learning 24.3 : Apply varmam for cartilage injuries

Total activity: 6 hrs

Activity 1. Self-Directed Learning (2 hrs)

The student will be able to observe the various cartilage injuries through live demonstration, note the key features

Activity 2. Demonstration Bedside (2hrs)

The Student will be performing the clinical tests for nerve injuries of cartilage, confirming the diagnosis, and applying varmam manipulation techniques in many patients with the specific condition. Each student is to perform varmam manipulation techniques. on at least 5 patients and document pre- and post-treatment assessment. Compare the pre- and post-treatment assessment and evaluate the efficacy of varmam management. presentation skills also.

Activity 3. Presentations (2hrs)

The student will present his/her observation in the class, and the outcome will be discussed with the teacher, taking classes for UG students about their case studies

Experiential-Learning 24.4 : Apply *varmam* for sports fractures

Total activity : 4 hrs

Activity 1: Self-Directed Learning (2 hrs)

The scholar will be able to observe the various sports injuries through live demonstrations. Encourage them to note key features and the students will work individually or in groups to analyze the cases, and will be able to perform the clinical examinations and confirm the diagnosis, and apply *varmam* manipulation techniques in many patients with the specific condition.

Activity 2. Case-Based Learning (2 hrs)

The student will present the case series based on *varmam* manipulation techniques on at least 5 patients and document pre- and post-treatment assessment. Compare the pre- and post-treatment assessment and evaluate the efficacy of *varmam* management.

Modular Assessment

Assessment method

Hour

INSTRUCTIONS

Conduct a structured modular assessment. The assessment will be for 50 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6C

Group discussion and collect the literary evidence and document it - 5 marks

Demonstrate and teach the UG students on sports injuries - 5 marks

Clinical video case presentation = 10 marks

Paper publications - 5 marks

OBSE for various sports injuries and *varmam* management = 15 marks

Perform *varmam* manipulation techniques for the management of various sports injuries for 5 cases and document them = 10 marks

or

Any practical in converted form can be taken for assessment (25 marks).

and

Any experiential, such as portfolios/reflections/presentations, can be taken as an assessment (25 marks).

4

Paper No : 4 ESSENTIALS IN TRAUMATOLOGY AND ORTHOPEDICS						
Semester No : 3						
Module 25 : General principles of traumatology - Part1						
Module Learning Objectives (At the end of the module, the students should be able to) Discuss about details of the skeletal system, general principles of fracture and dislocation. Discuss both direct and indirect fracture healing methods. Interpret X-rays, scans, and videos and illustrate anatomy, fractures, dislocations, and subluxations. Diagnose fracture, dislocation, and subluxation types through various imaging techniques and clinical models.						
M 25 Unit 1 Introduction to skeletal system 25.1.1. Brief anatomy 25.1.2. Organizations, types of bone and joints 25.1.3. Mechanism of joint movements References: 84,85,86						
3A	3B	3C	3D	3E	3F	3G
CO6,CO7,CO8	Describe the overall structure of skeletal system through anatomy organization - types of bones and joints.	2	Lecture	CC	Know	L&PPT
CO6,CO7,CO8	Identify and classify the different types of bone and joint, ROM of joints through skeletal models.	4	Practical Training 25.1	PSY-GUD	Knows-how	D-M,D
CO6,CO7,CO8	Demonstrate various bones and joints movements & relevant muscles action through living models, atlas and group discussions.	5	Experiential-Learning 25.1	PSY-MEC	Shows-how	PER,CBL,D

M 25 Unit 2 General principles of fractures

25.2.1. Introduction: definition, types, mechanism of injury, clinical features 25.2.2. Approach to orthopaedic injury, Investigation, management and approach to polytrauma case.

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO6,CO7,CO8	Describe the general principles of fracture, types, mechanism of injury, clinical features and approach to injury and polytrauma and its relevant investigations.	2	Lecture	CC	Know	L&PPT
CO6,CO7,CO8	Identify various types of fracture through clinical demonstration with patients.	4	Practical Training 25.2	PSY-GUD	Knows-how	PER,BS,DIS,D
CO6,CO7,CO8	Demonstrate proficiency in learning various Injuries, fracture through spotters, video atlas	5	Experiential-Learning 25.2	PSY-MEC	Shows-how	RP,DIS,C_L

M 25 Unit 3 General principles of dislocations

25.3.1. Definition, classification, patho-anatomy, clinical features, investigation, diagnosis, treatment and complications of dislocation 25.3.2. Definition, classification, patho-anatomy, clinical features, investigation, diagnosis, treatment and complications of subluxation

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO6,CO7,CO8	Describe the definition, types, clinical features, investigation, treatment and complications of dislocations and subluxations	3	Lecture	CC	Knows-how	L&PPT
CO6,CO7,CO8	Demonstrate the examination for the dislocations and subluxations of various joints with clinical presentation.	6	Practical Training 25.3	PSY-GUD	Knows-how	BS,CBL,D,D-M

CO6,CO7,CO8	Apply the various dislocations and subluxations by examination and radiological findings	8	Experiential-Learning 25.3	PSY-MEC	Shows-how	LS,EDU
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M 25 Unit 4 Fracture healing methods

25.4.1. Introduction 25.4.2. Indirect fracture healing 25.4.3. Stage of impact, stage of induction, stage of inflammation, stage of soft callus, stage of hard callus, stage of remodeling. 25.4.4. Direct fracture healing 25.4.5. Distraction histogenesis

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO6,CO7,CO8	Describe fracture healing methods	3	Lecture	CC	Know	L&PPT
CO6,CO7,CO8	Demonstrate various phases of direct and indirect fracture healing	6	Practical Training 25.4	PSY-GUD	Knows-how	CBL,X-Ray,D,BS
CO6,CO7,CO8	Demonstrate the proficiency in understanding fracture healing methods.	8	Experiential-Learning 25.4	PSY-MEC	Shows-how	FV,PER,EDU,BL

Practical Training Activity

Practical Training 25.1 : Identification and classification of different types of bone and joint, ROM of joints through skeletal models.

Total activity: 4 hrs

Activity 1: Demonstration on models (2 hours)

Step 1: The teacher will show a complete skeletal model and explain how it is categorised into different types of bones: long, short, flat, irregular, and sesamoid. and will point out specific bones in the model and describe their features, such as shape, function, and location. (1 hour)

Step 2: The teacher will use joint models (e.g., elbow, knee, shoulder) to show students how joints move through different ranges, such as flexion, extension, abduction, adduction, and rotation. and will demonstrate the range of motion at each joint, explaining how these movements differ depending on the joint structure (1 hour)

Activity 2: Demonstration (2 hours)

Step 1: The teacher will introduce the concept of measuring ROM and demonstrate how to measure ROM using a goniometer. (1 hour)

Step 2: The teacher illustrates the role of muscles in various movements of all joints by using the models (30 hours)

Step 3: The teacher assesses the students based on group discussion about ROM, and exhibits the muscles' role around the various joints, the mechanism of movements (30 mins)

Practical Training 25.2 : The various types of fractures through clinical demonstrated clinically with patients.

Total activity: 4 hrs

Activity 1: Brainstorming (1 hour)

The teacher will begin with a lecture that covers the basic anatomy of bones and the mechanisms that lead to fractures, and emphasise different fracture classifications. (1 hour)

Activity 2: Demonstration (1 hour)

The teacher will use diagrams, radiographs, or 3D models to show how fractures appear in different parts of the body and display X-ray images or CT scans to show various fractures. (1 hour)

Activity 3: Discussion (1 hour)

The teacher will discuss the clinical significance of identifying different types of fractures and explain how correct identification influences treatment decisions such as immobilisation, surgical intervention, or rehabilitation. (1 hour)

Activity 4: Presentation (1 hour)

The teacher will present case studies with different types of fractures and demonstrate the following: the clinical assessment and key signs of fracture, like deformity, swelling, bruising, and tenderness. (1 hour)

Practical Training 25.3 : Examination of dislocations and subluxations of various joints with clinical presentation

Total activity : 6 hrs

Activity 1: Brainstorming (2 hours)

The teacher will provide students with the theoretical foundation necessary to understand dislocations and subluxations, including their causes, types, and clinical importance. (2 hours)

Activity 2: Demonstration (3 hours)

Step 1: The teacher will use anatomical diagrams to show normal joint anatomy and how dislocations or subluxations can cause misalignment and Present clinical images of dislocations in common joints. (1 hour)

Step 2: Teach students how to perform a systematic and thorough physical examination to identify dislocations and subluxations, with emphasis on clinical presentation and patient history. (1 hour)

Step 3: The teacher will teach students how to interpret radiological findings (X-rays, MRIs, or CT scans) to confirm dislocations or subluxations and understand the extent of the injury. (1 hour)

Activity 3: Case-Based Learning (1 hour)

The teacher will present real-life case studies that describe patients with dislocations or subluxations, including the Mechanism of injury, Patient history and Physical findings. (1 hour)

Practical Training 25.4 : The various phases of direct and indirect fracture healing

Total activity: 6 hrs

Activity 1: Brainstorming (3 hours)

The teacher will define fracture healing and explain its significance in restoring function and structural integrity, and introduce the two types of fracture healing. (1 hour)

The teacher will use diagrams and 3D anatomical models to show the structure of bone and explain how fractures disrupt this structure, and Display radiographs showing fractures in various stages of healing. (2 hours)

Activity 2: Demonstration (1 hour)

The teacher will use bone models to demonstrate how the bones align and heal in primary healing, emphasising the need for precise bone alignment and rigid fixation. (1 hour)

Activity 2: Case-Based Learning (2 hours)

The teacher will provide real-world examples and case studies to enhance understanding and practical application of fracture healing processes. (2 hours)

Experiential learning Activity

Experiential-Learning 25.1 : The various bones and joints movements & relevant muscles action through living models, atlas and group discussions.

Total activity: 5 hs

Activity 1: Case-Based Learning (1 hour)

The students will present case studies or clinical scenarios related to muscle movements and joint injuries. (1 hour)

Activity 2: Demonstration (2 hours)

The students will take turns being the "living model" or partner with someone else. As one person performs the movement, the other palpates the muscles involved and identifies them by feeling or observing.(2 hours)

Activity 3: Discussion (2 hours)

Students will divide into small groups, and each group will identify the bones involved, classify the joint type, identify key muscles responsible for the joint movements and discuss the movements (2 hours)

Experiential-Learning 25.2 : The various dislocations and subluxations by examination and radiological findings

Total activity: 5 hrs

Activity 1: Co-Learning (1 hour)

The scholar will perform a physical examination to identify dislocations and subluxations and assess the injury's severity. (1 hour)

Activity 2: Demonstration (2 hours)

Step 1: The scholar will use diagrams or anatomical models of joints to demonstrate common dislocations and subluxations. (1 hour)

Step 2: The scholar identifies and evaluates dislocations and subluxations by using radiographs (X-rays) and other imaging modalities (e.g., MRI, CT)(1 hour)

Activity 3: Case-Based Learning (2 hours)

Present case studies or examples from real clinical practice and interpret the X-ray findings, and discuss the type of dislocation or subluxation with their colleagues (2 hours)

Experiential-Learning 25.3 : Examination and radiological findings of various dislocations and subluxations

Total activity: 8 hrs

Activity 1: Library session (1 hour)

The students will begin by reviewing textbooks, lecture slides, or online resources to learn about the definitions of dislocations and subluxations, common joints involved, and their clinical manifestations. (1 hour)

Activity 2: Edutainment (1 hour)

The students will use online learning platforms to access interactive modules on joint anatomy, common dislocations, and subluxations. (1 hour)

Activity 3: Practical (2 hours)

The students will practice the clinical examination in pairs or small groups, examining each other or using anatomical models. (1 hour)

The students will be provided with radiological images (printed or digital) and should identify the type of injury (dislocation or subluxation) and its severity. (1 hour)

Activity 4: Discussion (4hours)

The students will be discuss the interpretation of the radiological findings and the clinical reasoning behind the diagnosis. (1 hour)

The students will have a class-wide discussion where students compare and contrast different types of dislocations and subluxations and share their experiences of physical examinations and interpreting radiological images. (1 hour)

Students will visit clinical settings (e.g., hospitals or clinics) where they can observe real cases of dislocations and subluxations and in these settings, students can practice physical examination techniques under the supervision of clinicians and assess radiological findings. (2 hours)

Experiential-Learning 25.4 : Fracture healing methods.

Total Activity: 8 hrs

Activity 1: Blended Learning (2 hours)

Step 1: The students will begin with self-guided reading or watching educational videos on fracture healing and should review chapters in textbooks or online resources

about bone anatomy and physiology, types of fractures and basic fracture healing principles. (1 hour)

Step 2: The students will use time-lapse animations or virtual simulations to demonstrate the three phases of fracture healing, like the Inflammatory phase, Reparative phase and Remodelling phase. (1 hour)

Activity 2: Edutainment (2 hours)

Step 1: The students will recognise the radiological signs of fracture healing in X-rays, CT scans, and MRIs, linking theoretical knowledge with real clinical findings. (1 hour)

Step 2: The students will organise an interactive radiology workshop where students work in small groups, each analysing different fracture healing cases. (1 hour)

Activity 3: Presentation (2 hours)

The students will present clinical case studies that include Patient background, fracture type, treatment approach and Radiographs showing fracture healing at different stages. (2 hours)

Activity 4: Field visit(2 hours)

The students will visit clinics or hospitals to observe patients with different types of fractures in various stages of healing, and can observe fracture reduction, casting, or surgical procedures for fracture stabilisation. (2 hours)

Modular Assessment

Assessment method	Hour
INSTRUCTIONS Conduct a structured modular assessment. The assessment will be for 50 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6C Clinical presentation for dislocation and management techniques-25 Marks and Demonstration of general & systemic examination, serological & radiological investigations of various diseases of joints -15 Marks and Quiz and MCQ for fracture healing methods, direct and indirect healing - 10 marks Or Any practical in converted form can be taken for assessment (25 marks) and Any of the experiential as portfolio/ reflections/presentations, can be taken as an assessment (25 marks)	4

Module 26 : General principles of Traumatology -part 2

Module Learning Objectives

(At the end of the module, the students should be able to)

Describe the complications of fractures, diagnosis and its conservative management
Discuss complications of fractures by imaging x-rays.
Explain the emergency at the site of injury and first aid.
Describe fracture in special situations and its types, diagnosis and conservative management
Perform modus operandi in first aid management by assessing airway, CPR, identifying bleeding points and monitoring vitals.
Diagnose soft tissue, peripheral nerve injuries and mechanism of injury and classification.

M 26 Unit 1 Complication of fractures

26.1.1. Introduction 26.1.2. Acute Respiratory Distress Syndrome (ARDS) 26.1.3. Volkmann's ischemia or compartmental syndromes. 26.1.4. Non-union, avascular necrosis, malunion, traumatic myositis ossificans, 26.1.5. Deep vein thrombosis, pulmonary embolism, 26.1.6. Injuries to blood vessels and nerves, 26.1.7. Crush Injuries 26.1.8. Complications of open fracture, shock, Gas gangrene and tetanus.

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO6,CO7,CO8	Describe various complications of fracture like ARDS, Volkmann's ischemic contracture, non-union, mal-union, avascular necrosis, traumatic myositis ossificans, deep vein thrombosis, pulmonary embolism, vascular nerves, crush injuries and open fractures	2	Lecture	CK	Knows-how	L&PPT
CO6,CO7,CO8	Demonstrate various complication of fracture by clinically or imaging modalities	4	Practical Training 26.1	PSY-GUD	Shows-how	BS,X-Ray ,D-BED
CO6,CO7,CO8	Facilitate to identify the complication of fracture by clinical examination	5	Experiential-Learning 26.	PSY-MEC	Shows-how	CBL,DIS, RP

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M 26 Unit 2 Emergency care for the injuries 26.2.1. First AID Definition, goals of first aid treatment. 26.2.2. Initial care of the injured at the scene of the accident. 26.2.3. Modus operandi in first aid -airway, cardiac, bleeding and examination of vital structures. 26.2.4. Management at the hospital References: 84,85,86						
3A	3B	3C	3D	3E	3F	3G
CO6,CO7,CO8	Describe the emergency situation at the site of injury, first aid, initial care, at the scene and management at the hospital	3	Lecture	CC	Knows-how	L&PPT
CO6,CO7,CO8	Demonstrate modus operandi in first aid management by airway, cardiac, bleeding and vital examination by PPT/Videos presentation	6	Practical Training 26.2	PSY-GUD	Knows-how	D-BED,X-Ray
CO6,CO7,CO8	Demonstrate the first aid management in emergency aspect	8	Experiential-Learning 26.2	PSY-MEC	Shows-how	D-BED,SIM
M 26 Unit 3 Fracture in special situations 26.3.1. Fractures in children 26.3.2. Epiphyseal injuries 26.3.3. Pathological fractures 26.3.4. Fatigue or stress fractures References: 84,86						
3A	3B	3C	3D	3E	3F	3G
CO6,CO7,CO8	Describe details of fractures in children, epiphyseal injury, pathological fracture and stress fracture	2	Lecture	CC	Knows-how	L_VC,L&PPT
CO6,CO7,CO8	Demonstrate clinically with patient or model fractures in children, epiphyseal injury, pathological fracture and stress fracture	4	Practical Training 26.3	PSY-GUD	Shows-how	RP,BS,CBL

CO6,CO7,CO8	Diagnose and manage the fractures in children, epiphyseal injury, pathological fracture and stress fracture	5	Experiential-Learning 26.3	PSY-MEC	Shows-how	PL,D,CBL,PER
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M 26 Unit 4 Soft tissue injuries and Nerve injuries

26.4.1. Soft Tissue Injury 26.4.1.1. Introduction 26.4.1.2. Mechanism of injury, approach to the patient, treatment goals, 26.4.1.3. Classification -muscle strain and sprains, ligament 26.4.2. Nerve injury 26.4.2.1. Peripheral nerve injury-anatomy, general principles, classification 26.4.2.2. Ulnar, Radial and Sciatic nerve injury 26.4.2.3. Brachial plexus injuries, Erb's palsy, axillary and long thoracic nerve Injuries.

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO6,CO7,CO8	Describe soft tissue injury like flexors, nerves, muscles and ligaments, mechanism of injury , classification, clinical features, approach to the patients and treatment goals.	3	Lecture	CC	Knows-how	L_VC,L&PPT
CO6,CO7,CO8	Demonstrate clinically various soft tissue injury, peripheral nerve injury and its features, muscle strain and sprain	6	Practical Training 26.4	PSY-GUD	Knows-how	CBL,BS,RP,PBL
CO6,CO7,CO8	Demonstrate proficiency in understanding performing soft tissue and nerve injury	8	Experiential-Learning 26.4	PSY-MEC	Shows-how	PL,D,PER,CBL

Practical Training Activity

Practical Training 26.1 : Various complications of fractures by clinical or imaging modalities

Total activity: 4 hrs

Activity 1: Brainstorming (1 hr)

The staff will give a brief lecture about the various fracture complications/ deformities and case studies related to post-fracture complications

Activity 2: Demonstration Bedside (2 hrs)

The Staff will show the measurement methods at the bedside by following the parameters

Step 1. Greetings, and get consent from the patient (5 mins)

Step 2. History taking (10 mins)

Step 3. General examination, peculiar examination for corresponding joints, ROM, measure the movements by goniometric (1 hr 15 mins)

Step 4. Illustrate the serological findings (30 min)

Activity 3: X-ray Identification (1 hr)

Step 1: The staff will illustrate the radiological findings and explain the clinical aspects based on the findings (30 mins)

Step 2: The staff will assess the students through group discussion based on the following parameters (30 mins)

1. Describe any fracture-related case reports
2. Types & mechanisms of fractures
3. Distinguish the Radiological findings & correlate the findings with the case scenario

Practical Training 26.2 : Modus operandi in first aid management by airway, cardiac, bleeding and vital examination by PPT/Videos presentation

Total activity: 6 hrs

Activity 1: Brainstorming (2 hrs)

The staff will give a brief lecture on a piece of knowledge about various injuries, fractures and the devices used in emergencies through videos or live demonstrations

Activity 2: Demonstration (30 min)

The staff will demonstrate vital examinations and first aid management in emergencies (30 min)

Activity 3: Demonstration on models (3 hrs)

The staff will demonstrate the steps of basic life support and advanced life support in emergencies like airway, CPR, aerosol therapy, Ryle's tube insertion, male, female urinary catheterisation, pleural aspiration, and ascitic fluid aspiration (2hr 30 min)

The staff will encourage them to note key features (30 min)

Activity 4: Simulation (30 min)

The staff assess the student to simulate first aid using instruments

Practical Training 26.3 : Fracture management in children, epiphyseal injury, pathological fracture and stress fracture

Total activity: 4 hrs

Activity 1: Brainstorming (1 hr 20 min)

The staff gives a brief lecture on the following things in fracture management in children, including epiphyseal injury, pathological fracture and stress fracture

- Step 1. Greetings to the patient (2 min)
- Step 2. Self-introduction to the patient (2 min)
- Step 3. Place the patient in a suitable posture (6 min)
- Step 4. Informed consent (if the affected person is a child, get consent from parents/guardians) (5 min)
- Step 5. History taking (15 min)
- Step 6. General & Systemic examination (15 min)
- Step 7. Serological & Radiological investigations findings and clinical view based on Radiological findings (20 min)
- Step 8. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside (40 min)

Activity 2: Case-Based Learning (1 hr 20 min)

The staff gives a case study on the fracture management of pathological fractures

- Step 1. Greetings to the patient (2 min)
- Step 2. Self-introduction to the patient (2 min)
- Step 3. Place the patient in a suitable posture (6 min)
- Step 4. Informed consent (if the affected person is a child, get consent from parents/guardians) (5 min)
- Step 5. History taking (15 min)
- Step 6. General & Systemic examination (15 min)
- Step 7. Serological & Radiological investigations findings and clinical view based on Radiological findings (20 min)
- Step 8. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside (40 min)

Activity 3: Roleplays (1 hr 20 min)

The staff will divide the students into two groups, one group acts as the doctor, another group acts as the patient who suffers from the following things in fracture management in children, including epiphyseal injury, pathological fracture and stress fracture

- Step 1. Greetings to the patient (2 min)
- Step 2. Self-introduction to the patient (2 min)
- Step 3. Place the patient in a suitable posture (6 min)
- Step 4. Informed consent (if the affected person is a child, get consent from parents/guardians) (5 min)
- Step 5. History taking (15 min)
- Step 6. General & Systemic examination (15 min)
- Step 7. Serological & Radiological investigations findings and clinical view based on Radiological findings (20 min)
- Step 8. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside (40 min)

Practical Training 26.4 : Soft tissue injury, peripheral nerve injury and its features, muscle strain and sprain

Total Activity: 6 hrs

Activity 1: Brainstorming (2 hrs)

The staff describe the following things in the management of soft tissue injury through PPT

Step 1. Greetings to the patient (2 min)

Step 2. Self-introduction to the patient (2 min)

Step 3. Place the patient in a suitable posture (6 min)

Step 4. Informed consent (if the affected person is a child, get consent from parents/guardians) (5 min)

Step 5. History taking (30 min)

Step 6. General & Systemic examination (15 min)

Step 7. Serological & Radiological investigations findings and clinical view based on Radiological findings (30 min)

Step 8. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside (30 min)

Activity 2: Case-Based Learning (2 hrs)

The staff describe the following things in management in peripheral nerve injury and its features

Step 1. Greetings to the patient (2 min)

Step 2. Self-introduction to the patient (2 min)

Step 3. Place the patient in a suitable posture (6 min)

Step 4. Informed consent (if the affected person is a child, get consent from parents/guardians) (5 min)

