



SHRI
DHARMASTHALA
MANJUNATHESHWARA
UNIVERSITY

Ordinance Governing
III Year BPT Course
Curriculum 2021-22

SHRI DHARMASTHALA MANJUNATHESHWARA UNIVERSITY

(A State Private University established under the Shri Dharmasthala Manjunatheshwara University Act No 19 of 2018 of Government of Karnataka and Notification No. ED 261 URC 2018 dated 19th December 2018)

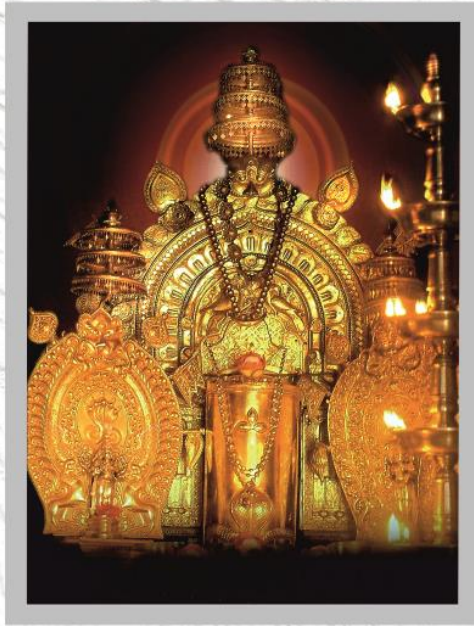
Manjushree Nagar, Sattur, Dharwad - 580 009, Karnataka, India

6th Floor, Manjushree Block SDM Medical College Campus

+91 836 2321127,2321126,2321125,2321124 sdmuniversity.edu.in

sdmuo@sdmuniversity.edu.in ; registrar@sdmuniversity.edu.in

|| Om Shri Manjunathaya Namaha ||



Shree Kshethra Dharmasthala

Edition Year : 2021-22

Shri Dharmasthala Manjunatheshwara University,
Manjushree Nagar, Sattur, Dharwad - 580 009, Karnataka, India
Phone: 0836-2321127
email: sdmuo@sdmuniversity.edu.in

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Shri Dharmasthala Manjunatheshwara University
6th Floor, Manjushree Block SDM Medical College Campus
Manjushree Nagar, Sattur, Dharwad - 580 009, Karnataka, India
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THE LOGO

Poojya Dr D. Veerendra Heggade, Hon'ble Chancellor of the University, while searching for an appropriate Logo for the University, saw a photograph picked from Temple Architecture showing Wings of a Bird, sculpted in Indian style and wanted it to be incorporated in the logo for the University, as the Wings symbolize 'Spreading of Knowledge beyond Boundaries'. Further it was felt that the Central theme of the logo should be 'Rudra' (The Linga) with wings on each side. In this way, the logo of the University was conceptualized.

Hence:

1. The central part represents **Rudra** who Demolishes Darkness.
2. The Three **horizontal lines on The Linga** stand for Samyak Darshan (Right Belief), Samyak Gyan (Right Knowledge) and Samyak Charitra (Right Conduct).
3. The **Wings** symbolize spreading of Knowledge across the boundaries.
4. Base line "**Truth Liberates**" highlights the Purpose of Education: to liberate oneself unconditionally. It shows that it is not discipline, nor knowledge nor the efforts to freedom that liberate but Truth is what liberates you from all your conditioning and ignorance.

The overall significance of Shri Dharmasthala Manjunatheshwara University's Logo is:

Darkness of ignorance is destroyed by the flow of knowledge to bring Liberty to everyone, by realizing the truth. And, it should spread globally without the boundaries as hindrance.



SHRI
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UNIVERSITY

VISION

Shri Dharmasthala Manjunatheshwara University will set the highest standards of teaching and learning by awakening the intelligence of the students and nurturing the creativity hidden in them by creating an environment where the ancient wisdom blends with modern science, to transform them into whole human beings to face the challenges.