Step 5. History taking (5 min)

Step 6. General & Systemic examination (15 min)

Step 7. Serological & Radiological investigations findings and clinical view based on Radiological findings (30 min)

Step 8. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside (55 min)

Activity 3: Roleplays (2 hrs)

The staff will divide the students into two groups, one group acts as the doctor, another group acts as the patient who suffers from soft tissue injury, peripheral nerve injury & muscle strain and sprain

The following criteria have been assessed by the teacher within the mentioned time

Step 1. Greetings to the patient (2 min)

Step 2. Self-introduction to the patient (2 min)

Step 3. Place the patient in a suitable posture (6 min)

Step 4. Informed consent (if the affected person is a child, get consent from parents/guardians) (5 min)

Step 5. History taking (5 min)

Step 6. General & Systemic examination (15 min)

Step 7. Serological and Radiological investigations findings and clinical view based on Radiological findings (30 min)

Step 8. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside (55 min)

Experiential learning Activity

Experiential-Learning 26.1 : Examination of the complications of the fracture

Total activity: 5 hrs

Activity 1: Case-Based Learning (3 hrs)

The scholar will do the following things at the bedside/PPT

1. Greetings to the patient (2 min)
2. Self-introduction to the patient (2 min)
3. Place the patient in a suitable posture (5 min)
4. Informed consent (1 min)
5. Complaints & History taking (20 min)
6. General examination (15 min)
7. Systemic examination (15 min)
8. Serological investigation findings illustrate a mechanism based on the findings (30 min)
9. Radiological investigations findings (30 min)
10. Differential diagnosis (30 min)
11. Management of the complications of fracture (30 min)

Activity 2: Roleplay (1 hr)

The students divided themselves into two groups. One group acts as doctors and will play to describe/demonstrate the signs, symptoms, and examinations. Management along with recent advanced techniques in the complications of the fracture

Activity 3: Discussions (1 hr)

Discuss with his/her colleagues about varmam and traditional bone setting methods for the complications of fracture

Experiential-Learning 26.2 : The first aid management in emergency aspect

Total activity: 8 hrs

Activity 1: Demonstration Bedside (2 hrs)

The scholar will perform the following things

1. Vital examination (30 min)
2. Assess breathing (30 min)
3. aerosol therapy(30 min)
4. CPR Application & defibrillation (30 min)

Activity 2: Simulation (2 hrs)

The student will perform the following things

1. Basic life support for epilepsy (30 min)
2. Basic life support for loss of consciousness (30 min)
3. Basic life support for a fire wound (30 min)
4. Basic life support for cut wound bleeding (30 min)

Activity 3: Practicals (4 hrs)

The student will practice on a model in the following procedure

1. advanced life support in emergencies like airway (30 mins)
2. Ryle's tube insertion (30 mins)
3. Male, female urinary catheterisation (1 hr)
4. Pleural aspiration (1hr)
5. Ascitic fluid aspiration (1 hr)

Experiential-Learning 26.3 : The fractures in children include epiphyseal injury, pathological fracture and stress fracture

Total activity: 5 hrs

Activity 1: Presentation (1 hr 30min)

The student will do a case presentation about fracture management in children, including epiphyseal injury, pathological fracture and stress fracture to final year students & CRRI. The presentation includes

1. Greetings to the patient (2 min)

2. Self-introduction to the patient (2 min)
3. Place the patient in a suitable posture - describe decubitus (6 min)
4. Informed consent (if the affected person is a child, get consent from parents/guardians) (5 min)
5. Present complaints & History taking - describe the history taking (15 min)
6. General & Systemic examination - explanation of the examination findings and clinical symptoms (15 min)
6. Serological & Radiological investigations findings and clinical view based on Radiological findings (15 min)
7. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside (15 min)

Activity 2. Case-Based Learning (1 hr 30 min)

The student will do a case presentation about fracture management in pathological fractures to final year students & CRRI. The presentation includes

1. Greetings to the patient (2 min)
2. Self-introduction to the patient (2 min)
3. Place the patient in a suitable posture - describe decubitus (6 min)
4. Informed consent (if the affected person is a child, get consent from parents/guardians) (5 min)
5. Present complaints & History taking - describe the history taking (15 min)
6. General & Systemic examination - explanation of the examination findings and clinical symptoms (15 min)
6. Serological & Radiological investigations findings and clinical view based on Radiological findings (15 min)
7. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside (15 min)

Activity 3: Demonstration (1 hr 30min)

The student will demonstrate the case about fracture management of stress fracture to final year students & CRRI. The presentation includes

1. Greetings to the patient (2 min)
2. Self-introduction to the patient (2 min)
3. Place the patient in a suitable posture - describe decubitus (6 min)
4. Informed consent (if the affected person is a child, get consent from parents/guardians) (5 min)
5. Present complaints & History taking - describe the history taking (15 min)
6. General & Systemic examination - explanation of the examination findings and clinical symptoms (15 min)
6. Serological & Radiological investigations findings and clinical view based on Radiological findings (15 min)
7. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside (15 min)

Activity 4: Peer Learning (30 min)

Deliver the knowledge of the alternative system of management for the fractures in children, including epiphyseal injury, pathological fracture and stress fracture, with Scopus/WOS articles

Experiential-Learning 26.4 : Management of soft tissue and nerve injury

Total Activity: 8 hrs

Activity 1: Presentation (2 hrs)

The student will present a case presentation about soft tissue injury fracture management to final year students and CRRI. The presentation includes

Step 1. Greetings to the patient (2 min)

Step 2. Self-introduction to the patient (2 min)

Step 3. Place the patient in a suitable posture - describe decubitus (10 min)

Step 4. Informed consent (if the affected person is a child, get consent from parents/guardians) (6 min)

Step 5. History taking - describe the history taking (20 min)

Step 6. General & Systemic examination - explanation of the examination findings and clinical symptoms (30 min)

Step 7. Serological & Radiological investigations findings and clinical view based on Radiological findings (30 min)

Step 8. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside (20 min)

Activity 2: Peer Learning (1hrs)

The student will deliver the knowledge of the alternative system of management for above mentioned conditions with Scopus/WOS articles

Activity 3: Demonstration (1hrs)

The student demonstrates and encourages the CRRI and final year students to demonstrate traditional bone setting methods in models

Activity 4. Case-Based Learning (2 hrs)

The student will do a case presentation about fracture management of nerve injury to final year students & CRRI at the bedside. The presentation includes

Step 1. Greetings to the patient (2 min)

Step 2. Self-introduction to the patient (2 min)

Step 3. Place the patient in a suitable posture - describe decubitus (2 min)

Step 4. Informed consent (if the affected person is a child, get consent from parents/guardians) (4 min)

Step 5. History taking - describe the history taking (10 min)

Step 6. General, systemic & CNS examination - explanation of the examination findings and clinical symptoms (30 min)

Step 7. Serological & Radiological investigations findings and clinical view based on Radiological findings (30 min)

Step 8. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside (40 min)

Activity 5: Peer Learning (1 hr)

Deliver the knowledge of the alternative system of management for above mentioned conditions with Scopus/WOS articles

Activity 6: Demonstration (1 hr)

The student demonstrates and encourages the CRRI and final year students to demonstrate traditional bone setting methods in models

Modular Assessment

Assessment method	Hour
INSTRUCTIONS Conduct a structured modular assessment. The assessment will be for 50 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6C OSCE for soft tissue/nerve injury -25 Marks and A topic presentation about basic life support for various emergency conditions -15 Marks and Team-Based Learning (TBL) for fracture complication and management - 10 marks The student will be assessed by • Learning outcome • Engagement • Critical thinking • Professional skills Or Any practical in converted form can be taken for assessment (25 marks) and Any of the experiential as portfolio/reflections/presentations, can be taken as an assessment (25 marks)	4
Semester No : 4	
Module 27 : Regional Traumatology part I injuries of the Upper limb	
Module Learning Objectives (At the end of the module, the students should be able to) Describe regional injuries of the upper limb Diagnose upper limb injuries through clinical signs and symptoms, and relevant investigation Perform conservative management by modern aspect and varmam aspect	

M 27 Unit 1 Injuries around the clavicle

27.1.1. Fracture of the clavicle 27.1.2. Injuries of the acromioclavicular joint 27.1.3. Injuries of the sternoclavicular joint

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO6 ,CO7,CO8	Describe the introduction and fracture of clavicle, acromioclavicular and sternoclavicular injuries, site of fracture and its classification, clinical features investigation and principles of conservative treatment	1	Lecture	CC	Knows-how	L&PPT
CO4,CO5,CO6 ,CO7,CO8	Describe the fracture of clavicle and its sites, classification and conservative management	2	Practical Training 27.1	PSY-GUD	Knows-how	D-BED,X-Ray,D
CO4,CO5,CO6 ,CO7,CO8	Identify fracture site, classification through clinical models	3	Experiential-Learning 27.1	PSY-MEC	Shows-how	CBL,D

M 27 Unit 2 Injuries of the shoulder joint.

27.2.1. Introduction, Brief anatomy of bones around the shoulder joint & anatomy of the shoulder joint 27.2.2. Fracture of the scapula 27.2.3. Dislocations of the shoulder joint 27.2.4. Anterior dislocation of the shoulder, recurrent anterior dislocation of the shoulder, 27.2.5. Inferior dislocation of the shoulder 27.2.6 Posterior dislocation of the shoulder.

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO6 ,CO7,CO8	Describe the shoulder joint injuries through introduction, brief anatomy dislocation of the shoulder joint, anterior and posterior dislocation of the shoulder joint, fracture of the scapula, mechanism of the injury, clinical feature, investigation and conservative	2	Lecture	CC	Knows-how	L&PPT

	treatment procedure.					
CO4,CO5,CO6,CO7,CO8	Demonstrate injuries of shoulder like dislocation, fracture clinically and its conservative management	4	Practical Training 27.2	PSY-GUD	Knows-how	X-Ray,D, D-BED,CBL
CO4,CO5,CO6,CO7,CO8	Perform to identify dislocation, fracture, conservative management around the shoulder joint	5	Experiential-Learning 27.2	AFT-RES	Shows-how	RP,SIM, DIS,CBL

M 27 Unit 3 Injuries around the elbow joint

27.3.1. Brief anatomy, classification of fractures for the distal Humerus 27.3.1.1. Supracondylar fracture 27.3.1.2. Physeal fracture 27.3.1.3. T condylar fracture 27.3.1.4. Cubitus valgus cubitus varus 27.3.2. Injuries around the elbow joint 27.3.2.1. Dislocation of the elbow joint, 27.3.2.2. Fracture of the head of the radius 27.3.2.3. Fractures of the olecranon process of the ulna 27.3.2.4. Fracture coronoid process of the ulna 27.3.2.5. Injuries in the capitulum, medial epicondyle and lateral epicondyle of the humerus, & sideswipe injuries

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO6,CO7,CO8	Describe the definition, classification, mechanism, clinical features, investigation and conservative management of Various injuries in the elbow joint & dislocation of elbow joint The fracture of distal humerus in children Radial head fracture, coronoid fracture, capitellum fracture Physeal fracture lateral condylar fracture and medial condylar fracture, side swipe injuries Post fracture complications	2	Lecture	CC	Knows-how	L_VC,L&PPT
CO4,CO5,CO6,CO7,CO8	Demonstrate the clinical features, examination, investigation and conservative management around the elbow joint	4	Practical Training 27.3	PSY-GUD	Knows-how	CBL,DIS, RP

CO4,CO5,CO6 ,CO7,CO8	Perform to explain the clinical features, examination, investigation and conservative management of injuries around the elbow joint	5	Experiential-Learning 27.3	AFT-RES	Shows-how	PBL,RP
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M 27 Unit 4 Injuries of the forearm

27.4. Forearm Injuries 27.4.1. Introduction, fracture of both bones, isolated distal end of ulnar fracture 27.4.2. Monteggia fracture 27.4.3. Distal radius fracture 27.4.4. Colles fracture, distal shaft of radius fracture 27.4.5. Galeazzi's fracture 27.4.6. Essex-Lopresti fracture 27.4.7. Radial styloid fracture 27.4.8. Smith or reverse 27.4.9. Colles' fracture 27.4.10. Barton's fracture 27.4.11. Volar barton fracture 27.4.12. Palmar rim fracture

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO6 ,CO7,CO8	Describe forearm injuries by introduction, mechanism of injury, clinical features, investigation, treatment procedure and complications	2	Lecture	CC	Knows-how	L&PPT
CO4,CO5,CO6 ,CO7,CO8	Demonstrate clinical signs, symptoms,examination, serological & radiological findings and conservative treatment procedures for forearm injuries	4	Practical Training 27.4	PSY-GUD	Knows-how	ML,BL
CO4,CO5,CO6 ,CO7,CO8	Perform to explain the clinical features, examination, investigation and conservative management of forearm injuries	5	Experiential-Learning 27.4	AFT-SET	Knows-how	PBL,RP

M 27 Unit 5 Injuries of the wrist

27.5. Injuries of carpal bones 27.5.1. Brief anatomy of carpal bones and carpal bone Injuries 27.5.2. Scaphoid fracture 27.5.3. Injuries of the carpometacarpal joints of the thumb and the radio-carpal. 27.5.4. Injuries & radio-carpal dislocations 27.5.5. Dorsal trans scaphoid peri lunate fracture 27.5.6. Fractures of lunate, triquetrum, pisiform, hamate, capitate, trapezoid and trapezium

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO6,CO7,CO8	Describe the anatomy, carpal injuries by its general principles, mechanism of injuries clinical features investigation and principles of treatment	2	Lecture	CK	Knows-how	L&PPT
CO4,CO5,CO6,CO7,CO8	Demonstrate the clinical signs and symptoms for injuries of the wrist by ppt/videos	4	Practical Training 27.5	PSY-GUD	Knows-how	D,D-BED
CO4,CO5,CO6,CO7,CO8	Identify various type of carpal injuries and improve the efficiency on treatment	5	Experiential-Learning 27.5	AFT-RES	Shows-how	D,D-BED,CBL

M 27 Unit 6 Injuries of the hand

27.6. Injuries of the phalanx 27.6.1. General principles, Injuries of the phalanx, mallet finger, distal interphalangeal joint Injuries fractures of the middle phalanx, dislocations of the IP joint, proximal phalanx fractures, metacarpophalangeal dislocations, kaplan's lesion, dislocations of the thumb, Injuries of fractures from 2 nd to 5th metacarpal bones, metacarpal fracture of the little finger, tendon Injuries, soft tissue and crush Injuries of the hand, amputation

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO6,CO7,CO8	Describe the general principles, incidence, mechanism of injury, classification, clinical features, relevant investigation of hand injuries.	1	Lecture	CK	Know	L&PPT
CO4,CO5,CO6,CO7,CO8	Demonstrate the various types of hand injuries, phalangeal metacarpal fractures through clinical signs and investigation, conservative management	2	Practical Training 27.6	PSY-GUD	Knows-how	D,CBL,D-BED
CO4,CO5,CO6,CO7,CO8	Apply the diagnosing and management skills in hand injuries	3	Experiential-Learning 27.6	AFT-SET	Shows-how	D,RP,DIS,SIM

Practical Training Activity

Practical Training 27.1 : The fracture of clavicle and its sites, classification and conservative management

Total activity: 2 hrs

Activity 1. Case-Based Learning (2hrs)

The staff describe the following things in management in clavicle injury

1. Greetings to the patient (1 min)
2. Self-introduction to the patient (1 min)
3. Place the patient in a suitable posture (2 min)
4. Informed consent (if the affected person is a child, get consent from parents/guardians) (3 min)
5. History taking (3 min)
6. General & Systemic examination (10 min)
7. Serological & Radiological investigations findings and clinical view based on Radiological findings (10 min)
8. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside (60 min)
9. After all the staff have assessed the students based on above mentioned aspect (30 min)

Practical Training 27.2 : Injuries of the shoulder, like dislocation, fracture, and their clinical management

Total activity: 4hrs

Activity 1. Case-Based Learning (2hrs 20 min)

The staff describe the following things in the management of injuries to the shoulder at the bedside or using the model in simulation

1. Greetings to the patient (1 min)
2. Self-introduction to the patient (1 min)
3. Place the patient in a suitable posture (2 min)
4. Informed consent (if the affected person is a child, get consent from parents/guardians) (3 min)
5. History taking (3 min)
6. General & Systemic examination for shoulder joint and fractures around in shoulder joint (60 min)
7. Serological & Radiological investigations findings and clinical view based on Radiological findings (10 min)
8. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside (60 min)

Activity 2. Discussions/Role-plays (40 min)

The staff allow the students as groups discussion/role-play based on first aid management & conservative management (40 min)

Activity 3. Simulation (60 min)

After all the staff have assessed the students based on the simulation (express the management in models) (60 min)

Practical Training 27.3 : The clinical features, examination, investigation and conservative management around the elbow joint

Total activity: 4 hrs

Activity 1: Case-Based Learning/ Simulations (2hrs 20 min)

The staff describe the following things in the management of injuries around the elbow joint at the bedside or using the model in simulation

1. Greetings to the patient (1 min)
2. Self-introduction to the patient (1 min)
3. Place the patient in a suitable posture (2 min)
4. Informed consent (if the affected person is a child, get consent from parents/guardians) (3 min)
5. History taking (3 min)
6. General & Systemic examination for shoulder joint and fractures around the elbow joint (60 min)
7. Serological & Radiological investigations findings and clinical view based on radiological findings (10 min)
8. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside (60 min)

Activity 2: Discussions/Roleplays (1 hr 40 min)

Step 1. The staff allow the students as groups discussion/role-play based on first aid management & conservative management (40 min)

Step 2. After all the staff have assessed the students based on the simulation (express the management in models) (60 min)

Practical Training 27.4 : Management of the forearm injuries

Total activity: 4hrs

Activity 1. Case-Based Learning (2hr 20 min)

The staff describe the following things in the management of the forearm injuries at the bedside or using the model in simulation

- Step 1. Greetings to the patient (1 min)
- Step 2. Self-introduction to the patient (1 min)
- Step 3. Place the patient in a suitable posture (2 min)
- Step 4. Informed consent (if the affected person is a child, get consent from parents/guardians) (3 min)
- Step 5. History taking (3 min)
- Step 6. General & Systemic examination for shoulder joint and fractures around in shoulder joint (60 min)
- Step 7. Serological & Radiological investigations findings and clinical view based on Radiological findings (10 min)
- Step 8. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside & describe the complications (60 min)

Activity 2. Discussions /Roleplays (40 min)

The staff allow the students as groups discussion/role-play based on first aid management & conservative management

Activity 3. Simulation (60 min)

After all the staff have assessed the students based on the simulation (express the management in models)

Practical Training 27.5 : Injuries of the wrist

Total activity: 4hrs

Activity 1: Case-Based Learning (2hr 20 min)

The staff describe the following things in the management of the wrist injuries at the bedside or using the model in simulation

Step 1. Greetings to the patient (1 min)

Step 2. Self-introduction to the patient (1 min)

Step 3. Place the patient in a suitable posture (2 min)

Step 4. Informed consent (if the affected person is a child, get consent from parents/guardians) (3 min)

Step 5. History taking (3 min)

Step 6. General & Systemic examination for shoulder joint and fractures around in shoulder joint (60 min)

Step 7. Serological & Radiological investigations findings and clinical view based on Radiological findings (10 min)

Step 8. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside & describe the complications (60 min)

Activity 2: Discussion (1 hr 40 min)

Step 1. The staff allow the students as groups discussion/role-play based on first aid management & conservative management (40 min)

Step 2. After all the staff have assessed the students based on the simulation (express the management in models) (60 min)

Practical Training 27.6 : Hand injuries, phalangeal metacarpal fractures

Total activity: 2 hrs

Activity 1: Case-Based Learning (1hr 20 min)

The staff describe the following things in the management of the wrist injuries at the bedside or using the model in simulation

Step 1. Greetings to the patient (1 min)

Step 2. Self-introduction to the patient (1 min)

Step 3. Place the patient in a suitable posture (2 min)

Step 4. Informed consent (if the affected person is a child, get consent from parents/guardians) (3 min)

Step 5. History taking (3 min)

Step 6. General & Systemic examination for the metacarpal, phalangeal and other injuries in hand (30 min)

Step 7. Serological & Radiological investigations findings and clinical view based on Radiological findings (20 min)

Step 8. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside & describe the complications (20 min)

Activity 2: Discussion (40 mins)

Step 1. The staff allow the students as groups discussion/role-play based on first aid management & conservative management (20 min)

Step 2. After all the staff have assessed the students based on the simulation (express the management in models) (20 min)

Experiential learning Activity

Experiential-Learning 27.1 : The clavicle fracture, classification through clinical models/ case presentation

Total activity : 3 hrs

Activity 1. Case-Based Learning (1hr 45 min)

The scholar will demonstrate the following criteria

Step 1. Greetings to the patient (1 min)

Step 2. Self-introduction to the patient (1 min)

Step 3. Place the patient in a suitable posture (3 min)

Step 4. Informed consent (if the affected person is a child, get consent from parents/guardians) (5 min)

Step 5. History taking (5 min)

Step 6. General & Systemic examination (30 min)

Step 7. Serological & Radiological investigations findings and clinical view based on Radiological findings (30 min)

Step 8. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside (30 min)

Activity 2. Presentations (1 hr 15 min)

After all, the student presented a case report/ case series to his/her colleagues through PPT

Experiential-Learning 27.2 : Dislocation, fracture, and conservative management around the shoulder joint

Total activity: 5 hrs

Activity 1. Case-Based Learning (3hr 20min)

The student will present based on the following criteria in the management of injuries to the shoulder at the bedside through PPT to final year/CRRRI students

1. How greets to the patient (5 min)

2. How Self-introduction to the patient (5 min)

3. Place the patient in a suitable posture / Describe first aid for severe forms of injuries around the shoulder joint (10 min)

4. Express the importance of getting informed consent (if the affected person is a child, get consent from parents/guardians) (5 min)

5. Elaborate on the techniques of history taking (45 min)

6. General & Systemic examination for shoulder joint and fractures around in shoulder joint (60 min)

7. Serological & Radiological investigations findings and clinical view based on Radiological findings (10 min)

8. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside (60 min)

Activity 2. Discussions / Role-plays (40 min)

The students make a group discussion/role-play based on first aid management & conservative management (40 min)

Activity 3. Simulation (60 min)

After all the students demonstrate based on the simulation (express the management in models) (60 min)

Experiential-Learning 27.3 : The clinical features, examination, investigation and conservative management of injuries around the elbow joint

Total activity: 5 hrs

Activity 1. Case-Based Learning (3hr 20 min)

The student will present based on the following criteria in the management of injuries to the elbow joint at the bedside to final year/CRRI students

1. How greets to the patient (5 min)
2. How Self-introduction to the patient (5 min)
3. Place the patient in a suitable posture / Describe first aid for severe forms of injuries around the elbow joint (10 min)
4. Express the importance of getting informed consent (if the affected person is a child, get consent from parents/guardians) (5 min)
5. Elaborate on the techniques of history taking (45 min)
6. General & Systemic examination for shoulder joint and fractures around in shoulder joint (60 min)
7. Serological & Radiological investigations findings and clinical view based on Radiological findings (10 min)
8. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside (60 min)

Activity 2. Discussions/ Role-plays (40 min)

The staff allow the students as groups discussion/role-play based on first aid management & conservative management (40 min)

Activity 3. Simulation (60 min)

After all the staff have assessed the students based on the simulation (express the management in models) (60 min)

Experiential-Learning 27.4 : Management of forearm injuries

Total activity: 5 hrs

Activity 1: Case-Based Learning (3 hrs 20 min)

The student will present based on the following criteria in the management of forearm injuries at the bedside through PPT to final year/CRRI students

1. How greets to the patient (5 min)
2. How Self-introduction to the patient (5 min)
3. Place the patient in a suitable posture / Describe first aid for severe forms of injuries around the forearm (10 min)
4. Express the importance of getting informed consent (if the affected person is a child, get consent from parents/guardians) (5 min)

5. Elaborate on the techniques of history taking (45 min)
6. General & Systemic examination for forearm and fractures and deformities in the forearm (60 min)
7. Serological & Radiological investigations findings and clinical view based on Radiological findings (10 min)
8. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside (60 min)
- Activity 2: Discussions / Roleplays (40 min)
9. The students make a group discussion/role-play based on first aid management & conservative management (40 min)
- Activity 3: Simulation (60 min)
10. After all, the student demonstrates on the simulation (express the management in models) (60 min)

Experiential-Learning 27.5 : Management of the carpal injuries

Total activity: 5 hrs

Activity 1: Case-Based Learning (3 hrs 20 min)

The student will present based on the following criteria in the management of injuries around carpal and metacarpal bones at the bedside to final year/CRRI students

Step 1. How greeds to the patient (5 min)

Step 2. How Self-introduction to the patient (5 min)

Step 3. Place the patient in a suitable posture / Describe first aid for severe forms of injuries around the shoulder joint (10 min)

Step 4. Express the importance of getting informed consent (if the affected person is a child, get consent from parents/guardians) (5 min)

Step 5. Elaborate on the techniques of history taking (45 min)

Step 6. General & Systemic examination for injuries around carpal and metacarpal bones (30 min)

Step 7. Serological & Radiological investigations findings and clinical view based on Radiological findings (40 min)

Step 8. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside (60 min)

Activity 2: Discussion (40 min)

The students make a group discussion/role-play based on first aid management & conservative management

Activity 3: Simulation (60 min)

After all, the student demonstrates on the simulation (expresses the management in models)

Experiential-Learning 27.6 : Management of Hand injuries

Total activity: 3 hrs

Activity 1: Demonstration (2 hrs)

The student will present based on the following criteria in the management of injuries to the shoulder at the bedside through PPT to final year/CRRI students

Step 1. How greeds to the patient (1 min)

Step 2. How Self-introduction to the patient (1 min)

Step 3. Place the patient in a suitable posture / Describe first aid for severe forms of injuries around the shoulder joint (10 min)

Step 4. Express the importance of getting informed consent (if the affected person is a child, get consent from parents/guardians) (2 min)

Step 5. Elaborate on the techniques of history taking (16 min)

Step 6. General & Systemic examination, pathological changes (30 min)

Step 7. Serological & Radiological investigations findings and clinical view based on Radiological findings (10 min)

Step 8. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside (50 min)

Activity 2: Discussion/ Roleplays (30 mins)

The students make a group discussion/role-play based on first aid management & conservative management (30 min)

Activity 3: Simulation (30 mins)

After all, the student demonstrates on the simulation (express the management in models) (30 min)

Modular Assessment

Assessment method

Hour

INSTRUCTIONS

Conduct a structured modular assessment. The assessment will be for 50 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6C

Case presentation for injuries in upper limb bones -25 Marks

The scholar will be assessed by

- History taking
- General and systemic examination finding
- Siddha diagnostic tools and findings
- Serological and radiological findings
- Conservative management

and

A topic presentation on recent advances in management techniques for injuries in upper limb bones -15Marks

and

Team-Based Learning (TBL) for shoulder joint dislocation and management - 10 marks

The student will be assessed by

- Examination of the shoulder joint

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- Express the traditional traction, manipulation and conservative management of the dislocation of the shoulder joint
- Explain the recent advanced techniques about the dislocations of the shoulder joint

Or

Any practical in converted form can be taken for assessment (25 marks)

and

Any of the experiential as portfolio/reflections/presentations can be taken as an assessment (25 marks)

Module 28 : Regional Traumatology Part II Injuries of the lower limb

Module Learning Objectives

(At the end of the module, the students should be able to)

Describe injuries of the lower limb, axial skeleton and pelvis

Identify various types, clinical features and clinical signs.

Describe investigation procedures.

Perform conservative management of the injuries of the lower limb, axial skeleton and pelvis.

M 28 Unit 1 Injuries around the hip, knee and leg.

28.1. Injuries of the hip 28.1.1. Introduction, Brief anatomy, posterior, anterior and central dislocation of the hip joint. 28.1.2. Fracture of the femur 28.1.2.1. Fracture neck of femur, 28.1.2.2. Subtrochanteric fracture 28.1.2.3. Trochanteric fracture 28.1.2.4. Fracture of the shaft of the femur 28.1.2.5. Distal femur fracture and supracondylar fracture of the femur. 28.1.3 Injuries of knee 28.1.3.1. Brief Anatomy, knee ligament Injuries -general principles, medial collateral ligament injuries, anterior and posterior cruciate ligament injuries, semilunar cartilage injuries 28.1.3.2. Fracture of the patella 28.1.3.3. Injuries around the extensor apparatus of the knee 28.1.3.4. Acute dislocation of the patella and the knee 28.1.4. Injuries of the leg 28.1.4.1. Fracture of tibia and fibula-proximal tibial fractures, fracture shaft of tibia and fibula, distal tibial fractures, open tibial fractures.

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO6,CO7,CO8	Describe the details of lower limb Injuries of hip, femur, knee joints and leg by its brief anatomy, classification, investigation and conservative clinical procedures.	3	Lecture	CC	Knows-how	L&PPT
CO4,CO5,CO6,CO7,CO8	Demonstrate clinical examination methods by signs and symptoms, investigations and its conservative treatment methods for injuries around the hip, knee & ankle joints	6	Practical Training 28.1	PSY-GUD	Knows-how	CBL,PBL,PER
CO4,CO5,CO6,CO7,CO8	Perform the diagnostic, conservative treatment methods of injuries in the joints of the hip, knee and ankle	10	Experiential-Learning 28.1	AFT-SET	Shows-how	CBL,PER,RP

M 28 Unit 2 Injuries of the ankle joint and foot

28.2.1. Injuries of the ankle joint 28.2.1.1. Anatomy of ankle joint,ankle injuries, ankle sprains -lateral and medial ligament sprain, tri-malleolar fracture, Achilles tendon injury. 28.2.2. Injuries of the foot 28.2.2.1. Forefoot injuries- Phalangeal fracture 28.2.2.2. Interphalangeal joint dislocation, metaphalangeal joint injury, injuries to other MTP joints, sesamoid bone injuries, and metatarsal fracture. 28.2.2.3. Mid-foot injuries -Navicular bone fractures, cuboid bone fractures, cuneiform injuries, tarsometatarsal injuries, 28.2.2.4. Hindfoot injuries- fracture calcaneum, fracture talus

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO6,CO7,CO8	Describe the brief anatomy, classification, investigation of ankle injuries, forefoot, midfoot and hindfoot injuries, ankle sprain, tri malleolar fracture and tendon achilleas injury.	2	Lecture	CC	Knows-how	L&PPT
CO4,CO5,CO6,CO7,CO8	Demonstrate clinical examination, signs and symptoms, investigation and its conservative treatment methods for leg & foot injuries	4	Practical Training 28.2	PSY-GUD	Shows-how	D,BS
CO4,CO5,CO6,CO7,CO8	Perform the conservative treatment methods & Injuries of the ankle joint and foot	6	Experiential-Learning 28.2	AFT-SET	Shows-how	PSM,CBL,PBL

M 28 Unit 3 Injuries of the axial skeleton

28.3. Injuries of the Axial skeleton 28.3.1. Anatomy of the axial skeleton 28.3.2. Injuries to the cervical spine, Whiplash injury, thoracic and lumbosacral spine injury, spinal cord injuries-injury at cervical level, injury at thoracic level, injury at thoracolumbar region, injury below L1, cauda-equina syndrome

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO6,CO7,CO8	Describe brief anatomy, etiology, mechanism of injury of the spine, Injuries at various level at spine.	4	Lecture	CC	Knows-how	L&PPT
CO4,CO5,CO6,CO7,CO8	Demonstrate clinical features and investigation methods for injuries of the axial skeleton	8	Practical Training 28.3	PSY-GUD	Knows-how	PER,BS,PAL
CO4,CO5,CO6,CO7,CO8	Perform the conservative treatment procedures of the axial skeleton injury.	8	Experiential-Learning 28.3	AFT-VAL	Shows-how	CBL,RP,DIS

M 28 Unit 4 Pelvic injuries, rib and coccyx injuries

28.4.1. Anatomy and fracture of the pelvis 28.4.2. Anatomy and fracture of the coccyx 28.4.3. Anatomy and fracture of the rib

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO6,CO7,CO8	Describe Brief anatomy, etiology, mechanism of injury of fracture pelvis, rib and coccyx	1	Lecture	CC	Knows-how	L&PPT
CO4,CO5,CO6,CO7,CO8	Demonstrate clinical features and investigation& management methods of injury of fracture pelvis, rib and coccyx	2	Practical Training 28.4	PSY-GUD	Knows-how	BS
CO4,CO5,CO6	Perform conservative treatment procedures of injury of fracture pelvis, rib and coccyx	2	Experiential-	AFT-SET	Shows-	D-BED

,CO7,CO8			Learning 28.4	how	
Practical Training Activity					
Practical Training 28.1 : Injuries around A.the hip, B. the knee, C. ankle joints					
Total activity: 6 hrs Activity 1. Case-Based Learning (2 hrs) . The staff will describe the definition, types, serological and radiological findings, management and complications of injuries to the hip joints (15 min) 1. Greetings to the patient (1 min) 2. Self-introduction to the patient (1 min) 3. Place the patient in a suitable posture (2 min) 4. Informed consent (if the affected person is a child, get consent from parents/guardians) (3 min) 5. History taking (3 min) 6. General & Systemic examination for shoulder joint and fractures around in hip joint (30 min) 7. Serological & Radiological investigations findings and clinical view based on Radiological findings (20 min) 8. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside & describe the complications (20 min) 9. The staff allow the students as groups discussion/role-play based on first aid management & conservative management (20 min) 10. After all the staff have assessed the students based on the simulation (express the management in models) (20 min) Activity 2. Presentations (2 hrs) The staff will describe the definition, types, serological and radiological findings, management and complications of injuries around the knee joint (15 min) 1. Greetings to the patient (1 min) 2. Self-introduction to the patient (1 min) 3. Place the patient in a suitable posture (2 min) 4. Informed consent (if the affected person is a child, get consent from parents/guardians) (3 min) 5. History taking (3 min) 6. General & Systemic examination for shoulder joint and fractures around in knee joint (30 min) 7. Serological & Radiological investigations findings and clinical view based on Radiological findings (20 min) 8. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside & describe the complications (20 min) 9. The staff allow the students as groups discussion/role-play based on first aid management & conservative management (15 min) 10. After all the staff have assessed the students based on the simulation (express the management in models) (20 min) Activity 3. Problem-Based Learning (2 hrs)					

The staff will describe the definition, types, serological and radiological findings, management and complications of injuries around in ankle joints (15 min)

1. Greetings to the patient (1 min)
2. Self-introduction to the patient (1 min)
3. Place the patient in a suitable posture (2 min)
4. Informed consent (if the affected person is a child, get consent from parents/guardians) (3 min)
5. History taking (3 min)
6. General & Systemic examination for shoulder joint, fractures & pathological findings around ankle joint (30 min)
7. Serological & Radiological investigations findings and clinical view based on Radiological findings (20 min)
8. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside & describe the complications (20 min)
9. The staff allow the students as groups discussion/role-play based on first aid management & conservative management (15 min)
10. After all the staff have assessed the students based on the simulation (express the management in models) (20 min)

Practical Training 28.2 : Injuries to the tibia, fibula and the foot

Total activity: 4 hrs

Activity 1: Brainstorming(1 hour 30 min)

The staff will describe the definition, clinical features, types, pathophysiology, serological and radiological findings, differential diagnosis of injuries of the tibia, fibula and foot by showing the videos and PPT

Activity 2: Demonstration (2 hours 30 min)

The staff demonstrate the bone setting through the models (30 mins)

The staff allow the students to demonstrate the management of bone settings through models (30 mins)

The staff will demonstrate the traction methods, bandage technique, and pop management in the injuries of tibia, fibula, and foot (1 hour 30 mins)

Practical Training 28.3 : Injuries of the axial skeleton

Total activity: 8 hrs

Activity 1. Brainstorming(2 hours 30 min)

The staff will describe the definition, clinical features, types, pathophysiology, serological and radiological findings, differential diagnosis, and treatment procedures in a modern aspect to the injuries of cervical vertebral injuries

Activity 2. Peer Assisted Learning (2 hours 30 min)

The staff will assist the student in getting the journals related to the definition, clinical features, types, pathophysiology, serological and radiological findings, differential diagnosis and treatment procedures in a modern aspect of injuries of thoracic vertebral injuries from SCOPUS/WOS indexed journals

Activity 3. Presentations (3 hours)

Step 1. The staff will present the case studies, including the definition, clinical features, types, pathophysiology, serological and radiological findings, differential diagnosis and treatment procedures in a modern aspect of injuries of lumbar vertebral injuries (2 hours 30 min)

Step 2. The staff assess the students by group discussion, based on the mechanism of fracture, serological and radiological findings, their explanation, post fracture management (30 mins)

Practical Training 28.4 : Fracture pelvis, rib and coccyx

Total activity: 2 hrs

Activity 1. Brainstorming (1 hr)

The staff will give a brief lecture on the definition, clinical features, types, pathophysiology, serological and radiological findings, differential diagnosis, and treatment procedures in a modern aspect of the fracture in pelvis, the ribs, coccyx

Activity 2. Discussion (1 hr)

The staff assess the students by group discussion, based on the mechanism of fracture, serological and radiological findings, their explanation, and post-fracture management

Experiential learning Activity

Experiential-Learning 28.1 : Management of the hip, knee and ankle joints

Total activity: 10 hrs

Activity 1. Case-Based Learning (3 hours 30 minutes)

The student will present based on the following criteria in the management of injuries to the hip joint at the bedside through PPT

1. How greets to the patient (1 min)

2. How Self-introduction to the patient (1 min)

3. Place the patient in a suitable posture (10 min)

4. Informed consent (if the affected person is a child, get consent from parents/guardians) (2 min)

5. History taking (16 min)

6. General & Systemic examination, pathological changes (60 min)

7. Serological & Radiological investigations findings and clinical view based on Radiological findings (10 min)

8. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside (50 min)

9. Make a case study & presentation, make a discussion with his/her PG colleagues on the case studies for various management procedures/ treatment procedures, practical difficulties (30 min)

10. The students take the conclusion of the presentation in their log book (35 min)

Activity 2. Presentations (3 hours 30 minutes)

2. The student will present based on the following criteria in the management of injuries to the knee joint at the bedside through PPT (3 hours 30 minutes)

1. How greeds to the patient (1 min)
2. How Self-introduction to the patient (1 min)
3. Place the patient in a suitable posture (10 min)
4. Informed consent (if the affected person is a child, get consent from parents/guardians) (2 min)
5. History taking (16 min)
6. General & Systemic examination, pathological changes (60 min)
7. Serological & Radiological investigations findings and clinical view based on Radiological findings (10 min)
8. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside (50 min)
9. Make a case study & presentation, make a discussion with his/her PG colleagues on the case studies for various management procedures/ treatment procedures, practical difficulties (30 min)
10. The students take the conclusion of the presentation in their log book (35 min)

Activity 3. Roleplays (3 hours)

The student will be divided into two groups. One group acts as the doctor, another one acts as the patient to exhibit the following criteria in the management of injuries to the ankle joint at the bedside through PPT (3 hours 30 minutes)

1. How greeds to the patient (1 min)
2. How Self-introduction to the patient (1 min)
3. Place the patient in a suitable posture (10 min)
4. Informed consent (if the affected person is a child, get consent from parents/guardians) (2 min)
5. History taking (16 min)
6. General & Systemic examination, pathological changes (45 min)
7. Serological & Radiological investigations findings and clinical view based on Radiological findings (10 min)
8. Demonstration of traditional bone setting methods along with or without varmam therapy at the bedside (50 min)
9. Make a case study & presentation, make a discussion with his/her PG colleagues on the case studies for various management procedures/ treatment procedures, practical difficulties (30 min)
10. The students take the conclusion of the presentation in their log book (20 min)

Experiential-Learning 28.2 : Injuries to the tibia, fibula and the foot

Total activity: 6 hrs

Activity 1. Case-Based Learning (2 hrs)

The scholar will demonstrate to the management of tibial fractures

1. Greetings to the patient (1 min)
2. Self-introduction to the patient (1 min)
3. Place the patient in a suitable posture (2 min)
4. Informed consent (1 min)
5. History taking (15 min)
6. General, systemic examination and deformities (20 min)
7. Serological & Radiological investigations findings (20 min)
8. Management - demonstrate traction reduction, bandaging, and express the correlation between traditional bone setting methods with alternative system management (60 min)

Activity 2. Problem-Based Learning (2 hrs)

The scholar will demonstrate to the management of fibular fractures

1. Greetings to the patient (1 min)
2. Self-introduction to the patient (1 min)
3. Place the patient in a suitable posture (2 min)
4. Informed consent (1 min)
5. History taking (15 min)
6. General, systemic examination and deformities (20 min)
7. Serological & Radiological investigations findings (20 min)
8. Management - demonstrate traction reduction, bandaging, and express the correlation between traditional bone setting methods with alternative system management (60 min)

Activity 3. Problem-Solving Method (2 hrs)

The scholar will demonstrate to the management of foot fractures

1. Greetings to the patient (1 min)
2. Self-introduction to the patient (1 min)
3. Place the patient in a suitable posture (2 min)
4. Informed consent (1 min)

5. History taking (15 min)
6. General, systemic examination and deformities (20 min)
7. Serological & Radiological investigations findings (20 min)
8. Management - demonstrate traction reduction, bandaging, and express the correlation between traditional bone setting methods with alternative system management (60 min)

Experiential-Learning 28.3 : The axial skeleton injury.

Total activity: 8 hrs

1. Cervical vertebral injury

Activity 1. Roleplays (1hr 30 min)

The students are divided into two separate groups

One group to act as the affected person and his relatives, and the affected person will express the signs of cervical vertebral injury. One group of students acting as doctors will express first aid, taking investigation, radiological findings & management procedures. The acting doctor group will examine the corresponding region and suitable radiological investigations.

Activity 2. Discussions (1 hr 30 min)

After the roleplay, the students will discuss the case series of various cervical vertebral injuries and conclude their logbook

Activity 3. Peer Learning (2 hr)

The students will present a case series about thoracic vertebral injuries and recent advances in management from various articles from Scopus/ WOS journals

Activity 4. Case-Based Learning (3hrs)

The students will demonstrate the following at the bedside

1. Complaints and history taking (20 min)
2. General & systemic examination (30 min)
3. Interpret serological investigation findings (40 min)
4. Illustrate radiological findings, exhibit various radiological investigation methods (40 min)
5. Traditional management for lumbar vertebral injuries (20 min)
6. Recent advanced techniques for lumbar vertebral injuries (30 min)

Experiential-Learning 28.4 : Fracture of pelvis, rib and coccyx

Total activity: 2 hrs

Activity 1. Roleplays (40 min) The students are divided into two separate groups One group to act affected person and his relatives, the affected person will express the signs of fractures of the pelvis (5 mins) One group of students acting as doctors will express first aid, taking investigation, radiological findings & management procedures (20 min) After the roleplay, the students will discuss together and conclude their logbook (15 min) Activity 2. Peer Learning (1hr 20 min) Step 1. The students will present the case series for rib fractures from a Scopus/WOS-indexed journal based on signs, symptoms, examination, management, including recent advanced techniques (40 min) Step 2. The students will present the case series for rib fractures from a Scopus/WOS-indexed journal based on signs, symptoms, examination, management, including recent advanced techniques (40 min)

Modular Assessment

Assessment method	Hour
INSTRUCTIONS Conduct a structured modular assessment. The assessment will be for 50 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6C Case presentation for injuries in lower limb bones -25 Marks The scholar will be assessed by • History taking • General and systemic examination findings • Siddha diagnostic tools and findings • Serological and radiological findings • Conservative management and A topic presentation on recent advances in management techniques for injuries in lower limb bones -15 Marks and Team-Based Learning (TBL) for the lower limb, axial skeleton and pelvic bones, fracture and joint dislocation and management - 10 marks The student will be assessed by • Examination of the lower limb, axial skeleton and pelvic bones • Express the traditional traction, manipulation and conservative management of dislocation of the hip joint	4

- Explain the recent advanced techniques about the dislocations of the hip joint

Or

Any practical in converted form can be taken for assessment (25 marks)

and

Any of the experiential as portfolio/reflections/presentations, can be taken as an assessment (25 marks)

Semester No : 5

Module 29 : General orthopedics-part I

Module Learning Objectives

(At the end of the module, the students should be able to)

Describe the various congenital, developmental, metabolic disorders, rheumatic disease, neuromuscular disorder, and bone neoplasm.

Describe pathology, pathophysiology, clinical signs and symptoms, and investigation of the above disorder

Perform conservative and general management

M 29 Unit 1 Congenital disorder

29.1.1. Congenital disorder of the upper limb - 29.1.1.1. Torticollis 29.1.1.2. Sprengel deformity 29.1.1.3. Cleidocranial dysostosis 29.1.1.4. Madelung's deformity
29.1.1.5. Congenital absence of radius 29.1.2. Congenital disorder of the lower limb 29.1.2.1. Congenital dysplasia of the hip 29.1.2.2. Congenital pseudarthrosis of the tibia 29.1.2.3. Congenital talipes equinovarus 29.1.2.4. Congenital absence of the tibia 29.1.2.5. Congenital absence of the fibula

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO6,CO7,CO8	Describe various Congenital disorders etiology pathology and classification	2	Lecture	CK	Know	L&PPT ,L_VC

CO6,CO7,CO8	Demonstrate clinical signs and symptoms investigations of congenital disorder	4	Practical Training 29.1	PSY-GUD	Knows-how	CBL
CO4,CO5,CO6,CO7,CO8	Perform conservative treatment procedures and discuss the complications of congenital disorder	5	Experiential-Learning 29.1	AFT-SET	Shows-how	CBL

M 29 Unit 2 Developmental disorder

29.2.1. Introduction, achondroplasia, osteogenesis imperfecta, mucopolysaccharide disorders 29.2.2. Hurler's disease, hunter's disease, hereditary multiple exostoses, dyschondroplasia, maffucci's disease 29.2.3. Osteopetrosis (marble bone disease) 29.2.4. Epiphyseal dysplasia, metaphyseal dysplasia, diaphyseal dysplasia, fibrous dysplasia, albert syndrome, nail patella syndrome, marfan's syndrome, acrocephalosyndactyly, carpenter 's syndrome, Cleidocranial dysplasia. 29.2.5. Congenital neurofibromatosis, 29.2.6. Paget's disease

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO6,CO7,CO8	Describe the definition, History, Classification, pathology and pathogenesis of developmental disorder	2	Lecture	CC	Knows-how	L&PPT
CO4,CO5,CO6,CO7,CO8	Demonstrate clinical signs and symptoms, investigation methods of Developmental disorder	4	Practical Training 29.2	PSY-GUD	Knows-how	D,CBL
CO4,CO5,CO6,CO7,CO8	Perform conservative management of developmental disorder of Developmental disorder	5	Experiential-Learning 29.2	AFT-SET	Shows-how	CBL

M 29 Unit 3 Metabolic disorders

29.3.1. Rickets 29.3.2. Renal osteodystrophy 29.3.3. Vitamin D-resistant rickets 29.3.4. Celiac rickets_ gluten sensitive enteropathy 29.3.5. Osteomalacia 29.3.6. Hyperparathyroidism 29.3.7. Osteoporosis 29.3.8. Scurvy 29.3.9. Metabolic disorders leading to osteosclerosis.

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO6,CO7,CO8	Describe brief introduction about bone formation remodeling definition etiology types , role of calcium metabolism of various metabolic disorder	1	Lecture	CK	Know	L&PPT
CO4,CO5,CO6,CO7,CO8	Demonstrate clinical features, other features and investigation of Metabolic disorders	2	Practical Training 29.3	PSY-GUD	Knows-how	BS,PER
CO4,CO5,CO6,CO7,CO8	Perform conservative treatment procedures in the initial stages, late stage, and discuss the differential diagnosis of metabolic disorders	3	Experiential-Learning 29.3	PSY-GUD	Knows-how	PER,CBL,RP

M 29 Unit 4 Rheumatic diseases

29.4.1. Introduction 29.4.2. Classification 29.4.3. Rheumatoid arthritis 29.4.5. Seronegative spondylarthritis 29.4.6. Ankylosing spondylitis 29.4.7. Fibromyalgia

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO6,CO7,CO8	Discuss about introduction classification definition etiology pathology pathogenesis of various Rheumatic diseases	2	Lecture	CC	Knows-how	L&PPT
CO4,CO5,CO6,CO7,CO8	Demonstrate clinical features articular extra articular features, deformities and investigations of Rheumatic diseases	4	Practical Training 29.4	PSY-GUD	Shows-how	D-BED,CBL,D,D-M
CO4,CO5,CO6,CO7,CO8	Perform general measures goals of treatments and conservative treatment of Rhumaic disorders	5	Experiential-Learning 29.4	AFT-RES	Shows-how	D,D-BED

M 29 Unit 5 Neuromuscular disorders

29.5.1. Cerebral palsy 29.5.2. Poliomyelitis 29.5.3. Arthrogryposis multiplex Congenita 29.5.4. Leprosy in orthopedics 29.5.6. Muscular dystrophies 29.5.7. Neural

tube defects- spina bifida Aperta

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO6,CO7,CO8	Describe definition it's classification causes pathology pathogenesis and stages of various Neuromuscular disorder	2	Lecture	CK	Knows-how	L&PPT
CO4,CO5,CO6,CO7,CO8	Demonstrate clinical features, investigation of Neuromuscular disorder	4	Practical Training 29.5	PSY-ADT	Knows-how	SIM,DIS,CBL
CO4,CO5,CO6,CO7,CO8	Perform conservative management for Neuromuscular disorder	5	Experiential-Learning 29.5	AFT-RES	Shows-how	CBL

M 29 Unit 6 Bone neoplasm

29.6.1. Introduction 29.6.2. General principles of tumors, classification 29.6.3. Tumors of cartilaginous origin, osseous origin, resorptive bone tumors, giant cell tumor, tumors of non-osseous origin and inclusion tumors

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO6,CO7,CO8	Elaborate brief introduction general principles of tumors staging classification of bone Neoplasm	1	Lecture	CC	Knows-how	L&PPT
CO4,CO5,CO6,CO7,CO8	Demonstrate various clinical features of investigation methods of Bone Neoplasm	2	Practical Training 29.6	PSY-GUD	Shows-how	DIS,D
CO4,CO5,CO6,CO7,CO8	Perform conservative management and discuss prognosis and complications of bone neoplasm	3	Experiential-Learning 29.6	AFT-SET	Does	RP,PL,BS

Practical Training Activity

Practical Training 29.1 : The congenital disorder

Total activity: 4 hrs

Activity 1. Brainstorming (2 hr 30 min)

The staff will describe the definition, clinical features, types, pathophysiology, serological and radiological findings, differential diagnosis, and treatment procedures in a modern aspect of the Congenital disorder

Activity 2. Presentations (1 hr 30 min)

The staff will present the case study/case series from the WOS/Scopus journal indexed journal, make discuss with each other (1 hr)

The staff will conduct the assessment of the students by group discussion, based on the mechanism of fracture, serological and radiological findings, their explanation, and post-fracture management (30 mins)

Practical Training 29.2 : The developmental disorder

Total activity: 4 hrs

Activity 1. Brainstorming(2 hr 30 min)

The staff will describe the definition, clinical features, types, pathophysiology, serological and radiological findings, differential diagnosis, and treatment procedures in a modern aspect of the developmental disorder

Activity 2. Case-Based Learning (1 hr 30 min)

The staff will present the case study/case series from the WOS/Scopus journal indexed journal, make discuss with each other (1 hr)

The staff will conduct the assessment of the students by group discussion, based on the mechanism of fracture, serological and radiological findings, their explanation, and management of developmental disorder (30 mins)

Practical Training 29.3 : The metabolic disorders

Total activity: 2 hrs

Activity 1. Brainstorming (1 hr)

The staff will describe the definition, clinical features, types, pathophysiology, serological and radiological findings, differential diagnosis, and treatment procedures in a modern aspect of metabolic disorders

Activity 2. Presentations (1 hr)

The staff will present the case study/case series from the WOS/Scopus journal indexed journal, make discuss with each other (30 min)

The staff will conduct the assessment of the students by group discussion, based on the mechanism of fracture, serological and radiological findings, their explanation, and post-fracture management (30 mins)

Practical Training 29.4 : The rheumatic diseases

Total activity: 4 hrs

Activity 1. Case-Based Learning (2 hr 20 min)

The staff describe the following things in the management of rheumatic diseases at the bedside

Step 1. Greetings to the patient (1 min)

Step 2. Self-introduction to the patient (1 min)

Step 3. Place the patient in a suitable posture (2 min)

Step 4. Informed consent (if the affected person is a child, get consent from parents/guardians) (3 min)

Step 5. History taking (3 min)

Step 6. General & Systemic examination (20 min)

Step 7. Serological & Radiological investigations findings and clinical view based on Radiological findings (50 min)

Step 8. Management of rheumatic diseases at the bedside & describe the complications (60 min)

Activity 2. Discussion(40 min)

The staff allow the students as groups discussion/role-play based on first aid management & conservative management

Activity 3. Simulation (60 min)

After all the staff have assessed the students based on the simulation (express the management in models) (60 min)

Practical Training 29.5 : The neuromuscular disorder

Total activity: 4 hrs

Activity 1. Case-Based Learning (2hrs 20 min)

The staff describe the following things in the management of neuromuscular disorders at the bedside

1. Greetings to the patient (1 min)

2. Self-introduction to the patient (1 min)

3. Place the patient in a suitable posture (2 min)

4. Informed consent (if the affected person is a child, get consent from parents/guardians) (3 min)

5. History taking (3 min)

6. General & Systemic examination (60 min)

7. Serological & Radiological investigations findings and clinical view based on Radiological findings (10 min)

8. Management of rheumatic diseases at the bedside & describe the complications (60 min)

Activity 2. Discussion (40 min)

The staff allow the students as groups discussion/role-play based on first aid management & conservative management

Activity 3. Simulation (60 min)

After all the staff have assessed the students based on the simulation (express the management in models)

Practical Training 29.6 : Bone Neoplasm

Total activity hours: 2 hrs

The staff will describe the definition, clinical features, types, pathophysiology, serological and radiological findings, differential diagnosis, and treatment procedures in a modern aspect of the bone Neoplasm (1 hr)

The staff will present the case study/case series from the WOS/Scopus journal indexed journal, make discussion with each other (30 min)

The staff will conduct the assessment of the students by group discussion, based on the mechanism of fracture, serological and radiological findings, their explanation, and post-fracture management (30 mins)

Experiential learning Activity

Experiential-Learning 29.1 : The congenital disorder

Total activity: 5 hrs

Activity 1. Presentations (2 hr)

The student describes any kind of congenital disorders based on definition, pathophysiology, signs, symptoms, serological, radiological findings, differential diagnosis, and management

Activity 2. Peer Learning (1 hr)

The student will describe the case series/ case report for a congenital disorder from the WOS/Scopus-indexed journals

Activity 3. Roleplays (2 hr)

The students are divided into two separate groups

One group to act affected person and his relatives, the affected person will express the signs of the congenital disorder (30 mins)

One group of students acting as doctors will express history taking, investigation, radiological findings & management procedures (30 min)

The acting doctor group examines the corresponding region, examination, suitable radiological investigations (30 min)

After the roleplay, the students will discuss together and conclude their logbook (30 min)

Experiential-Learning 29.2 : The developmental disorder

Total activity: 5 hrs

Activity 1. Presentations (1 hr)

The student describes any kind of developmental disorder based on definition, pathophysiology, signs, symptoms, serological, radiological findings, differential diagnosis,

and management

Activity 2. Case-Based Learning (2 hr)

The student will describe the case series/ case report for a developmental disorder from the WOS/Scopus indexed journals

Activity 3. Roleplays (2 hrs)

The students are divided into two separate groups

One group to act affected person and his relatives, the affected person will express the signs of the developmental disorder (30 mins)

One group of students acting as doctors will express history taking taking investigation, radiological findings & management procedures (30 min)

The acting doctor group examine the corresponding region examination, suitable radiological investigations (30 min)

After the roleplay, the students will discuss together and conclude their logbook (30 min)

Experiential-Learning 29.3 : Management of metabolic disorders

Total activity : 3 hrs

Activity 1. Presentation(1 hr)

The student describes any kind of developmental disorder based on definition, pathophysiology, signs, symptoms, serological, radiological findings, differential diagnosis, and management

Activity 2. Case-Based Learning (1 hr)

The student will describe the case series/ case report for a developmental disorder from the WOS/Scopus indexed journals

Activity 3. Roleplays (1 hr)

The students are divided into two separate groups

One group to act affected person and his relatives, the affected person will express the signs of the developmental disorder (10 mins)

One group of students acting as doctors will express history taking taking investigation, radiological findings & management procedures (20 min)

The acting doctor group examine the corresponding region examination, suitable radiological investigations (20 min)

After the roleplay, the students will discuss together and conclude their logbook (10 min)

Experiential-Learning 29.4 : The rhumatic disorders

Total activity: 5 hrs

Activity 1. Case-Based Learning (3hr 20 min)

The student will present based on the following criteria in the management of injuries to the rheumatic disorders at the bedside through PPT to final year/CRRRI students

1. How greets to the patient (5 min)

2. How Self-introduction to the patient (5 min)

3. Place the patient in a suitable posture / Describe first aid for severe forms of injuries around the rhumaic disorders (10 min)

4. Express the importance of getting informed consent (if the affected person is a child, get consent from parents/guardians) (5 min)
 5. Elaborate on the techniques of history taking (45 min)
 6. General & Systemic examination (30 min)
 7. Serological & Radiological investigations findings and clinical view based on Radiological findings (40 min)
 8. Management of rheumatic disorders at the bedside (60 min)
- Activity 2. Discussion(40 min)
9. The students make a group discussion/role-play based on first aid management & conservative management
- Activity 3. Simulation (60 min)
- After all, the student demonstrates on the simulation (express the management in models) (60 min)

Experiential-Learning 29.5 : Management for neuromuscular disorder

Total activity: 5 hrs

Activity 1. Case-Based Learning (3hr 20 min)

The student will present based on the following criteria in the management of injuries to the neuromuscular disorder at the bedside through PPT to final year/CRRRI students

Step 1. How greets to the patient (5 min)

Step 2. How Self-introduce to the patient (5 min)

Step 3. Place the patient in a suitable posture / Describe first aid for severe forms of injuries around the neuromuscular disorder (10 min)

Step 4. Express the importance of getting informed consent (if the affected person is a child, get consent from parents/guardians) (5 min)

Step 5. Elaborate on the techniques of history taking (45 min)

Step 6. General & Systemic examination (30 min)

Step 7. Serological & Radiological investigations findings and clinical view based on Radiological findings (40 min)

Step 8. Management of neuromuscular disorder at the bedside (60 min)

Activity 2. Discussion(40 min)

The students make a group discussion/role-play based on first aid management & conservative management

Activity 3. Simulation (60 min)

After all, the student demonstrates on the simulation (express the management in models)

Experiential-Learning 29.6 : Bone neoplasm

Total activity: 3 hrs

Activity 1. Brainstorming (1 hr)

The student describes any kind of bone neoplasm based on definition, pathophysiology, signs, symptoms, serological, radiological findings, differential diagnosis, and

management

Activity 2. Peer Learning (1 hr)

The student will describe the case series/ case report for a developmental disorder from the WOS/Scopus indexed journals (1 hr)

Activity 3. Roleplays (1 hr)

The students are divided into two separate groups

One group to act affected person and his relatives, the affected person will express the signs of the bone neoplasm (10 mins)

One group of students acting as doctors will express history taking taking investigation, radiological findings & management procedures (20 min)

The acting doctor group examine the corresponding region examination, suitable radiological investigations (20 min)

After the roleplay, the students will discuss together and conclude their logbook (10 min)

Modular Assessment

Assessment method

Hour

INSTRUCTIONS

Conduct a structured modular assessment. The assessment will be for 50 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6C

Case presentation for Congenital/Developmental/Metabolic disorders -25 Marks

The scholar will be assessed by

- History taking
- Signs and symptoms
- General and systemic examination findings
- Siddha diagnostic tools and findings
- Serological and radiological findings
- Conservative management and recent advanced techniques

and

A topic presentation signs, symptoms, pathophysiology, siddha diagnostic tool findings, serological and radiological findings, recent advanced management techniques, literature evidence, recent publications about bone neoplasm -10 Marks

and

Team-Based Learning (TBL) for Rheumatic disease/ Neuromuscular disorder and management - 15 marks

The student will be assessed by

- Demonstration of clinical examination

4

- Compare the siddha pathophysiology with the modern term
- Explain the siddha diagnostic tool along with serological and radiological findings
- Explain the siddha treatment based on siddha principles and recent advanced techniques

Or

Any practical in converted form can be taken for assessment (25 marks)

and

Any of the experiential as portfolio/reflections/presentations, can be taken as an assessment (25 marks)

Module 30 : General orthopedics- part-2 and sports medicine

Module Learning Objectives

(At the end of the module, the students should be able to)

Describe etiology, pathology, pathogenesis aspect of osteomyelitis and skeletal TB, gonococcal, syphilitic, neuropathic and hemophilic arthritis, osteo arthritis, gout and crystalline arthropathy.

Infer investigation procedures for the above conditions.

Descuss about sports injuries, mechanisms, wound healing timeline and factors.

Perform conservative management through modification of lifestyle, physiotherapy, mechanical aids and alternative therapy.

M 30 Unit 1 Infection of bone and skeletal tuberculosis.

30.1. Osteomyelitis-acute, subacute and chronic 30.2. Skeletal tuberculosis - general principles, TB spine, TB of the hip joint, TB of the knee, TB of the shoulder. T.B. of the ankle and Tuberculosis osteomyelitis

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
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CO6,CO7,CO8	Describe brief introduction, definition, classification, etiology, agent factors, host factors, environment factors, pathophysiology of acute, subacute and chronic osteomyelitis. Explain brief introduction, etiology, pathology, classification of skeletal tuberculosis.	2	Lecture	CC	Knows-how	L,L&PPT
CO6,CO7,CO8	Demonstrate clinical signs and symptoms, investigations of osteomyelitis and skeletal tuberculosis	4	Practical Training 30.1	PSY-GUD	Knows-how	LRI,D-BED
CO6,CO7,CO8	Perform the general and conservative management & discuss differential diagnosis and complications in osteomyelitis and skeletal tuberculosis	5	Experiential-Learning 30.1	PSY-MEC	Shows-how	RP,DIS,PER,BS,PL

M 30 Unit 2 Disorder of the joints

30.2.1. Infective arthritis 30.2.2. Gonococcal arthritis 30.2.3. Syphilitic arthritis 30.2.4. Neuropathy arthritis 30.2.5. Hemophilic arthritis

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO6,CO7,CO8	Describe brief introduction of infective and non infective arthritis with definition , predisposing factors, causative organisms, pathology of various arthritis	2	Lecture	CC	Knows-how	L&GD,L
CO6,CO7,CO8	Interpret the clinical signs and symptoms with various investigations of various arthritis	4	Practical Training 30.2	PSY-GUD	Shows-how	CBL,LRI,BS
CO6,CO7,CO8	Perform conservative management in acute and chronic conditions of infective and non-infective arthritis	5	Experiential-Learning 30.2	PSY-MEC	Shows-how	CBL

M 30 Unit 3 Degenerative disorder

30.3.1. Osteoarthritis of the hip, knee and other regions. 30.3.2. Crystalline arthropathy- Gout and pseudogout

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO6,CO7,CO8	Describe definition, causes, general features, pathology, risk factor, types of primary and secondary osteoarthritis of knee joint and other joints and osteoporosis, gout and crystalline arthropathy.	2	Lecture	CC	Knows-how	L&GD,L
CO6,CO7,CO8	Demonstrate clinical signs and symptoms, clinical features and investigation of osteoporosis, gout and crystalline arthropathy.	4	Practical Training 30.3	PSY-GUD	Shows-how	PER,BS,P L,DIS
CO6,CO7,CO8	Perform conservative management for obesity induced OA	6	Experiential-Learning 30.3	PSY-MEC	Shows-how	CBL,BL,D

M 30 Unit 4 Sports Injuries and wound healing timeline

30.4.1. Sports injury-Introduction 30.4.2. Classification of sports injury 30.4.2.1. William's classification 30.4.2.2. Consequential Injuries 30.4.2.3. Non-consequential Injuries 30.4.3. Sports injuries of upper limbs, lower limbs, head, neck, trunk and spine. 30.4.4. Wound healing timeline-Terminology, growth factors influences, chronology, of wound healing 30.4.5. Ligament healing timeline 30.4.6. Tendon healing timeline 30.4.7. Muscle healing timeline 30.4.8. Articular cartilage healing timeline 30.4.9. Bone healing timeline.

References: 84,85,86,87,88

3A	3B	3C	3D	3E	3F	3G
CO6,CO7,CO8	Describe brief introduction of sports medicine and classification of sports injury by williams classification. Explain terminology of wound healing and wound healing timeline of ligament, tendon,muscle, articular cartilage and bone.	2	Lecture	CK	Know	L&PPT ,L
CO6,CO7,CO8	Demonstrate common sports injury in various sports and explain details of sports injury of upper, lower limb, head, neck, trunk and spine. Applying various modalities in rehabilitation in early and late proliferation, early and late remodelling of healing phases	4	Practical Training 30.4	PSY-GUD	Shows-how	X-Ray,D-BED
CO6,CO7,CO8	Discuss the mechanism of sports injury and perform to correct the repetitive strain injury	5	Experiential-	PSY-	Shows-	CBL

	and good physique. experience the healing properties, the possible modalities and goals for common clinical injuries.		Learning 30.4	MEC	how	
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M 30 Unit 5 Sports injuries and medicine

30.5.1. Sports injuries of upper limbs, lower limbs- Investigation, conservative treatment, preventive, proper treatment and proper training

References: 84,85,86,87,88

3A	3B	3C	3D	3E	3F	3G
CO6,CO7,CO8	Describe details of various investigations regarding the sports injuries and discuss the general principles, treatment applicable to all sports injury	2	Lecture	CC	Knows-how	L,L&PPT
CO6,CO7,CO8	Demonstrate preventive measures by proper training to prevent injuries by exercises, relaxation and body stretches	4	Practical Training 30.5	PSY-GUD	Shows-how	D,DIS,SIM
CO6,CO7,CO8	Applying correct posture biomechanics, proper training by exercises to improve cardio pulmonary capacity, muscle strength, agility, flyometers and relaxation	5	Experiential-Learning 30.5	PSY-MEC	Shows-how	PER,D,DIS,IBL

Practical Training Activity

Practical Training 30.1 : Osteomyelitis and skeletal tuberculosis

Total activity hours 4

Activity 1. Brainstorming (1 hr)

The staff will describe the definition, clinical features, types, pathophysiology, serological and radiological findings, differential diagnosis, and treatment procedures in a modern aspect of osteomyelitis

Activity 2. Presentation (1 hr)

The staff will describe the definition, clinical features, types, pathophysiology, serological and radiological findings, differential diagnosis, and treatment procedures in a modern aspect of skeletal tuberculosis(1 hr)

Activity 3. Peer Assist Learning (1hr)

The staff will present the case study/case series for osteomyelitis and skeletal tuberculosis from the WOS/Scopus-indexed journals

Activity 3. Discussion (1 hr)

The staff will conduct the assessment of the students by group discussion, based on the mechanism of fracture, serological and radiological findings, their explanation, and post-fracture management for osteomyelitis and skeletal tuberculosis

Practical Training 30.2 : Management of infectious & non-infectious arthritis

Total activity:- 4 hours

Activity 1. Brainstorming (1 hr 15 min)

The staff will about the definition, types, and case scenario, serological and radiological findings. Management of infective arthritis (1 hr)

The staff allow the student to write the details of infectious arthritis a brief to their logbook (15 min)

Activity 2. Case-Based Learning (2hr 45 min)

The staff describe the following things in the management of non-infectious arthritis at the bedside

Step 1. Greetings to the patient (1 min)

Step 2. Self-introduction to the patient (1 min)

Step 3. Place the patient in a suitable posture (2 min)

Step 4. Informed consent (if the affected person is a child, get consent from parents/guardians) (3 min)

Step 5. History taking (3 min)

Step 6. General & systemic examination (60 min)

Step 7. Serological & Radiological investigations findings and clinical view based on Radiological findings (10 min)

Step 8. Management of rheumatic diseases at the bedside & describe the complications (60 min)

Step 9. After all the staff have assessed the students based on the simulation (express the management in models) (25 min)

Practical Training 30.3 : Osteoporosis, gout and crystalline arthropathy

Total activity:- 4 hrs

Activity 1. Presentations (1 hour)

The staff will describe the definition, clinical features, types, pathophysiology, serological and radiological findings, differential diagnosis, and treatment procedures in a modern aspect of osteoporosis through PPT (60 min)

Activity 2. Brainstorming (60 min)

The staff will describe the definition, clinical features, types, pathophysiology, serological and radiological findings, differential diagnosis, and treatment procedures in a modern aspect of gout through PPT

Activity 3. Flipped Classroom (30 min)

The staff will assist the students to get videos about the definition, clinical features, types, pathophysiology, serological and radiological findings, differential diagnosis, and

treatment procedures in a modern aspect of crystalline arthropathy

Activity 4. Peer Learning (45 min)

The staff will present the case study/case series for osteoporosis, gout and crystalline arthropathy from the WOS/Scopus indexed journals

Activity 5. Discussion (45 min)

The staff will conduct the assessment of the students by group discussion, based on the mechanism of fracture, serological and radiological findings, their explanation, and management for osteoporosis, gout and crystalline arthropathy

Practical Training 30.4 : Common sports injuries in the upper, lower limb, head, neck, trunk and spine

Total activity:- 4 hours

Activity 1. Brainstorming (2hr 30 min)

The staff will describe the definition, types, mechanism, management and rehabilitation techniques for sport injuries in the upper limb through PPT (50 min)

The staff will describe the definition, types, mechanism, management and rehabilitation techniques for sport injuries in the lower limb through PPT (50 min)

The staff will describe the definition, types, mechanism, management and rehabilitation techniques for sport injuries in the head & neck through PPT (50 min)

Activity 2. Presentations (1 hr 30 min)

The staff will describe the definition, types, mechanism, management and rehabilitation techniques for sport injuries in the trunk & spine through PPT (50 min)

The staff will assess the students by description of the region-wise sport injuries and management (40 min)

Practical Training 30.5 : Exercises, relaxation, and body stretches

Total activity:- 4 hours

Activity 1. Demonstration (2 hrs)

Step 1. The staff will demonstrate exercise techniques, mechanisms, exercises, orientation to muscle strengthening & preventive measures through PPT/ videos (1 hr)

Step 2. The staff will demonstrate relaxation techniques, mechanisms, orientation to muscle relaxation & preventive measures through PPT/ videos (1 hr)

Activity 2. Simulation (2 hrs)

Step 1. The staff will encourage the student to simulation about body stretch techniques, mechanisms, region-wise body stretch techniques & preventive measures through PPT/ videos (1 hr)

Step 2. The staff assess the students based on description and demonstration of exercises, relaxation, and body stretches (1 hr)

Experiential learning Activity

Experiential-Learning 30.1 : Management of osteomyelitis and skeletal tuberculosis

Total activity: -5 hours

Activity 1. Self-Based Learning (1hr)

The student describes any kind of congenital disorders based on definition, pathophysiology, signs, symptoms, serological, radiological findings, differential diagnosis, and management of osteomyelitis and skeletal tuberculosis (30 min)

Activity 2. Peer Learning (1 hr)

The student will describe the case series/ case report for osteomyelitis and skeletal tuberculosis from the WOS/Scopus-indexed journals

Activity 3. Roleplays -osteomyelitis (1 hr 30 min)

The students are divided into two separate groups

Step 1. One group to act affected person and his relatives, the affected person will express the signs of the congenital disorder (30 mins)

Step 2. One group of students acting as doctors will express history taking taking investigation, radiological findings & management procedures (30 min)

Step 3. The acting doctor group examine the corresponding region examination, suitable radiological investigations (15 min)

Step4. After the roleplay, the students will discuss together and conclude their logbook (15 min)

Activity 4. Case-Based Learning -skeletal tuberculosis (1 hr 30 min)

The student presents the case study about skeletal tuberculosis to their colleuges

Experiential-Learning 30.2 : Management of infective and non-infective arthritis (primary & secondary OA)

Total activity:- 5 hours

Activity 1. Presentations (1 hr)

The student will present the case series/case study of any infective arthritis from the WOS/Scopus-indexed journals through PPT

Activity 2. Case-Based Learning (3 hrs)

The student will present based on the following criteria in the management of injuries to the non-infectious arthritis at the bedside through PPT to final year/CRRRI students

Step 1. How greets to the patient (5 min)

Step 2. How Self-introduce to the patient (5 min)

Step 3. Place the patient in a suitable posture / Describe first aid for severe forms of injuries around the non-infectious arthritis (10 min)

Step 4. Express the importance of getting informed consent (if the affected person is a child, get consent from parents/guardians) (5 min)

Step 5. Elaborate on the techniques of history taking (45 min)

Step 6. General & Systemic examination (30 min)

Step 7. Serological & Radiological investigations findings and clinical view based on Radiological findings (40 min)

Step 8. Management of non-infective arthritis at the bedside (40 min)

Activity 3. Simulation (1 hr)

After all, the student demonstrates on the simulation (expresses the management in models)

Experiential-Learning 30.3 : Management for obesity induced OA

Total activity:- 6 hours

Activity 1. Blended Learning (1 hr)

The student will describe the definition, types, causes, calorie-based various dietary and varmam management, alternative management, complications of obesity

Activity 2. Demonstration (1 hr)

The student demonstrates physiotherapy techniques for obesity induced OA at the bedside/through PPT

Activity 3. Case-Based Learning (4 hr)

The student will present based on the following criteria in the management of obesity induced OA at the bedside through PPT to final year/CRRI students

Step 1. How greets to the patient (5 min)

Step 2. How to Self-introduction to the patient (5 min)

Step 3. Place the patient in a suitable posture / Describe first aid for severe forms of injuries around the non-infectious arthritis (10 min)

Step 4. Express the importance of getting informed consent (if the affected person is a child, get consent from parents/guardians) (5 min)

Step 5. Elaborate on the techniques of history taking (45 min)

Step 6. General & Systemic examination (30 min)

Step 7. Serological & Radiological investigations findings and clinical view based on Radiological findings (40 min)

Step 8. Describes various diets (calorie-based, intermediate diet, Mediterranean diet, paleo diet, keto diet). varmam management of obesity induced OA at the bedside (40 min)

Step 9. After all, the student demonstrates on the simulation (express the management in models) (60 min)

Experiential-Learning 30.4 : Common sports injuries in the upper, lower limb, head, neck, trunk and spine

Total activity: 5 hrs

Activity 1. Case-Based Learning (3 hrs)

The student will present based on the following criteria in the management of common sports injuries in the upper, lower limb, head, neck, trunk and spine at the bedside through PPT to final year/CRRI students

Step 1. How greets to the patient (5 min)

Step 2. How to Self-introduce to the patient (5 min)

Step 3. Place the patient in a suitable posture / Describe first aid for severe forms of injuries (10 min)

Step 4. Express the importance of getting informed consent (if the affected person is a child, get consent from parents/guardians) (5 min)

Step 5. Elaborate on the techniques of history taking (45 min)

Step 6. General & systemic examination (30 min)

Step 7. Serological & Radiological investigations findings and clinical view based on Radiological findings (30 min)

Step 8. Describes varmam management of sports injuries at the bedside (20 min) Step 9. After all, the student demonstrates on the simulation (express the management in models) (30 min) Activity 2. Peer Learning (60 min) The student will describe to the case study/case series to their colleagues from the Scopus indexed journals Activity 3. Discussion (60 min) The student discuss with others and concluded in their log book (30 min)	
Experiential-Learning 30.5 : Posture biomechanics, cardio pulmonary capacity, muscle strength, agility, flyometers and relaxation	
Total activity:- 5 hours Activity 1. Presentations (2 hr) Step 1. The student will describe the anatomy, mechanism, types, disorders of postures, systemic, general examination, and management of postural disorders Step 2. The student will describe the anatomy, mechanism, cardio workout, and impact of cardio workout in the normal human (1 hr) Activity 2. Demonstration (2 hr) The student will demonstrate how to examine the muscle strengths, examination on individual muscle strength, muscle tone, reflexes, muscle strengthening exercise for individual muscles, usage of the flexometer, and determine ROM, the workout, yoga, and medications to improve agility Activity 3. Discussion (1 hr) The students will discuss with others about posture biomechanics, cardio pulmonary capacity, muscle strength, agility, flyometers and relaxation and conclude in their log book (1hr)	
Modular Assessment	
Assessment method	Hour
INSTRUCTIONS Conduct a structured modular assessment. The assessment will be for 50 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6C Case presentation for any Infective arthritis/Metabolic arthritis/Degenerative arthritis -25 Marks The scholar will be assessed by • History taking • Signs and symptoms • General and systemic examination findings • Siddha diagnostic tools and findings • Serological and radiological findings	4

- Conservative management and recent advanced techniques

and

A topic presentation on signs, symptoms, pathophysiology, siddha diagnostic tool findings, serological and radiological findings, recent advanced management techniques, literature evidence, recent publications about for skeletal TB/ hemophilic arthritis/Osteomyelitis -15 Marks

and

Quiz/ MCQ/Crossword - 10 marks

Or

Any practical in converted form can be taken for assessment (25 marks)

and

Any of the experiential as portfolio/reflections/presentations, can be taken as an assessment (25 marks)

Semester No : 6

Module 31 : Non-traumatic orthopaedic disorders.

Module Learning Objectives

(At the end of the module, the students should be able to)

Describe the general principles of non-traumatic orthopaedic disorders.

Diagnose the various regional conditions of the upper limb, lower limb, spine, low back ache, and repetitive stress injury through clinical examination and relevant investigation.

Treat the patient with conservative management, educate the patient about proper posture and preventive measures.

M 31 Unit 1 General principles and Regional conditions of the neck

31.1.1. History, examination, investigation 31.1.2. Neck-torticollis, thoracic outlet syndrome, cervical rib, cervical disc syndrome

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO6,CO7,CO8	Describe history and approach to non traumatic orthopedic disorders by three steps of clinical examination.	1	Lecture	CC	Knows-how	L&PPT
CO6,CO7,CO8	Describe brief introduction, causes, contributing factors, clinical features of various conditions of the neck	1	Lecture	CC	Knows-how	L&PPT
CO6,CO7,CO8	Demonstrate examination of the condition through three steps and investigation methods	2	Practical Training 31.1	PSY-GUD	Knows-how	D,D-BED
CO6,CO7,CO8	Demonstrate relevant clinical signs and symptoms through clinical examination and investigation in the disorders of neck	2	Practical Training 31.2	PSY-GUD	Shows-how	D-BED,D
CO6,CO7,CO8	Perform conservative management of the disorders in neck	5	Experiential-Learning 31.1	PSY-MEC	Does	PER,CBL

M 31 Unit 2 Regional condition of the upper limb and disorders of the hand

31.2.1. Shoulder -frozen shoulder, rotator cuff lesions, rotator cuff tears, deltoid contracture. 31.2.2. Elbow-tennis elbow, golfer's elbow, olecranon bursitis. 31.2.3. Wrist and hand. -de- quervain's syndrome, trigger fingers and thumb, ganglia, Dupuytren's contracture, carpal tunnel syndrome, compound palmar ganglion

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO6,CO7,CO8	Describe brief introduction, history, etiology, clinical features and stages of regional condition of the upper limb	2	Lecture	CK	Know	L&PPT ,L
CO6,CO7,CO8	Demonstrate relevant clinical signs and symptoms, investigation, differential diagnosis of the various condition of the upper limb	4	Practical Training 31.3	PSY-GUD	Shows-how	D-BED,D
CO6,CO7,CO8	Perform conservative management and prognosis for disorders for upper limb	5	Experiential-	PSY-	Does	CBL

			Learning 31. 2	MEC		
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M 31 Unit 3 Regional condition of the lower limbs

31.3.1. Hip-coxa Vara, Legg-Calve-Perthes disease, slipped capital femoral epiphysis 31.3.2. Knee-genu valgum, genu varum, genu recurvatum, bursa around the knee, popliteal cyst, chondromalacia patella, recurrent dislocations of patella, loose bodies in the knee, jumper's knee, iliotibial band syndrome, Osgood -schlatter disease, sinding- Larsen Johansson syndrome, plica syndrome, osteochondritis dissecans, Hoffa's syndrome 31.3.3. Foot-introduction ,pes-cavus,pes-planus, painful heel- traumatic disturbances, foot pain 31.3.4. Heel- developmental and pathological disturbances of the heel, plantar fibromatosis, dancer tendinitis, hallux valgus, hammer toe, sesamoiditis

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
CO6,CO7,CO8	Describe brief introduction, definition, classification, predisposing factors, etiology, pathogenesis, clinical features of the lower limb	3	Lecture	CC	Knows-how	L&PPT ,L
CO6,CO7,CO8	Demonstrate relevant clinical signs and symptoms, and investigation of disease in the lower limb	6	Practical Training 31.4	PSY-GUD	Knows-how	BS,D
CO6,CO7,CO8	Perform conservative management and appliances and various rehabilitation methods LL disorders	8	Experiential-Learning 31.3	PSY-MEC	Shows-how	CBL

M 31 Unit 4 Regional condition of the spine and Low back ache

31.4.1. Scoliosis, kyphosis, lumbosacral stenosis, spondylolisthesis 31.4.2. Low back ache -introduction, epidemiology, posture, pathophysiology, functional anatomy, lumbar disc disease, classification of intervertebral disc, 31.4.3. Examination, clinical features, investigation, differential diagnosis, conservative treatment of the back, 31.4.4. Back education in special situations -school bag syndrome, repetitive stress injury

References: 84,85,86

3A	3B	3C	3D	3E	3F	3G
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CO6,CO7,CO8	Describe brief introduction about spinal deformities, definition varieties, classification types and clinical features	3	Lecture	CC	Knows-how	L,L&PPT
CO6,CO7,CO8	Demonstrate relevant clinical signs and symptoms and investigations through clinical examination and investigation of the lumbar region diseases	6	Practical Training 31.5	PSY-GUD	Shows-how	PL,DIS,B S,D,X-Ray
CO6,CO7,CO8	Perform treatment methods by conservative management and support of various splints and braces for diseases in the lumbar region	8	Experiential-Learning 31.4	PSY-MEC	Shows-how	D,CBL

Practical Training Activity

Practical Training 31.1 : Non traumatic orthopedic disorders

Total activity:-2 hours

Step 1. Demonstration (1 hr)

The staff will demonstrate non-traumatic orthopaedic conditions through a three-step clinical examination and corrective management.

Step 2. Discussions (1 hr)

The staff divide students into small groups and discuss their observations, clinical signs and investigation procedures of the neck.

Practical Training 31.2 : Clinical examination and investigation in the disorders of the head & neck

Total activity:- 2 hours

Activity 1. Demonstration(30 min)

The staff will demonstrate specific examination for disorders of the head & neck

Activity 2. X-ray Identification (30 min)

The staff will show radiological findings and explain the corresponding clinical findings

Activity 3. Peer Learning (1hr)

Step 1. The staff will present a case report/ case study related to disorders of the head & neck from the WOS/Scopus indexed journal (30min)

Step 2. The staff assess the students into group discussions

Divide students into small groups and discuss their observations, clinical signs and investigation procedures of the neck (30 min)

Practical Training 31.3 : Various conditions of the upper limb

Total activity:- 4 hours

Activity 1. Brainstorming (1 hr 30 min)

Step 1. The staff will describe the definition, pathophysiology management of the non-traumatic conditions in the upper limb

Step 2. The staff describe various treatments/management for the corresponding conditions of the non-traumatic conditions in the upper limb (30 min)

Activity 2. Demonstration (1 hr)

The staff will demonstrate a specific examination for the upper limb and describe the various examination findings in the upper limb

Activity 3. X-ray Identification (30min)

The staff will show radiological findings and explain the corresponding clinical findings

Activity 4. Peer Learning (30min)

The staff will present a case report/ case study related to any one non-traumatic disorder of the upper limb from the WOS/Scopus indexed journal (30min)

Activity 5. Discussions (30min)

The staff assess the students into group discussions

Divide students into small groups and discuss their observations, clinical signs and investigation procedures of the upper limb (30 min)

Practical Training 31.4 : Disease in the lower limb

Total activity:- 6 hours

Activity 1. Brainstorming (1 hr 30 min)

The staff will describe the definition, pathophysiology management of the disease in the lower limb through

Activity 2. Demonstration (2 hr)

Step 1. The staff will demonstrate a specific examination for the lower limb and describe the various examination findings in the lower limb(1 hr)

Step 2. The staff describe various treatments/management along with recent advances for the corresponding conditions of the non-traumatic conditions in the lower limb (1 hr)

Activity 3. X-ray Identification(1 hr 30 min)

The staff will show radiological findings and explain the corresponding clinical findings

Activity 4. Peer Assisted Learning (30 min)

The staff will assist the students to pick a case report/ case study related to any one non-traumatic disorder of the lower limb from the WOS/Scopus indexed journal

Activity 5. Discussion (30 min)

The staff assess the students into group discussions

Divide students into small groups and discuss their observations, clinical signs and investigation procedures in the lower limb

Practical Training 31.5 : Clinical examination and investigation of diseases in the lumbar region

Total activity:- 6 hrs

Activity 1. Brainstorming (1 hr 30 min)

The staff will describe the definition, pathophysiology, systemic, general examination, radiological, serological investigations & management of the disease in the lumbar region

Activity 2. Demonstration (1 hr)

The staff will demonstrate a specific examination for the lumbar region and describe the various examination findings in the lumbar region

Activity 3. X-ray identification (1 hr 30 min)

The staff will show radiological findings and explain the corresponding clinical findings

Activity 4. Peer Learning (1 hr)

The staff will present a case report/ case study related to any one non-traumatic disorder of the upper limb from the WOS/Scopus indexed journal

Activity 5. Discussion (1 hr)

The staff assess the students into group discussions, divide students into small groups and discuss their observations, clinical signs and investigation procedures of the neck

Experiential learning Activity

Experiential-Learning 31.1 : Conservative management of the disorders in the head & neck

Total activity:- 5 hours

Activity 1. Presentations (1 hr)

The student will present the case series/case study of conservative management of the disorders in the head & neck from the WOS/Scopus-indexed journals through PPT to final year students

Activity 2. Case-Based Learning (3 hrs)

The student will present based on the following criteria in the management of any one disorder in neck

1. Greetings to the patient (5 min)
2. Self-introduction to the patient (5 min)
3. Place the patient in a suitable posture /first aid for severe forms of injuries around the non-infectious arthritis (10 min)
4. Informed consent (if the affected person is a child, get consent from parents/guardians) (5 min)
5. History taking, (includes complaints and duration) (15 min)
6. General & Systemic examination (20 min)
7. Serological & Radiological investigations findings and clinical view based on Radiological findings (40 min)
8. Varmam management (50 min)

Activity 3. Discussions (1hr)

9. After all, the students discuss with each other and write their logbook based on the discussion

Experiential-Learning 31.2 : Disorders of the upper limb

Total activity:-5 hours

Activity 1. Case-Based Learning (3 hrs)

The student will perform the following things at the bedside

Step 1. Greeting to the patient (5 min)

Step 2. Self-introduction to the patient (5 min)

Step 3. Get consent from the patient (5 min)

Step 4. History taking (15 min)

Step 5. General & systemic examination of the upper limb with finding explanation (30 min)

Step 6. The serological findings (25 min)

Step 7. Radiological findings (25 min)

Step 8. Disease diagnosed & pathophysiology of the diagnosed disease (30 min)

Step 9. Differential diagnosis with proper explanation (10 min)

Step 10. Line of treatment & Assessment scale (30 min)

Activity 2. Presentations (60 min)

The student will present the case study/ case series to their colleagues

Activity 3. Discussion (60 min)

Discuss with their colleagues about recent advances in management/ treatment

Experiential-Learning 31.3 : Lower limb disorders: conservative management, appliances, and various rehabilitation methods

Total activity:-8 hrs

Activity 1. Presentation (1 hr)

The student will describe the examination of the lower limb with the corresponding clinical, serological & radiological findings, conservative/ treatment for the corresponding findings

Activity 2. Demonstration (2 hrs)

The student will demonstrate various rehabilitation techniques and various appliances for lower limb disease through PPT/Videos

Activity 3. Case-Based Learning (3 hrs)

The student will perform the following things at the bedside

Step 1. Greeting to the patient (5 min)

Step 2. Self-introduction to the patient (5 min)

Step 3. Get consent from the patient (5 min)

Step 4. History taking (15 min)
 Step 5. General & systemic examination of the upper limb with finding explanation (20 min)
 Step 6. The serological findings (10 min)
 Step 7. Radiological findings (10 min)
 Step 8. Disease diagnosed & pathophysiology of the diagnosed disease (10 min)
 Step 9. Differential diagnosis with proper explanation (30 min)
 Step 10. Line of treatment & Assessment scale (10 min)
 Step 11. Make a case study (30 min)
 Activity 4. Simulation (1 hr)
 The student encourages their colleagues to simulate the management procedures on models
 Activity 5. Discussions (1 hour)
 Discuss with their colleagues about recent advances in management/ treatment

Experiential-Learning 31.4 : Diseases in the lumbar region: conservative management and support of various splints and braces

Total activity:-8 hours
 Activity 1. Demonstrations (3 hrs)
 Step 1: The student will demonstrate the examination of the lumbar region with the corresponding clinical, serological & radiological findings, conservative/ treatment for the corresponding findings (1 hr)
 Step 2: The student will demonstrate various rehabilitation techniques for diseases in the lumbar region through PPT/Videos (1 hr)
 Step 3: The student will demonstrate various appliances and their usage through PPT (1hr)
 Activity 2. Case-Based Learning (4 hrs)
 The student will perform the following things at the bedside
 Step 1. Greeting to the patient (5 min)
 Step 2. Self-introduction to the patient (5 min)
 Step 3. Get consent from the patient (5 min)
 Step 4. History taking (25 min)
 Step 5. General & systemic examination of the upper limb with finding explanation (30 min)
 Step 6. The serological findings (30 min)
 Step 7. Radiological findings (30 min)
 Step 8. Disease diagnosed & pathophysiology of the diagnosed disease (20 min)
 Step 9. Differential diagnosis with proper explanation (30 min)
 Step 10. Line of treatment & Assessment scale (30 min)

Step 11. Make a case study (30 min)

Activity 3. Discussion (1 hr)

Discuss with their colleagues about recent advances in management/ treatment and conclude their logbook

Modular Assessment

Assessment method	Hour
INSTRUCTIONS Conduct a structured modular assessment. The assessment will be for 50 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6C OSCE for regional injuries (any region) -25 Marks and A topic presentation for recent advanced techniques for the management regional non-traumatic disorders -15Marks and Team-Based Learning (TBL) for conservative management of non-traumatic orthopaedic disorders. - 10 marks The student will be assessed by • Learning outcome • Engagement • Critical thinking • Professional skills Or Any practical in converted form can be taken for assessment (25 marks) and Any of the experiential as portfolio/reflections/presentations can be taken as an assessment (25 marks)	4

Module 32 : Physical medicine

Module Learning Objectives

(At the end of the module, the students should be able to)

Describe about Posture, biomechanics, clinical kinesiology, therapeutic exercises, massage therapy, electrotherapy, mobility aids, suspension, traction orthosis, braces, prosthesis.

Compare and integrate with traditional varmam therapy in the view of the advantages, disadvantages, and limitations of various challenging and emerging diseases.

Apply physical medicine therapy in relevant conditions

Identify the normal posture and body mechanics

Demonstrate the various body plans, joint positions and their application for various clinical conditions and in daily activities.

Counsel the patient about proper body posture through exercises.

Diagnose and treat the common orthopaedic and neurological diseases by physical medicine and integrate with varmam therapeutic procedures

M 32 Unit 1 Physiotherapy, therapeutic exercises & orthosis, brace and prosthesis

32.1.1. Physiotherapy-.Physiotherapy approach to osteoarthritis, rheumatoid arthritis, ankylosing spondylitis, frozen shoulder and torticollis, upper and lower extremities post arthroplasty rehabilitation-Neurological -stroke, Parkinson's disease, multiple sclerosis, poliomyelitis, motor neuron disease and traumatic brain injury. 32.1.2. Therapeutic exercises- Introduction, mechanism, various exercises procedures for strengthening, relaxation, coordination, mobilisation, endurance, gait, balance and musculoskeletal injuries 32.1.3. Orthosis, brace and prosthesis- Classification, varieties-spinal, cervical, upper and lower limbs. types-supportive spinal orthosis, corrective spinal orthosis, lower limb Orthosis,Hip-Knee-Ankle-Foot [HAKF] Orthosis , upper Orthosis ,foot wear and it's modifications. 32.1.4. Prosthesis -classification, types, PrHip-Knee-Ankle-Foot Orthosisosthetic for lower and upper limb.

References: 84,85,86,88,89,90,91,92,93,94,97,98

3A	3B	3C	3D	3E	3F	3G
CO6,CO7,CO8	Describe physiotherapy, therapeutic exercise, orthosis, braces and prosthesis	4	Lecture	CC	Know	L&PPT
CO6,CO7,CO8	Demonstration of physiotherapy therapeutic exercise, and orthosis orthosis, braces and prosthesis techniques	8	Practical Training 32.1	PSY-GUD	Knows-how	BS,D,RP
CO6,CO7,CO8	Perform physiotherapy therapeutic exercise, and orthosis orthosis, braces and prosthesis techniques	10	Experiential-Learning 32.	AFT-RES	Shows-how	CBL

			1			
M 32 Unit 2 Posture, biomechanics, massage therapy & clinical kinesiology 32.2.1. Posture alignment procedure for standing, sitting, muscle imbalance, pathological, upper & lower extremities 32.2.2. Body Biomechanics - basic principles, back education, wallet syndrome 32.2.3. Techniques, Indications, Contra indication, Dangers of massage therapy 32.2.4. Clinical kinesiology, Introduction, terminology, basic concepts, osteo kinematics, arthrokinematics, clinical application References: 84,85,86,88,91,95,96,97						
3A	3B	3C	3D	3E	3F	3G
CO6,CO7,CO8	Describe the Posture, biomechanics, Massage therapy & clinical kinesiology	4	Lecture	CK	Know	L&PPT
CO6,CO7,CO8	Demonstrate the Techniques, Indication, Contra indication, Dangers of massage therapy	8	Practical Training 32.2	PSY-GUD	Knows-how	
CO6,CO7,CO8	Apply mechanism of massage therapy with kinesiology	6	Experiential-Learning 32.2	AFT-SET	Shows-how	DIS,CBL
M 32 Unit 3 Suspension and traction Introduction, physiological effects, modes and techniques for applying traction parameters and suspension, indication and Contra indication. References: 84,85,86,91						
3A	3B	3C	3D	3E	3F	3G
CO6,CO7,CO8	Describe definition, types & classification of Suspension and traction	1	Lecture	CC	Knows-how	L&PPT
CO6,CO7,CO8	Demonstration of suspension and traction based on disease	2	Practical Training 32.3	PSY-GUD	Knows-how	SIM,D

CO6,CO7,CO8	Perform suspension and traction procedures and discuss traditional technique and its advantages and limitations.	5	Experiential-Learning 32.3	AFT-RES	Shows-how	CBL
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M 32 Unit 4 Electro therapy and mobility AIDS

32.4.1. Low frequency, medium frequency and high frequency currents, transcutaneous nerve stimulation (TENS), microfilament electrical Neuromuscular stimulation, iontophoresis common motor points-indication, Contraindication, physiological effects. 32.4.2. Diathermy -short wave, microwave and long wave diathermy-indication, Contraindication 32.4.3. Radiation therapy - infrared and ultraviolet radiation-indication, Contra indication dangers 32.4.4. Laser therapy 32.4.5. Superficial heating modalities -paraffin,wax bath therapy, hot pack, electrical heating pads, Whirlpool bath, helio therapy, sauna therapy, biofeedback, electromyography 32.4.6. Mobility AIDS-parallel walk, walking frames, rollators, walking cane and stick, crutches, dependent mobility AIDS

References: 84,85,86,96

3A	3B	3C	3D	3E	3F	3G
CO6,CO7,CO8	Describe Definition electro therapy ,radiation therapy, lesar therapy, and enlist the aids	1	Lecture	CK	Know	L&PPT
CO6,CO7,CO8	Demonstration of electro,radiation & laser therapy for various disease	2	Practical Training 32.4	PSY-GUD	Shows-how	D
CO6,CO7,CO8	Perform the electro,radiation & laser therapy for various disease	5	Experiential-Learning 32.4	AFT-SET	Shows-how	PBL,D

Practical Training Activity

Practical Training 32.1 : Physiotherapy, therapeutic exercise, orthosis, braces and prosthesis techniques

Total activity: 8 hrs

Activity 1. Brainstorming (3 hrs)

The staff will give a brief lecture on the definition, types, and mechanism of Physiotherapy, therapeutic exercise, and uses of orthosis, braces and prosthesis

Activity 2. Demonstration (3 hrs)

The staff will demonstrate how to fix the orthosis, braces and prosthesis on suitable patients

Activity 3. Roleplays (2 hrs)

The staff divide the students into groups to play the role of doctor and patient. The doctor will explain the physiotherapy therapeutic exercise and deliver a piece of knowledge about the fixation of aids like orthosis, braces and prosthesis techniques

The staff will demonstrate physiotherapy therapeutic exercise, orthosis, braces and prosthesis techniques, therapeutics based on

1. Greetings to the patient
2. self introduction
3. informed consent
4. History taking
5. General & systemic examination
6. Describe the serological & radiological findings
7. Disease diagnosed & pathophysiology of the diagnosed disease
8. Line of treatment & Assessment scale
9. Make a case study

Practical Training 32.2 : The Techniques, Indications, Contraindications, Dangers of Massage Therapy

Total activity: 8 hrs

Activity 1. Brainstorming (2 hrs)

The staff will give a brief lecture on the techniques, indications, contraindications, and dangers of massage therapy to the students

Activity 2. Flipped Classroom (2 hrs)

The staff will assist the student in referring to the valuable videos based on various massage therapies and mechanisms behind the corresponding techniques, and assess the students based on their logbook related to the videos

Activity 3. Demonstrations (4 hrs)

The staff will demonstrate the thokkanam/massage therapy in various regions of the body and deliver the contraindications for particular techniques

Practical Training 32.3 : Suspension and traction for diseases

Total activity: 2 hrs

Activity 1. Demonstration (1 hr)

The staff will demonstrate suspension and traction procedures for cervical and lumbar disc diseases

Activity 2. Simulation (1 hr)

The staff will encourage the student to simulate the procedures through models and live demonstrations. Encourage them to note the key points.

Practical Training 32.4 : Electrotherapy, radiation therapy, and laser therapy for various diseases

Total activity: 2 hours

Activity 1. Demonstration (2 hours)

The staff will demonstrate electrotherapy, radiation therapy & laser therapy for various diseases, also demonstrate pre-, post- and operative procedures, and explain the mechanism of above mentioned therapies

Experiential learning Activity

Experiential-Learning 32.1 : Physiotherapy, therapeutic exercise, and orthosis, braces and prosthesis techniques

Total activity: 10 hrs

Activity 1. Self-based Learning (2 hrs)

The student will apply the physiotherapy therapeutic exercise at the bedside on suitable patients and collect the data to make a case study, along with vs without Varmam therapy

Activity 2. Demonstration (2 hrs)

The student will demonstrate how to fix the orthosis, braces and prosthesis in suitable conditions

Activity 3. Peer Learning (2 hrs)

The student will present the case study based on physiotherapy & therapeutic exercise from SCOPUS/WOS-indexed journals

Activity 4. Presentations (2 hrs)

The student will make a presentation based on indication, contra-indication, therapeutic method, and the mechanism of various physiotherapy therapeutic exercises

Activity 5. Discussions (2 hrs)

The student makes a discussion based on various physiotherapy, therapeutic exercise, and orthosis, braces and prosthesis techniques

Experiential-Learning 32.2 : The mechanism of massage therapy with kinesiology

Total activity: 6 hrs

Activity 1. Library Session (2 hrs)

The student gathers the knowledge and collects the data about various types, techniques, indian and other countries' massage techniques, and the mechanism of the corresponding massage techniques

Activity 2. Presentation (2 hrs)

The student will present the case study based on massage therapy with kinesiology from WOS/Scopus-indexed journals

Activity 3. Demonstration (2 hrs)

The Student will demonstrate the different types of massage techniques based on suitable conditions, and present the various techniques

Experiential-Learning 32.3 : Suspension and traction procedures, and discuss traditional techniques and their advantages and limitations

Total activity: 5 hrs

Activity 1. Demonstration (2 hrs)

The student will demonstrate suspension and traction procedures on models/ bedside in suitable clinical conditions

Activity 1. Case-Based Learning (2 hrs 20 min)

The scholar will perform to following things at the bedside

1. Greet the patient (5 min)
2. Self-introduction(5 min)
3. Informed consent(5 min)
4. History taking (15 min)
5. General & systemic examination (20 min)
- 6 . Describe the serological & radiological findings (30 min)
7. Disease diagnosed & pathophysiology of the diagnosed disease (30 min)
8. Line of treatment & Assessment scale (30 min)

Activity 2. Discussions (40 mins)

The students will discuss with their colleagues based on Suspension and traction procedures, and discuss traditional techniques and their advantages and limitations, and conclude their logbook

Experiential-Learning 32.4 : The electrotherapy, radiation therapy & laser therapy for various diseases

Total activity: 5 hrs

Activity 1. Demonstration (2 hrs)

Step 1. The student will demonstrate electrotherapy for various diseases (1 hr)

Step 2. The student will demonstrate radiation therapy for various diseases (1 hr)

Activity 2. Presentations (2 hours)

The student will present a case study used by electro, radiation and laser therapy, and explain the mechanism of electro, radiation and laser therapy

Activity 3. Practical (1 hr)

Step 1. The student will apply the electrotherapy to the patient in various conditions (20 mins)
 Step 2. The student will apply radiation therapy to the patient in various conditions (20 mins)
 Step 3. The student will apply laser therapy to the patient in various conditions (20 mins)

Modular Assessment

Assessment method

Hour

INSTRUCTIONS

Conduct a structured modular assessment. The assessment will be for 50 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per the table 6C

Case presentation for various injuries used by various physiotherapies -25 Marks

The scholar will be assessed by

- History taking
- General and systemic examination findings
- Siddha diagnostic tools and findings
- Serological and radiological findings
- Conservative management
- Compare the physiotherapies techniques with siddha external therapy mechanism

and

A topic presentation for various physiotherapy, electrotherapy techniques, mobility aids, suspension, traction orthosis, braces, and prosthesis. -15Marks

and

Spotters/Quiz/MCQs/Crossword - 10 marks

Or

Any practical in converted form can be taken for assessment (20 marks)

and

Any of the experiential as portfolio/reflections/presentations, can be taken as an assessment (30 marks)

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Table 4 : Practical Training Activity

(*Refer table 3 of similar activity number)		
Practical No*	Practical name	Hours
1.1	Varmam points identification by anatomical landmarks method.	2
1.2	Varmam points location in the body using the finger breadth measurement and the thread measurement method.	2
1.3	Identification and the location of varmam points by the graphical measurement method	2
1.4	Identification and the location of varmam points relative to body planes & assign specialised nomenclature	2
1.5	Identify the position of key varmam points relative to adjacent varmam points	2
2.1	Varmam point therapy for head and face- Stimulation techniques and therapeutic uses	8
2.2	Varmam points & illakumuraigal for anterior and lateral aspects of head	7
2.3	Varmam points for superior and posterior aspects of the head -Stimulation techniques and therapeutic uses	8
2.4	Varmam points & illakumuraigal of superior and posterior aspects of head	7
3.1	Application of the stimulation techniques on varmam points in the neck & chest for therapeutic indications.	10
3.2	Identification of the signs and symptoms of varmam points injury in the neck & chest, perform specific illakumuraigal and treatment.	10
4.1	Application of the stimulation techniques on varmam points of upper limb for therapeutic indications.	10
4.2	Identification of the signs and symptoms of varmam points injuries in the upper limb and Performing specific illakumuraigal and treatment.	10
5.1	Application of the stimulation techniques on varmam points in the abdomen for therapeutic indications.	10
5.2	Identification of the signs and symptoms of varmam points injury in the abdomen, Perform specific illakumuraigal and treatment.	10
6.1	Application of the stimulation techniques on varmam points in the pelvis & back for therapeutic indications.	10
6.2	Identification of the signs and symptoms of varmam points injury in the pelvis and back, Perform specific illakumuraigal and treatment.	10

7.1	Application of the stimulation techniques on varmam points in the lower limb for therapeutic indications.	10
7.2	Identification of the signs and symptoms of varmam points injury in the lower limb, Perform specific illakumuraigal and treatment.	10
8.1	Apply the manipulation techniques on varmam points related to neurological and psychiatric disorders.	2
8.2	Apply the manipulation techniques on varmam points related to musculoskeletal disorders.	2
8.3	Application of manipulation techniques on varmam points related to cardiovascular disorder.	2
8.4	Application of manipulation techniques on varmam points related to respiratory disorders.	2
8.5	Apply the manipulation techniques on varmam points related to digestive system & genito urinary system disorders.	2
8.6	Application of manipulation techniques on varmam points related to endocrine disorders.	2
8.7	Application of manipulation techniques on varmam points related to hematological disorders.	2
8.8	Apply the manipulation techniques on varmam points related to ENT disorders	2
8.9	Application of manipulation techniques on varmam points related to pediatric diseases.	2
8.10	Apply the manipulation techniques on varmam points related to geriatric diseases.	2
9.1	Pharmacological activity, qualitative and quantitative analysis for validation of Varmam aga maruthugal (Saaru, Karkam, Vaatru, Kudineer, Ilagam)	5
9.2	Pharmacological activity, qualitative and quantitative analysis for validation of Varmam aga maruthugal (Nei,Thylam, Kuligai, Kuzhambu, Panda Puthayal)	5
9.3	Nutrient value of Varmam kanji vagaigal (Porridge)	5
9.4	Bio-chemical and pharmacological Screening of kanji vagaigal (Porridge)	5
10.1	Varmam pura maruthuvam (Thalam, Tharai, Thuvalai) based on diseases conditions	5
10.2	Varmam pura maruthuvam (Kizhi Parigaram) based on diseases conditions	5
10.3	Varmam pura maruthuvam (Poochu,Pasai,Kulineer) based on diseases conditions	5

10.4	Varmam pura maruthuvam (Pugai, Nasiyam ,Nasikaparanam, Oothal, Kalikkam) based on diseases conditions	5
11.1	Application of thodu varmam on the basis of disease aspect	10
11.2	Padu varmam, thattu varmam application on the basis of disease aspect	5
11.3	Aadhara varmam, ul varmam, odukki varmam application based on the disease aspect	5
12.1	Varmam application for CNS, RS, CVS and Endocrine wellness	5
12.2	Varmam application for GIT, Genito-urinary, Eye and ENT wellness	5
12.3	Varmam for Geriatric care, Palliative care	2
12.4	Varmam for postnatal and special children's care	2
12.5	Varmam for speech disorder and pain management	2
12.6	Varmam for Rehabilitation, Emergency Management	4
13.1	Therapeutic application of major group of adangal	5
13.2	Therapeutic application of minor group of adangal	5
13.3	Adangal maruthuvam for regional symptoms	5
13.4	Adangal maruthuvam for general symptomatology	5
14.1	Padu varmam and iymkanda Ilakku murai	5
14.2	Thodu varmam ilakku murai	5
14.3	Retrieving methods of specific conditions (pregnant women, lactating mothers)	5
14.4	Retrieving methods of specific conditions (children and infants & neonatal)	5
15.1	Therapeutic application of Kai Thirumal muraigal	5
15.2	Therapeutic application of chavuttu thirumal	5

15.3	Pothu Varmam Thadaval and Soothira Thadavu Muraigal	3
15.4	Thasa Naadi Pinnal Murai	3
15.5	Varmam thadaval muraigal of traditional vaithiyars	4
16.1	Manual methods of iluvai parigaram (traction methods)	5
16.2	Mechanical methods of iluvai parigaram (traction methods)	5
16.3	Traditional traction methods for sciatica, spondylitis	5
16.4	Traditional traction methods for herniated disc,stenosis	5
17.1	Management of varmam injuries through ilakkumuraigal	2
17.2	Management of fracture through varmam techniques	2
17.3	Application of equipment in the management of fracture	2
17.4	Internal medicines for the management of varmam injuries.	6
17.5	External medicines for the management of varmam injuries.	8
18.1	Varmam management for the head injuries	10
18.2	Varmam management for the facial bone injuries	10
19.1	Manipulation techniques for injuries to cervical, thoracic and lumbar spine	6
19.2	Manipulation techniques for traumatic paraplegia and quadriplegia	6
19.3	Manipulation techniques for sacrum, coccyx and sacroiliac joint injuries.	4
19.4	Varmam management for injuries to the ribs, sternum and hyoid bone	4
20.1	Examination and varmam management for shoulder joint injuries	6
20.2	Reduction techniques and varmam management for puyakaayam	2

20.3	Reduction technique for mulankai mootu kaayam in varmam management.	4
20.4	Management of the reduction technique for manikattukaayangal	4
20.5	Varmam management for hand and finger trauma	4
21.1	Varmam management for hip joint injuries	4
21.2	Varmam management for thodai kaayangal(thigh injuries).	4
21.3	Varmam management for mulankaal muttu kaayangal(knee joint injuries)	4
21.4	The clinical signs,symptoms and varmam management of tarsal bone fracture and dislocation	4
21.5	Varmam management of foot injuries.	4
22.1	Optimal possible varmam management for soft tissue injury	2
22.2	Location of soft tissue varmam injury in upper limb and demonstration of appropriate varmam management.	6
22.3	Location of soft tissue injury in lower limb and demonstration of appropriate varmam management	6
22.4	Demonstration of appropriate varmam management for soft tissue injury.	6
23.1	Varmam management for nerve injuries in the head and neck	4
23.2	Varmam management techniques for thoracic nerve injuries	4
23.3	Varmam-related nerve injuries in the abdominal and pelvic regions.	4
23.4	Varmam management for nerve injuries in the upper and lower limbs	4
23.5	Varmam techniques for peripheral nerve injuries	4
24.1	Management of muscle and tendon injuries through varmam therapy	6
24.2	Varmam manipulation techniques for ligament injuries.	6
24.3	Varmam manipulation techniques for cartilage injuries	4

24.4	Varmam manipulation techniques for sports-related fractures	4
25.1	Identification and classification of different types of bone and joint, ROM of joints through skeletal models.	4
25.2	The various types of fractures through clinical demonstrated clinically with patients.	4
25.3	Examination of dislocations and subluxations of various joints with clinical presentation	6
25.4	The various phases of direct and indirect fracture healing	6
26.1	Various complications of fractures by clinical or imaging modalities	4
26.2	Modus operandi in first aid management by airway, cardiac, bleeding and vital examination by PPT/Videos presentation	6
26.3	Fracture management in children, epiphyseal injury, pathological fracture and stress fracture	4
26.4	Soft tissue injury, peripheral nerve injury and its features, muscle strain and sprain	6
27.1	The fracture of clavicle and its sites, classification and conservative management	2
27.2	Injuries of the shoulder, like dislocation, fracture, and their clinical management	4
27.3	The clinical features, examination, investigation and conservative management around the elbow joint	4
27.4	Management of the forearm injuries	4
27.5	Injuries of the wrist	4
27.6	Hand injuries, phalangeal metacarpal fractures	2
28.1	Injuries around A.the hip, B. the knee, C. ankle joints	6
28.2	Injuries to the tibia, fibula and the foot	4
28.3	Injuries of the axial skeleton	8
28.4	Fracture pelvis, rib and coccyx	2
29.1	The congenital disorder	4

29.2	The developmental disorder	4
29.3	The metabolic disorders	2
29.4	The rheumatic diseases	4
29.5	The neuromuscular disorder	4
29.6	Bone Neoplasm	2
30.1	Osteomyelitis and skeletal tuberculosis	4
30.2	Management of infectious & non-infectious arthritis	4
30.3	Osteoporosis, gout and crystalline arthropathy	4
30.4	Common sports injuries in the upper, lower limb, head, neck, trunk and spine	4
30.5	Exercises, relaxation, and body stretches	4
31.1	Non traumatic orthopedic disorders	2
31.2	Clinical examination and investigation in the disorders of the head & neck	2
31.3	Various conditions of the upper limb	4
31.4	Disease in the lower limb	6
31.5	Clinical examination and investigation of diseases in the lumbar region	6
32.1	Physiotherapy, therapeutic exercise, orthosis, braces and prosthesis techniques	8
32.2	The Techniques, Indications, Contraindications, Dangers of Massage Therapy	8
32.3	Suspension and traction for diseases	2
32.4	Electrotherapy, radiation therapy, and laser therapy for various diseases	2

Table 5 : Experiential learning Activity

(*Refer table 3 of similar activity number)		
Experiential learning No*	Experiential name	Hours
1.1	Location of various varmam points by the anatomical landmark method.	2
1.2	Location of key varmam points by finger breadth and thread measurement method.	3
1.3	Locating varmam points by graphical measurement methods.	3
1.4	Locating key varmam points by various body planes and specialized nomenclature.	3
1.5	Locating varmam points by adjacent key varmam points.	2
2.1	Varmam points in the anterior and lateral aspects of head in different pathological conditions.	5
2.2	Therapeutic applications of varmam points in the anterior and lateral aspects of head.	5
2.3	Illakumuraigal and treatment for varmam injuries.	5
2.4	Varmam point & ilakkumuraigal injuries in the anterior and lateral aspects of head	5
2.5	Varmam points for the superior and posterior aspects of the head in different pathological conditions.	5
2.6	Therapeutic applications of varmam points in the superior and posterior aspects of the head.	5
2.7	Illakumuraigal and treatment in conditions of varmam injuries.	5
2.8	Varmam point and ilakkumuraigal for superior and posterior aspects of the head.	4
3.1	Application of the manipulation techniques on varmam points of neck and chest in different pathological conditions.	6
3.2	Demonstration and recording of the efficacy of therapeutic applications of varmam points in neck and chest.	7
3.3	Demonstrate illakumuraigal and treatment in conditions of varmam injuries of neck and chest.	10
3.4	Varmam points and illakumuraigal for injury of neck and chest.	3

4.1	Application of the manipulation techniques on varmam points of upper limb in different pathological conditions.	6
4.2	Demonstration and recording the efficacy of therapeutic applications varmam points of the upper limb.	7
4.3	Demonstration of proficiency in performing illakumuraigal and treatment in conditions of varmam injuries of upper limb.	10
4.4	Accessment of the efficacy of various illakumuraigal and expertising in selecting illakumuraigal specific to each varmam point injury of upper limb.	3
5.1	Application of the manipulation techniques on the varmam points of abdomen in different pathological conditions.	6
5.2	Demonstration and recording of the efficacy of therapeutic applications of varmam points of the abdomen.	7
5.3	Demonstration of proficiency in performing illakumuraigal and treatment in conditions of varmam injuries of the abdomen.	10
5.4	Accessment of the efficacy of various illakumuraigal and expertising in selecting illakumuraigal specific to each varmam point injury of abdomen.	3
6.1	Application of the manipulation techniques on varmam points of pelvis and back in different pathological conditions	6
6.2	Demonstration and recording of the efficacy of therapeutic applications varmam points of pelvis and back.	7
6.3	Demonstration of proficiency in performing illakumuraigal and treatment in conditions of varmam injuries of pelvis and back	10
6.4	To access the efficacy of various illakumuraigal and expertise in selecting illakumuraigal specific to each varmam point injury of pelvis and back.	3
7.1	Application of the manipulation techniques on varmam points in the lower limbs in different pathological conditions.	6
7.2	Demonstration and recording of the efficacy of therapeutic applications of varmam points in the lower limbs.	7
7.3	Demonstration of proficiency in performing illakumuraigal and treatment in conditions of varmam injuries of lower limbs.	10
7.4	Assessment of the efficacy of varmam illakumuraigal and expertising in selecting illakumuraigal specific to each varmam point injury of lower limbs.	3
8.1	Applying the varmam therapeutic techniques on patients with neurological and psychiatric disorders and document the clinical outcome.	3

8.2	Applying the varmam therapeutic techniques on patients with musculoskeletal disorders and document the clinical outcome.	3
8.3	Implementation of varmam therapeutic techniques on patients with cardiovascular disorders and document the clinical outcomes.	2
8.4	Implementation of varmam therapeutic techniques on patients with respiratory disorders and document the clinical outcomes.	2
8.5	Implementation of varmam therapeutic techniques on patients with digestive system & genito urinary system disorders & documentation of the clinical outcome.	3
8.6	Applying the varmam therapeutic techniques on patients with endocrine disorders and documentation of the clinical outcome.	3
8.7	Applying the varmam therapeutic techniques on patients with hematological disorders and document the clinical outcome.	2
8.8	Applying the varmam therapeutic techniques on patients with ENT disorders and documentation of the clinical outcome.	3
8.9	Applying the varmam therapeutic techniques on pediatric diseases conditions and document the clinical outcome.	3
8.10	Applying of varmam therapeutic techniques on patients with geriatric disorders and documentation of the clinical outcome.	2
9.1	Varmam mooligai agarathi documentation based on Verupeyargal (Synonyms) and therapeutic uses	1
9.2	Varmam aga Marunthugal documentation based therapeutic uses (Musculo Skeletal, Neurological, Psychiatric Conditions, Paediatric Conditions)	5
9.3	Enlist the internal medicine Practiced in traditional Vaithiyas (Saaram,Karkam,Vaatru,Kudineer,Ilagam)	4
9.4	Documentation of varmam aga Marunthugal (Nei, Thylam, Kuligai, Kuzhambu, Panda Puthayal) based therapeutic uses (Musculo Skeletal, Neurological, Psychiatric Conditions, Paediatric Conditions)	5
9.5	Enlist the internal medicine Practiced in traditional Vaithiyas (Nei,Thylam, Kuligai,Kuzhambu, Panda Puthayal)	3
9.6	Case presentation of Varmam kanji (porridge varieties)	8
10.1	Thalam, Tharai, Thuvalai external therapy documentation from traditional Vaithiyars	4
10.2	Varmam pura maruthuvam (Thalam, Tharai, Thuvalai) based on diseases conditions	4
10.3	Kizhi Parigaram Documentation from traditional Vaithiyars	6

10.4	Poochu,Pasai, Kuli Neer Documentation from practiced in traditional Vaithiyars	3
10.5	Varmam pura maruthuvam (Poochu, Pasai, Kuli Neer) based on diseases conditions	3
10.6	Pugai, Nasiyam ,Nasikaparanam, Oothal, Kalikkam Documentation from practiced in traditional Vaithiyars	3
10.7	Varmam pura maruthuvam (Pugai, Nasiyam, Nasikaparanam, Oothal, Kalikkam) based on diseases conditions	3
11.1	Documentation of thodu varmam application methods from traditional vaithiyas	10
11.2	Documentation of padu varmam, thattu varmam, aadhara varmam,ul varmam, odukki varmam application practiced in traditional vaithiyas.	8
11.3	Enlist the documented therapeutic varmam application practiced in traditional vaithiyars	8
12.1	Documentation of varmam protocol Systemic wellness followed by traditional vaithiyas	5
12.2	Varmam clinical protocol for systemic wellness to other health care professions	8
12.3	Wellness and prevention in PHC/GH/Rehabilitation Centre	8
12.4	Varmam protocol for general wellness to health care professionals	5
13.1	Application of adangal for disease condition	7
13.2	SOP for adangal application for disease conditions	6
13.3	Therapeutic application of adangal muraigal	4
13.4	Document the adangal murai used in emergency management	4
13.5	Document methods practiced by traditional vaithiyars	5
14.1	Padu varmam ilakku murai for disease condition	7
14.2	Thodu varmam ilakku murai for disease condition	6
14.3	Case study for specific retrieving techniques (any 2)	7

14.4	Case study for thiravukol methods	6
15.1	Documentation of Chavuttu Thirumal practiced among traditional vaithiyars	4
15.2	Therapeutic methods of chavuttu Thirumal practiced among traditional vaithiyars	4
15.3	Case study of Chavuttu Thirumal (Massage by Foot Pressure)	5
15.4	Therapeutic application of thadavu muraigal	4
15.5	Case study of therapeutic application of thadavu muraigal	5
15.6	Thadavu muraigal practiced among traditional vaithiyars	4
16.1	Musculo skeletal examination	6
16.2	Traditional traction methods	7
16.3	Traditional traction methods for sciatica, spondylitis, stenosis, herniated disc	6
16.4	Case series or case study for traditional traction methods	7
17.1	Ilakkumuraigal for varmam injuries	2
17.2	Techniques for effective management of fracture	4
17.3	Equipment for the management of fractures	4
17.4	Internal medicines for the management of varmam injuries	8
17.5	External medicines used for the management of varmam injuries	8
18.1	Varmam management for injury to the skull bones	10
18.2	Assess the efficacy of varmam medicine for the skull bone injury	4
18.3	Varmam management for injury of the facial bones	8
18.4	The efficacy of varmam medicine for the facial bone injury	4

19.1	Apply varmam therapy for nattellu kaayangal	8
19.2	Manipulation techniques in the management of paraplegia and quadriplegia	8
19.3	Traditional varmam procedures for sacrum, Ilium, and coccyx injuries	6
19.4	Manipulation techniques for hyoid bone & thoracic injuries	4
20.1	Management of shoulder dislocation	8
20.2	Varmam management for fracture of the humerus	4
20.3	Various injuries and dislocations of the elbow, and perform the treatment procedures	6
20.4	Varmam management for manikattu kaayangal.	4
20.5	Varmam management for injuries of the hand	4
21.1	Varmam management procedures for hip joint injuries	6
21.2	Varmam management for thodai kaayangal (thigh injuries).	6
21.3	Varmam management for knee joint injuries	6
21.4	Varmam management for ankle joint injury	4
21.5	Varmam management for injury of the foot	4
22.1	Varmam management in different cases of soft tissue varmam injury	3
22.2	Management of soft tissue injury upper limb	7
22.3	Management of soft tissue injuries in lower limb	7
22.4	Varmam management for soft tissue injury	9
23.1	Varmam management of nerve injuries of head and neck	6

23.2	Varmam management for nerve injuries of thorax	6
23.3	Varmamr management for nerve injuries of abdomen and pelvis	4
23.4	Varmam management for nerve injuries of upper limb and lower limb.	6
23.5	Varmam management for specific peripheral nerve injuries.	4
24.1	Varmam management for muscle and tendon Injury	8
24.2	Varmam management for injury to ligaments	8
24.3	Apply varmam for cartilage injuries	6
24.4	Apply varmam for sports fractures	4
25.1	The various bones and joints movements & relevant muscles action through living models, atlas and group discussions.	5
25.2	The various dislocations and subluxations by examination and radiological findings	5
25.3	Examination and radiological findings of various dislocations and subluxations	8
25.4	Fracture healing methods.	8
26.1	Examination of the complications of the fracture	5
26.2	The first aid management in emergency aspect	8
26.3	The fractures in children include epiphyseal injury, pathological fracture and stress fracture	5
26.4	Management of soft tissue and nerve injury	8
27.1	The clavicle fracture, classification through clinical models/ case presentation	3
27.2	Dislocation, fracture, and conservative management around the shoulder joint	5
27.3	The clinical features, examination, investigation and conservative management of injuries around the elbow joint	5
27.4	Management of forearm injuries	5

27.5	Management of the carpal injuries	5
27.6	Management of Hand injuries	3
28.1	Management of the hip, knee and ankle joints	10
28.2	Injuries to the tibia, fibula and the foot	6
28.3	The axial skeleton injury.	8
28.4	Fracture of pelvis, rib and coccyx	2
29.1	The congenital disorder	5
29.2	The developmental disorder	5
29.3	Management of metabolic disorders	3
29.4	The rhumatic disorders	5
29.5	Management for neuromuscular disorder	5
29.6	Bone neoplasm	3
30.1	Management of osteomyelitis and skeletal tuberculosis	5
30.2	Management of infective and non-infective arthritis (primary & secondary OA)	5
30.3	Management for obesity induced OA	6
30.4	Common sports injuries in the upper, lower limb, head, neck, trunk and spine	5
30.5	Posture biomechanics, cardio pulmonary capacity, muscle strength, agility, flyometers and relaxation	5
31.1	Conservative management of the disorders in the head & neck	5
31.2	Disorders of the upper limb	5

31.3	Lower limb disorders: conservative management, appliances, and various rehabilitation methods	8
31.4	Diseases in the lumbar region: conservative management and support of various splints and braces	8
32.1	Physiotherapy, therapeutic exercise, and orthosis, braces and prosthesis techniques	10
32.2	The mechanism of massage therapy with kinesiology	6
32.3	Suspension and traction procedures, and discuss traditional techniques and their advantages and limitations	5
32.4	The electrotherapy, radiation therapy & laser therapy for various diseases	5

Table 6 : Assessment Summary: Assessment is subdivided in A to H points**6 A : Number of Papers and Marks Distribution**

Subject Code	Paper	Theory	Practical	Total
SIDPG-VM	4	100 x 4 Papers = 400	400	800

6 B : Scheme of Assessment (Formative and Summative Assessment)**Credit frame work**

SIDPG-VM consists of 32 modules totaling 64 credits, which correspond to 1920 Notional Learning Hours. Each credit comprises 30 Hours of learner engagement, distributed across teaching, practical, and experiential learning in the ratio of 1:2:3. Accordingly, one credit includes 5 hours of teaching, 10 hours of practical training, 13 hours of experiential learning, and 2 hours allocated for modular assessment, which carries 25 marks.

Formative Assessment :Module wise Assessment:will be done at the end of each module. Evaluation includes learners active participation to get Credits and Marks. Each Module may contain one or more credits.

Summative Assessment:Summative Assessment (University examination) will be carried out at the end of Semester VI.

6 C : Calculation Method for Modular Grade Points (MGP)

Module Number & Name (a)	Credits (b)	Actual No. of Notional Learning Hours (c)	Attended Number of notional Learning hours (d)	Maximu m Marks of assessmen t of modules (e)	Obtained Marks per module (f)	MGP =d* f/c*e*100
Semester No : 3						
Paper No : 1 (PRINCIPLES AND PRACTICES OF VARMAM MARUTHUVAM)						
M1 Methods of locating varmam points	1	30		25		
M2 Varmam points in the head	3	90		75		
Paper No : 2 (VARMAM THERAPEUTIC TECHNIQUES)						
M9 Varmam aga marundhu (Varmam internal medicine)	2	60		50		
M10 Varmam Pura Marundhu (Varmam External Medicine)	2	60		50		
Paper No : 3 (VARMA KAAYA MARUTHUVA IYAL(MANAGEMENT OF SIDDHA VARMAM TRAUMATOLOGY)						
M17 Introduction to varmam injuries & medicines used in varmam injuries	2	60		50		

M18 Injuries of head & face and its varmam management	2	60		50		
Paper No : 4 (ESSENTIALS IN TRAUMATOLOGY AND ORTHOPEDICS)						
M25 General principles of traumatology - Part1	2	60		50		
M26 General principles of Traumatology -part 2	2	60		50		
	16	480		400		
Semester No : 4						
Paper No : 1 (PRINCIPLES AND PRACTICES OF VARMAM MARUTHUVAM)						
M3 Varmam points in the neck and chest	2	60		50		
M4 Varmam points in the upper limb	2	60		50		
Paper No : 2 (VARMAM THERAPEUTIC TECHNIQUES)						
M11 Therapeutic Application of Varmam Points	2	60		50		
M12 Varmam Clinical Protocol	2	60		50		
Paper No : 3 (VARMA KAAYA MARUTHUVA IYAL(MANAGEMENT OF SIDDHA VARMAM TRAUMATOLOGY)						
M19 Atchu-Elumbu Kaayangal (Injuries of the Axial Skeleton)	2	60		50		
M20 Varmam Management For Regional Injuries – Part -I Upper limb injuries	2	60		50		
Paper No : 4 (ESSENTIALS IN TRAUMATOLOGY AND ORTHOPEDICS)						
M27 Regional Traumatology part I injuries of the Upper limb	2	60		50		
M28 Regional Traumatology Part II Injuries of the lower limb	2	60		50		
	16	480		400		
Semester No : 5						
Paper No : 1 (PRINCIPLES AND PRACTICES OF VARMAM MARUTHUVAM)						
M5 Varmam points in the Abdomen	2	60		50		
M6 Varmam points in the Pelvis and Back	2	60		50		
Paper No : 2 (VARMAM THERAPEUTIC TECHNIQUES)						
M13 Therapeutic application of adangal	2	60		50		

M14 Therapeutic Application of Ilakku Murai and Thiravukol (Varmam Retrieving Techniques)	2	60		50		
Paper No : 3 (VARMA KAAYA MARUTHUVA IYAL(MANAGEMENT OF SIDDHA VARMAM TRAUMATOLOGY)						
M21 Varmam Management For Regional Injuries –Part II- Lower limb injuries	2	60		50		
M22 Varmam management for soft tissue injuries	2	60		50		
Paper No : 4 (ESSENTIALS IN TRAUMATOLOGY AND ORTHOPEDICS)						
M29 General orthopedics-part I	2	60		50		
M30 General orthopedics- part-2 and sports medicine	2	60		50		
	16	480		400		
Semester No : 6						
Paper No : 1 (PRINCIPLES AND PRACTICES OF VARMAM MARUTHUVAM)						
M7 Varmam points in the Lower limb	2	60		50		
M8 Varmam therapies for various Diseases	2	60		50		
Paper No : 2 (VARMAM THERAPEUTIC TECHNIQUES)						
M15 Varmam Thadaval Parigaram (Varmam Massage Techniques)	2	60		50		
M16 Iluvai Parigaram (Traction Methods)	2	60		50		
Paper No : 3 (VARMA KAAYA MARUTHUVA IYAL(MANAGEMENT OF SIDDHA VARMAM TRAUMATOLOGY)						
M23 Varmam management for nerve injuries	2	60		50		
M24 Varmam management for Sports injuries	2	60		50		
Paper No : 4 (ESSENTIALS IN TRAUMATOLOGY AND ORTHOPEDICS)						
M31 Non-traumatic orthopaedic disorders.	2	60		50		
M32 Physical medicine	2	60		50		
	16	480		400		
MGP = ((Number of Notional learning hours attended in a module) X (Marks obtained in the modular assessment) / (Total number of Notional learning hours in the module) X (Maximum marks of the module)) X 100						

6 D : Semester Evaluation Methods for Semester Grade Point Average (SGPA)

SGPA will be calculated at the end of the semester as an average of all Module MGPs. Average of MGPs of the Semester For becoming eligible for Summative assessment of the semester, student should get minimum of 60% of SGPA

SGPA = Average of MGP of all modules of all papers = add all MGPs in the semester/ no. of modules in the semester
Evaluation Methods for Modular Assessment

Semester No : 3		
Paper No : 1 PRINCIPLES AND PRACTICES OF VARMAM MARUTHUVAM		
A S.N o	B Module number and Name	C MGP
1	M1.Methods of locating varmam points	C1
2	M2.Varmam points in the head	C2
Paper No : 2 VARMAM THERAPEUTIC TECHNIQUES		
A S.N o	B Module number and Name	C MGP
3	M9.Varmam aga marundhu (Varmam internal medicine)	C3
4	M10.Varmam Pura Marundhu (Varmam External Medicine)	C4
Paper No : 3 VARMA KAAYA MARUTHUVA IYAL(MANAGEMENT OF SIDDHA VARMAM TRAUMATOLOGY		
A S.N o	B Module number and Name	C MGP
5	M17. Introduction to varmam injuries & medicines used in varmam injuries	C5
6	M18.Injuries of head & face and its varmam management	C6
Paper No : 4 ESSENTIALS IN TRAUMATOLOGY AND ORTHOPEDICS		
A S.N o	B Module number and Name	C MGP
7	M25.General principles of traumatology - Part1	C7
8	M26.General principles of Traumatology -part 2	C8
	Semester Grade point Average (SGPA)	(C1+C2+C3+C4+C5+C6+C7+C8) / Number of modules(8)
Semester No : 4		
Paper No : 1 PRINCIPLES AND PRACTICES OF VARMAM MARUTHUVAM		

A S.N o	B Module number and Name	C MGP
1	M3.Varmam points in the neck and chest	C1
2	M4.Varmam points in the upper limb	C2
Paper No : 2 VARMAM THERAPEUTIC TECHNIQUES		
A S.N o	B Module number and Name	C MGP
3	M11.Therapeutic Application of Varmam Points	C3
4	M12.Varmam Clinical Protocol	C4
Paper No : 3 VARMA KAAYA MARUTHUVA IYAL(MANAGEMENT OF SIDDHA VARMAM TRAUMATOLOGY		
A S.N o	B Module number and Name	C MGP
5	M19.Atchu-Elumbu Kaayangal (Injuries of the Axial Skeleton)	C5
6	M20.Varmam Management For Regional Injuries – Part -I Upper limb injuries	C6
Paper No : 4 ESSENTIALS IN TRAUMATOLOGY AND ORTHOPEDICS		
A S.N o	B Module number and Name	C MGP
7	M27.Regional Traumatology part I injuries of the Upper limb	C7
8	M28.Regional Traumatology Part II Injuries of the lower limb	C8
	Semester Grade point Average (SGPA)	(C1+C2+C3+C4+C5+C6+C7+C8) / Number of modules(8)
Semester No : 5		
Paper No : 1 PRINCIPLES AND PRACTICES OF VARMAM MARUTHUVAM		
A S.N o	B Module number and Name	C MGP
1	M5.Varmam points in the Abdomen	C1
2	M6.Varmam points in the Pelvis and Back	C2
Paper No : 2 VARMAM THERAPEUTIC TECHNIQUES		
A S.N	B Module number and Name	C MGP

o		
3	M13.Therapeutic application of adangal	C3
4	M14.Therapeutic Application of Ilakku Murai and Thiravukol (Varmam Retrieving Techniques)	C4

Paper No : 3 VARMA KAAYA MARUTHUVA IYAL(MANAGEMENT OF SIDDHA VARMAM TRAUMATOLOGY

A S.N o	B Module number and Name	C MGP
5	M21.Varmam Management For Regional Injuries –Part II- Lower limb injuries	C5
6	M22.Varmam management for soft tissue injuries	C6

Paper No : 4 ESSENTIALS IN TRAUMATOLOGY AND ORTHOPEDICS

A S.N o	B Module number and Name	C MGP
7	M29.General orthopedics-part I	C7
8	M30.General orthopedics- part-2 and sports medicine	C8
	Semester Grade point Average (SGPA)	$(C1+C2+C3+C4+C5+C6+C7+C8) / \text{Number of modules}(8)$

Semester No : 6

Paper No : 1 PRINCIPLES AND PRACTICES OF VARMAM MARUTHUVAM

A S.N o	B Module number and Name	C MGP
1	M7.Varmam points in the Lower limb	C1
2	M8.Varmam therapies for various Diseases	C2

Paper No : 2 VARMAM THERAPEUTIC TECHNIQUES

A S.N o	B Module number and Name	C MGP
3	M15.Varmam Thadaval Parigaram (Varmam Massage Techniques)	C3
4	M16.Iluvai Parigaram (Traction Methods)	C4

Paper No : 3 VARMA KAAYA MARUTHUVA IYAL(MANAGEMENT OF SIDDHA VARMAM TRAUMATOLOGY

A S.N	B Module number and Name	C MGP
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o		
5	M23. Varmam management for nerve injuries	C5
6	M24. Varmam management for Sports injuries	C6
Paper No : 4 ESSENTIALS IN TRAUMATOLOGY AND ORTHOPEDICS		
A S.N o	B Module number and Name	C MGP
7	M31.Non-traumatic orthopaedic disorders.	C7
8	M32.Physical medicine	C8
	Semester Grade point Average (SGPA)	(C1+C2+C3+C4+C5+C6+C7+C8) / Number of modules(8)

S. No	Evaluation Methods
1.	Method explained in the Assessment of the module or similar to the objectives of the module.

6 E : Question Paper Pattern

MD/MS SIDDHA Examination SIDPG-VM Sem VI

Time: 3 Hours ,**Maximum Marks:** 100
INSTRUCTIONS: All questions compulsory

		Number of Questions	Marks per Question	Total Marks
Q 1	Application-based Questions (ABQ)	1	20	20
Q 2	Short answer questions (SAQ)	8	5	40
Q 3	Analytical based structured Long answer question (LAQ)	4	10	40
				100

6 F : Distribution for summative assessment (University examination)

S.No	List of Module/Unit	ABQ	SAQ	LAQ
Paper No : 1 (PRINCIPLES AND PRACTICES OF VARMAM MARUTHUVAM)				
(M-1)Methods of locating varmam points (Marks: Range 5-15)				
1	(U-1) Anatomical landmarks methods	No	Yes	No
2	(U-2) Proportional measurement a) Finger breadth measurement method b) Thread measurement method	No	Yes	Yes
3	(U-3) Graphical measurement method	No	Yes	No
4	(U-4) Body planes and Nomenclature method	No	Yes	No
5	(U-5) Locating by reference to adjacent varmam points	No	Yes	No
(M-2)Varmam points in the head (Marks: Range 5-20)				
1	(U-1) Varmam points on the anterior & lateral aspect of the Head-Physiological Aspects	Yes	Yes	Yes
2	(U-2) Varmam points in the anterior & lateral aspects of the Head-pathological aspects	No	Yes	Yes
3	(U-3) Varmam points in the superior and posterior aspect of Head-physiological aspects	Yes	Yes	Yes
4	(U-4) Varmam points in superior and posterior aspects oh Head-pathological aspects	Yes	Yes	Yes
(M-3)Varmam points in the neck and chest (Marks: Range 5-10)				
1	(U-1) Physiological Aspects	No	Yes	No
2	(U-2) Pathological Aspects	No	Yes	No
(M-4)Varmam points in the upper limb (Marks: Range 5-10)				
1	(U-1) Physiological Aspects	No	Yes	No
2	(U-2) Pathological Aspects	No	Yes	No
(M-5)Varmam points in the Abdomen (Marks: Range 5-20)				
1	(U-1) Physiological Aspects	Yes	Yes	No
2	(U-2) Pathological Aspects	No	Yes	Yes
(M-6)Varmam points in the Pelvis and Back (Marks: Range 5-10)				
1	(U-1) Physiological Aspects	No	Yes	No
2	(U-2) Pathological Aspects	No	Yes	No
(M-7)Varmam points in the Lower limb (Marks: Range 5-15)				
1	(U-1) Physiological Aspects	No	Yes	Yes

2	(U-2) Pathological Aspects	No	Yes	Yes
(M-8)Varmam therapies for various Diseases (Marks: Range 5-20)				
1	(U-1) Varmam for Neurological disorders & Psychiatric disorders.	Yes	Yes	No
2	(U-2) Varmam for Musculoskeletal disorders	Yes	Yes	Yes
3	(U-3) Varmam for Cardiovascular disorders	No	Yes	Yes
4	(U-4) Varmam for Respiratory disorders	No	Yes	No
5	(U-5) Varmam for Digestive disorders and Genito urinary disorders	Yes	Yes	Yes
6	(U-6) Varmam for Endocrine disorders	Yes	Yes	No
7	(U-7) Varmam for Hematological disorders	No	Yes	No
8	(U-8) Varmam for ENT diseases	No	Yes	Yes
9	(U-9) Varmam for Pediatric diseases	No	Yes	Yes
10	(U-10) Varmam for Geriatric diseases	No	Yes	Yes

S.No	List of Module/Unit	ABQ	SAQ	LAQ
Paper No : 2 (VARMAM THERAPEUTIC TECHNIQUES)				
(M-9)Varmam aga marundhu (Varmam internal medicine) (Marks: Range 5-20)				
1	(U-1) Introduction of Varmam Aga Marundhu (Varmam Internal Medicine)	No	Yes	Yes
2	(U-2) Varmam medicine Part - I	Yes	Yes	Yes
3	(U-3) Varmam medicine part-II	Yes	Yes	Yes
4	(U-4) Pathiyakaala ozhukkam	No	Yes	Yes
(M-10)Varmam Pura Marundhu (Varmam External Medicine) (Marks: Range 5-20)				
1	(U-1) Varmam External Medicine Part I	No	Yes	Yes
2	(U-2) Varmam External Medicine Part II	Yes	Yes	Yes
3	(U-3) Varmam External Medicine Part III	Yes	Yes	Yes
4	(U-4) Varmam External Medicine Part IV	Yes	Yes	Yes
(M-11)Therapeutic Application of Varmam Points (Marks: Range 5-20)				
1	(U-1) Ethical Guidelines of Varmam Application	No	Yes	Yes
2	(U-2) Application of Varmam Points	Yes	Yes	Yes
(M-12)Varmam Clinical Protocol (Marks: Range 5-20)				
1	(U-1) Varmam for Systemic Wellness	Yes	Yes	Yes
2	(U-2) Varmam for General Wellness	Yes	Yes	Yes
(M-13)Therapeutic application of adangal (Marks: Range 5-20)				
1	(U-1) Classification of Adangal	Yes	Yes	Yes
2	(U-2) Adangal Application for Various Disorders	Yes	Yes	Yes
(M-14)Therapeutic Application of Ilakku Murai and Thiravukol (Varmam Retrieving Techniques) (Marks: Range 5-20)				
1	(U-1) Varmam ilakku murai	Yes	Yes	Yes
2	(U-2) Varmam Thiravu Kol	Yes	Yes	Yes
(M-15)Varmam Thadaval Parigaram (Varmam Massage Techniques) (Marks: Range 5-20)				
1	(U-1) Chavuttu Thirumal (Massage with Foot)	Yes	Yes	Yes
2	(U-2) Various Massage Techniques	Yes	Yes	Yes
(M-16)Iluvai Parigaram (Traction Methods) (Marks: Range 5-15)				
1	(U-1) Basics of Iluvai Parigaram	No	Yes	Yes

2	(U-2) Traction Methods	No	Yes	Yes
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S.No	List of Module/Unit	ABQ	SAQ	LAQ
Paper No : 3 (VARMA KAA YA MARUTHU VA IYAL(MANAGEMENT OF SIDDHA VARMAM TRAUMATOLOGY)				
(M-17) Introduction to varmam injuries & medicines used in varmam injuries (Marks: Range 5-15)				
1	(U-1) Classification	No	Yes	No
2	(U-2) General principles of fracture management	No	Yes	Yes
3	(U-3) Equipments required for fracture management	No	Yes	No
4	(U-4) Internal medicines for Fracture management	No	Yes	Yes
5	(U-5) External medicines used in Fracture management	No	Yes	Yes
(M-18)Injuries of head & face and its varmam management (Marks: Range 5-20)				
1	(U-1) Thalai Kaayangal	Yes	Yes	Yes
2	(U-2) Muga Kaayangal	Yes	Yes	Yes
(M-19)Atchu-Elumbu Kaayangal (Injuries of the Axial Skeleton) (Marks: Range 5-20)				
1	(U-1) Nattellu Kaayangal	Yes	Yes	Yes
2	(U-2) Complication of spinal cord injury	No	Yes	Yes
3	(U-3) Injuries of Ilium, Sacrum, Coccyx	No	Yes	Yes
4	(U-4) Injuries of Rib, Hyoid, Sternum	No	Yes	Yes
(M-20)Varmam Management For Regional Injuries – Part -I Upper limb injuries (Marks: Range 5-20)				
1	(U-1) Thol poruthu kaayanagal	Yes	Yes	Yes
2	(U-2) Puya kaayangal	Yes	Yes	Yes
3	(U-3) Mulankai mootu kaayangal	No	Yes	Yes
4	(U-4) Manikkattu Kaayangal	No	Yes	Yes
5	(U-5) Ankai Kaayangal	Yes	Yes	Yes
(M-21)Varmam Management For Regional Injuries –Part II- Lower limb injuries (Marks: Range 5-20)				
1	(U-1) Iduppu paguthi kaayangal	Yes	Yes	Yes
2	(U-2) Thodai kaayangal	Yes	Yes	Yes
3	(U-3) Mulankaal Muttu Kaayangal	No	Yes	Yes
4	(U-4) Kanukkaal Kaayangal	No	Yes	Yes
5	(U-5) Paatha kaayangal	No	Yes	Yes
(M-22)Varmam management for soft tissue injuries (Marks: Range 5-15)				

1	(U-1) Injury to head and neck	No	Yes	Yes
2	(U-2) Injury to abdomen and thorax:	No	Yes	Yes
3	(U-3) Injury to upper and lower limb	No	Yes	Yes
(M-23) Varmam management for nerve injuries (Marks: Range 5-20)				
1	(U-1) Nerve Injuries of Head and Neck	Yes	Yes	Yes
2	(U-2) Nerve Injuries of Thorax	Yes	Yes	Yes
3	(U-3) Nerve Injuries of Abdomen and pelvis	No	Yes	Yes
4	(U-4) Nerve Injuries of Upper limb and lower limb	No	Yes	Yes
5	(U-5) Peripheral nerve injuries	No	Yes	Yes
(M-24) Varmam management for Sports injuries (Marks: Range 5-20)				
1	(U-1) Injuries to muscles and tendons	Yes	Yes	Yes
2	(U-2) Injuries to ligaments	No	Yes	Yes
3	(U-3) Injuries to the cartilage	No	Yes	Yes
4	(U-4) Fractures and Dislocation	Yes	Yes	Yes

S.No	List of Module/Unit	ABQ	SAQ	LAQ
Paper No : 4 (ESSENTIALS IN TRAUMATOLOGY AND ORTHOPEDICS)				
(M-25)General principles of traumatology - Part1 (Marks: Range 5-20)				
1	(U-1) Introduction to skeletal system	No	Yes	Yes
2	(U-2) General principles of fractures	No	Yes	No
3	(U-3) General principles of dislocations	Yes	Yes	Yes
4	(U-4) Fracture healing methods	No	Yes	No
(M-26)General principles of Traumatology -part 2 (Marks: Range 5-20)				
1	(U-1) Complication of fractures	Yes	Yes	Yes
2	(U-2) Emergency care for the injuries	No	Yes	Yes
3	(U-3) Fracture in special situations	Yes	Yes	No
4	(U-4) Soft tissue injuries and Nerve injuries	No	Yes	No
(M-27)Regional Traumatology part I injuries of the Upper limb (Marks: Range 5-20)				
1	(U-1) Injuries around the clavicle	No	Yes	No
2	(U-2) Injuries of the shoulder joint.	Yes	Yes	Yes
3	(U-3) Injuries around the elbow joint	No	Yes	Yes
4	(U-4) Injuries of the forearm	Yes	Yes	No
5	(U-5) Injuries of the wrist	No	Yes	No
6	(U-6) Injuries of the hand	No	Yes	No
(M-28)Regional Traumatology Part II Injuries of the lower limb (Marks: Range 5-20)				
1	(U-1) Injuries around the hip, knee and leg.	Yes	Yes	Yes
2	(U-2) Injuries of the ankle joint and foot	No	Yes	Yes
3	(U-3) Injuries of the axial skeleton	Yes	Yes	No
4	(U-4) Pelvic injuries, rib and coccyx injuries	No	Yes	No
(M-29)General orthopedics-part I (Marks: Range 5-20)				
1	(U-1) Congenital disorder	Yes	Yes	No
2	(U-2) Developmental disorder	No	Yes	No
3	(U-3) Metabolic disorders	No	Yes	Yes
4	(U-4) Rheumatic diseases	Yes	Yes	No
5	(U-5) Neuromuscular disorders	No	Yes	No

6	(U-6) Bone neoplasm	No	Yes	No
(M-30)General orthopedics- part-2 and sports medicine (Marks: Range 5-20)				
1	(U-1) Infection of bone and skeletal tuberculosis.	Yes	Yes	No
2	(U-2) Disorder of the joints	No	Yes	No
3	(U-3) Degenerative disorder	Yes	Yes	Yes
4	(U-4) Sports Injuries and wound healing timeline	Yes	Yes	Yes
5	(U-5) Sports injuries and medicine	Yes	Yes	Yes
(M-31)Non-traumatic orthopaedic disorders. (Marks: Range 5-20)				
1	(U-1) General principles and Regional conditions of the neck	Yes	Yes	Yes
2	(U-2) Regional condition of the upper limb and disorders of the hand	No	Yes	Yes
3	(U-3) Regional condition of the lower limbs	Yes	Yes	Yes
4	(U-4) Regional condition of the spine and Low back ache	Yes	Yes	Yes
(M-32)Physical medicine (Marks: Range 5-20)				
1	(U-1) Physiotherapy, therapeutic exercises & orthosis, brace and prosthesis	Yes	Yes	Yes
2	(U-2) Posture, biomechanics, massage therapy & clinical kinesiology	Yes	Yes	Yes
3	(U-3) Suspension and traction	No	Yes	No
4	(U-4) Electro therapy and mobility AIDS	No	Yes	Yes

6 G : Instruction for the paper setting & Blue Print for Summative assessment (University Examination)

Instructions for the paper setting.

1. University examination shall have 4 papers of 100 marks.

Each 100 marks question paper shall contain:-

- Application Based Question: 1 No (carries 20 marks)
- Short Answer Questions: 8 Nos (each question carries 05 marks)
- Long Answer Questions: 4 Nos (each question carries 10 marks)

2. Questions should be drawn based on the table 6F.

3. Marks assigned for the module in 6F should be considered as the maximum marks. No question shall be asked beyond the maximum marks.

4. Refer table 6F before setting the questions. Questions should not be framed on the particular unit if indicated “NO”.

5. There will be a single application-based question (ABQ) worth 20 marks. No other questions should be asked from the same module where the ABQ is framed.

6. Except the module on which ABQ is framed, at least one Short Answer Question should be framed from each module.

7. Long Answer Question should be analytical based structured questions assessing the higher cognitive ability.

8. Create Blueprint based on instructions 1 to 7

6 H : Distribution of Practical Exam (University Examination)

S.No	Heads	Marks
1	Major Practical: Preparation of any one of the following Varmam maruthuvam PG Total Marks: 100 Duration: 1.30 Hours 1.Case history & clinical examination – 20 Marks Patient history taking – 5 Chief complaints,examination & assessment – 5 Local/systemic findings, palpation, ROM Siddha diagnostic parameters – 5 naadi, udal kattugal, mukkutra balance indication for varmam maruthuvam – 5 Justification for use in the presented case 2.Preparation of medicine any internal or external medicine – 30 Marks 1.External medicine:	100

Identification of Ingredients – 5

Mooligai / Thathu classification and action

Standard Operating Procedure (SOP) – 10

Sequential steps: cleaning, grinding, heating (if needed), binding materials

Consistency & Application Readiness – 5

Texture, temperature, binding method

Dosage Form Appropriateness – 5

Suitability of selected “Pura Marunthu” type for the clinical condition

Storage & Preservation – 5

Shelf life, containers, expiry

or

2.Internal medicine:

Identification of Ingredients - 5

Method of preparation - 10

Dosage & Indication - 5

Storage & Preservation - 5

Shelf life, containers, expiry - 5

3.Demonstration of Stimulation– 30 Marks

Preprocedure – 5

Patient position, consent

Demonstration Technique – 15

Site selection, correct placement

PostApplication Instructions – 5

Rest, dietary advice, followup

4.Interpretation & Clinical Reasoning – 10 Marks

Therapeutic Objectives – 3

Expected benefits (pain relief, inflammation reduction, etc.)

Integration with Internal Medication – 2

Supportive oral therapy or dietary guidelines

Followup Planning & Monitoring – 3

Timeline for evaluation or reapplication

Rationale Linking Siddha and Modern Views – 2

5.Communication, Ethics & Professionalism – 10 Marks

	Explanation to patient & consent Process – 3 Clarity, Confidence, Attitude – 4 Adherence to Ethical and Confidential Practices – 3 Total: 100 Marks <table><tr><th>Section</th><th>Marks</th></tr><tr><td>Case History & Assessment</td><td>- 20 Marks</td></tr><tr><td>Preparation of medicine any internal or external medicine – 30 Marks</td><td></td></tr><tr><td>Demonstration of Stimulation</td><td>-30 Marks</td></tr><tr><td>Interpretation & Clinical Reasoning</td><td>-10 Marks</td></tr><tr><td>Communication & Ethics</td><td>- 10 Marks</td></tr><tr><td>Total</td><td>-100 marks</td></tr></table>	Section	Marks	Case History & Assessment	- 20 Marks	Preparation of medicine any internal or external medicine – 30 Marks		Demonstration of Stimulation	-30 Marks	Interpretation & Clinical Reasoning	-10 Marks	Communication & Ethics	- 10 Marks	Total	-100 marks	
Section	Marks															
Case History & Assessment	- 20 Marks															
Preparation of medicine any internal or external medicine – 30 Marks																
Demonstration of Stimulation	-30 Marks															
Interpretation & Clinical Reasoning	-10 Marks															
Communication & Ethics	- 10 Marks															
Total	-100 marks															
2	1) Short Case / Minor Practical: Total Marks: 25 1. History Taking –3 marks 2. Systemic examination -3 marks 3. General examination - 4 marks 4. Special tests - 4 marks	50														

	5. Serological & Radiological investigation - 4 marks 6. Differential diagnosis - 3 marks 7. Diagnosis - 4 marks 2) Short Case / Minor Practical: Total Marks: 25 1. Physico-chemical analysis for choornam 1. Determination of qualitative analysis of Potassium in the given sample -3 mark 2. Determination of qualitative analysis of Sodium in the given sample -3 mark 3. Determination of qualitative analysis of Sulphate & Bicarbonates in the given sample-3 mark 2. Phytochemical analysis for choornam 1. Determination of qualitative analysis of Saponins in the given sample -3 mark 2. Determination of qualitative analysis of Steroids in the given sample -4 mark 3. Determination of qualitative analysis of Tannin in the given sample -3 mark 4. Determination of qualitative analysis of Terpenoids in the given sample-3 mark 5. Determination of qualitative analysis of Quinones in the given sample -3 mark	
3	Spotters Spotter No. 1 Specimen: Raw ingredient Questions:	50

a) Name the drug ingredient.

b) State one condition for which it is indicated.

Spotter No. 2

X-ray Displayed:

Question:

Identify the site of injury.

Suggest one supportive therapy under Siddha system for rehabilitation.

Spotters No.3

Case Summary (2-line description):

Provide 2- line hallmark signs of any disease

Question:

What is your provisional diagnosis?

Mention varmam treatment for it

Spotter No. 4

Physiotherapy instrument: Any instrument

Question:

Identify the equipment.

Usage

Spotter No. 5

Lab report summary (2-line description):

Provide 2-line hallmark lab findings of any disease

Question:

What is your provisional diagnosis?

Mention Varmam Maruthuvam treatment for it

Spotter No. 6

Identification varmam location

Duration

Administration method

Physiological & pathological symptoms

Spotter No. 7

Identification of type of fracture

Management

Complication

Spotter No. 8

	Chart/Diagram: Clinical anatomy of Nerve Questions: a) Identify the clinical condition b) Mention its motor function c) State one test to examine it Spotters 9 Identification of deformities in given modules a.Line of treatment b.Varmam management Spotters 10 Identification of the injured ligament based of radiology a)name b) clinical examination of specific ligament	
4	Assessment Format: Teaching Ability – varmam maruthuvam 1.Topic Selection & Relevance - 3 marks 1.1.Topic chosen is relevant to varmam maruthuvam 1.2.Clinical/anatomical linkage is clear 2. Knowledge of Subject - 4 marks 2.1. Demonstrates accurate, up-to-date content	25

	2.2. Applies Thirithoda/Anatomy/Procedure integration 3. Clarity of Explanation - 4 marks 3.1. Explains terms and concepts clearly 3.2. Uses simple, logical sequencing 4. Teaching Method Used - 3 marks 4.1. Appropriate method selected (chalk & talk, PPT, demonstration, model based, roleplay, etc.) 5. Use of Teaching Aids - 3 marks 5.1. Utilizes models, diagrams, charts, PPTs, real tools (e.g., anatomy models) 6. Interaction & Communication Skills - 3 marks 6.1. Maintains eye contact, voice modulation, invites questions 7. Clinical/Functional Integration- 3 marks 7.1. Relates the topic to real-life application (e.g., showing how varmam is applied in knee pain) 8. Time Management & Conclusion 2 marks 8.1. Covers topic in allotted time- Summarizes or concludes effectively	
5	Assessment Criteria: Presentation Skills – Varmam Maruthuvam 1. Content Accuracy & Relevance: 5 marks	25

- 1.1. Topic is relevant to Varmam Maruthuvam
- 1.2. Accurate Siddha & functional concepts
- 1.3. Up-to-date examples
2. Organization & Structure: 4 marks
 - 2.1. Logical flow (introduction, body, conclusion)
 - 2.2. Segmented well (pathology, diagnosis, management)
3. Clarity of Delivery : 4 marks
 - 3.1. Clear speech, terminology used appropriately
 - 3.2. Smooth explanation of complex procedures/concepts
4. Use of Teaching Aids 3 marks
 - 4.1. Diagrams, charts, PPTs, instruments/models (e.g., Kattu material, anatomy models)
5. Confidence & Communication Skills 3 marks
 - 5.1. Maintains eye contact, gestures confidently- Engages audience
6. Clinical/Procedural Integration 3 marks
 - 6.1. Connects with applied anatomy, diagnosis, or patient care
 - 6.2. Uses real-world cases or demonstrations
7. Time Management & Conclusion 2 marks

	7.1. Uses allotted time effectively- Summarizes key points clearly 8.Q & A Handling (Optional if included) 1 mark 8.1. Responds accurately and respectfully to questions	
6	VIVA Examination Structure – Varmam Maruthuvam Total Marks: 100 (4 Examiners x 25 marks each) Examiner 1 – Principles & Practices of varmam Maruthuvam (25 Marks) Suggested Topics: • Identification the location of Varmam • Measuring Methods of Varmam • Application methods • Indication Mark Distribution (25 Marks): Criteria Marks Conceptual Clarity - 10 Terminology -5	100

Integration with Siddha Framework- 5

Communication -5

Examiner 2 – Varmam Therapeutic Techniques (25 Marks)

Suggested Topics

Internal medicine classification

.External therapy classification

Quantity & Quality analysis

Sports injuries,dietary regimens

Varmam for systemic & General wellness

Adangal-classification,therapeutic application

Illaku muraigal-classification,therapeutic application

Thirumaal muraigal -classification,therapeutic application

Illuvai-classification,therapeutic application

Varmam massage varmam techniques-classification,therapeutic application

Varmam thiravukol

- Case diagnosis using Siddha and modern correlation
- Functional anatomy in therapy decisions

Mark Distribution (25 Marks):

Criteria Marks

Clinical Reasoning -10

Application of siddha diagnosis-5

Therapy selection justification- 5

Case Communication 5

Examiner 3 – Varma Kaaya Maruthuva Iyal (25 Marks)

- Suggested Topics:
- Classification & varmam management of fractures
- Regional -wise injuries
- Nerve injuries
- Soft tissue injuries

.Sports injuries

Varmam for injuries of nerve, soft tissues, sport injuries

- Mark Distribution (25 Marks):

Criteria Marks

Identification & Description 8

Step-wise Procedure Knowledge 10

Safety & Precaution Awareness 4

Communication 3

Examiner 4 – Essentials in Traumatology And Orthopedics (25 Marks)

- Suggested Topics:
- Applied anatomy of joints, muscles, pelvis, spine
- Gait, posture, TMJ, cranial, peripheral nerve
- Functional rehabilitation and physiotherapy synergy
- Mark Distribution (25 Marks):

Criteria Marks

Applied Anatomy Understanding 10

Functional Correlation 7

Relevance to Pura Maruthuvam 5

Confidence & Delivery 3

Summary Table

Examiner Domain Max Marks

Examiner 1 Principles & Practices of Varmam Maruthuvam Theory - 25

	Examiner 2 Varmam Therapeutic Techniques Theory - 25 Examiner 3 Varma Kaaya Maruthuva Iyal Theory- 25 Examiner 4 Essentials in Traumatology And Orthopedics Theory- 25	
7	This logbook assessment evaluates hands-on skills, clinical postings, practical sessions, learning outcomes and professional behavior Assessment Parameters for Final Logbook Evaluation (Total: 25 Marks) Criteria Max Marks Attendance and Punctuality - 5 Clinical Case Participation & Observation - 10 Documentation Quality (Clarity & Accuracy)- 5 Professional Behavior / Initiative - 5 Total - 25	25
8	Assessment of Practical / Clinical Record – Varmam Maruthuvam Total Marks: 25 1. Completeness of Record: 5 marks 1.1. All sessions/activities documented- Dates, signatures, and procedures logged 2. Case Documentation Quality: 5 marks 2.1. Accurate history, diagnosis, Siddha correlation, and treatment plan 3. Procedural Detailing : 5 marks 3.1. Step-by-step methods of internal, external medicine, varmam	25

	application,advance varmam techniques, etc. are well described with observations 4. Integration with Siddha Principles : 4 marks 4.1. Use of Thirithodam, Udal Thathukkal, where relevant 5. Clarity, Neatness & Presentation : 3 marks 5.1. Legibility, well-organized, minimal corrections 6. Reflective Notes / Learning Outcome : 3 marks 6.1. Insightful summary or reflection after major cases or therapies	
Total Marks		400

#No separate marks for dissertation viva.

Reference Books/ Resources

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Abbreviations

Domain		T L Method		Level	
CK	Cognitive/Knowledge	L	Lecture	K	Know
CC	Cognitive/Comprehension	L&PPT	Lecture with PowerPoint presentation	KH	Knows how
CAP	Cognitive/Application	L&GD	Lecture & Group Discussion	SH	Shows how
CAN	Cognitive/Analysis	L_VC	Lecture with Video clips	D	Does
CS	Cognitive/Synthesis	REC	Recitation		
CE	Cognitive/Evaluation	SY	Symposium		
PSY-SET	Psychomotor/Set	TUT	Tutorial		
PSY-GUD	Psychomotor/Guided response	DIS	Discussions		
PSY-MEC	Psychomotor/Mechanism	BS	Brainstorming		
PSY-ADT	Psychomotor Adaptation	IBL	Inquiry-Based Learning		
PSY-ORG	Psychomotor/Origination	PBL	Problem-Based Learning		
AFT-REC	Affective/ Receiving	CBL	Case-Based Learning		
AFT-RES	Affective/Responding	PrBL	Project-Based Learning		
AFT-VAL	Affective/Valuing	TBL	Team-Based Learning		
AFT-SET	Affective/Organization	TPW	Team Project Work		
AFT-CHR	Affective/ characterization	FC	Flipped Classroom		
		BL	Blended Learning		
		EDU	Edutainment		
		ML	Mobile Learning		
		ECE	Early Clinical Exposure		
		SIM	Simulation		
		RP	Role Plays		
		SDL	Self-directed learning		
		PSM	Problem-Solving Method		
		KL	Kinaesthetic Learning		
		W	Workshops		
		GBL	Game-Based Learning		
		LS	Library Session		
		PL	Peer Learning		
		RLE	Real-Life Experience		
		PER	Presentations		
		D-M	Demonstration on Model		
		PT	Practical		
		X-Ray	X-ray Identification		
		CD	Case Diagnosis		

		LRI	Lab Report Interpretation		
		DA	Drug Analysis		
		D	Demonstration		
		D-BED	Demonstration Bedside		
		DL	Demonstration Lab		
		DG	Demonstration Garden		
		FV	Field Visit		
		JC	Journal Club		
		Mnt	Mentoring		
		PAL	Peer Assisted Learning		
		C_L	Co Learning		
		DSN	Dissection		
		PSN	Prosection		