MISSION

- ▶ To ensure that the journey of education is inspiring, pleasant and enjoyable.
- ▶ Attract the best of teachers and students.
- ▶ Achieve high principles of trust, love and spirituality in the students.
- ▶ Create a collaborative, diverse and exclusive community.
- ▶ Transform the student of today to be a leader of tomorrow and a better human being.
- ▶ Produce passionate teachers.
- ▶ Evolve innovative teaching techniques.
- ▶ Create a peaceful environment.
- ▶ Prepare the student to face the social challenges.
- ▶ Create a University of which the Nation is proud of.
- ▶ Be an effective partner in Nation Building.
- ▶ Create an Eco-friendly University.
- ▶ Create a University based on the principles of beauty, love and justice.

||Om Shanti! Om Shanti! Om Shanti||



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6th floor, Manjushree Building, SDM College of Medical
Sciences & Hospital Campus, Sattur, Dharwad - 580009
Tel. No : +91 836 2477511, 2321115, 2321117
Fax: +91836 2463400
Email: registrar@sdmuniversity.edu.in

SDMU/ACAD/BPT/F-4/Notf-222/679/2021

Date:29-12-2021

NOTIFICATION

Ordinance governing Curricula of BPT Year III - 2021

Ref:

1. Minutes of the 5th Meeting of Academic Council
(Ref. No. SDMU/AC/M5/F-28/626/2021 Dated: 10-12-2021)
2. Minutes of the 5th Meeting of Board of Studies - Physiotherapy held on 06.07.2021

In exercise of the powers conferred under Statutes 1.4 (Powers and functions - Para ix & x) & 1.8 (Powers and functions - Para i) of Shri Dharmasthala Manjunatheshwara University, the Academic Council has accorded its approval for the notification on the ordinance governing the Curricula of BPT Year III - 2021.

The ordinance shall be effective from the date of notification.

Lt. Col. U. S. Dinesh (Retd.)
REGISTRAR
REGISTRAR,
Shri Dharmasthala Manjunatheshwara
University, Dharwad



To: The Principal, SDM College of Physiotherapy.

Copy for information to:

1. Hon'ble Chancellor, Shri Dharmasthala Manjunatheshwara University, Dharwad
2. Vice Chancellor - Shri Dharmasthala Manjunatheshwara University.
3. Pro Vice-Chancellor (Academics) - Shri Dharmasthala Manjunatheshwara University.
4. Controller of Examinations, Shri Dharmasthala Manjunatheshwara University.
5. Chairperson, Board of Studies - Physiotherapy
6. University Office for Records File
7. Office of the Registrar

COURSE OF STUDY - SUBJECTS AND HOUR DISTRIBUTION

Third year BPT [Duration 25 -36 months]						
Sl. No.	Subject (QP Code)	Teaching hours				
		Weekly Class hours	Total	Theory	Practical	Clinics
<i>Main Subjects: For University Examination</i>						
1	General Medicine (BPT1111)	2	75	75		
2	General Surgery (BPT1112)	2	65	65		
3	Orthopaedics & Traumatology (BPT1113)	2	60	60		
4	Musculoskeletal And Sports Physiotherapy (BPT1114)	5	150	90	60	
5	Cardiorespiratory & General Physiotherapy (BPT1115)	5	150	90	60	
6	Supervised Rotatory Clinical Training	18	660			660
<i>Subsidiary subjects: Not for University Examination</i>						
7	Allied Therapies (BPT1199)	2	60	60		
8.	Project (Introduction and basic methodology)	1	40		40	
Total		37	1260	440	160	660

Rotatory clinical training:

- Students will be posted in all physiotherapy outpatient departments/ wards on rotation basis.
- Students will be posted in general medicine, general surgery and orthopaedics outpatient departments/ wards on rotation basis.
- Project will start in III Year, which will continue in IV Year and end in internship. Project will be executed by a group of students under the guidance of teaching staff/s.

SCHEME OF EXAMINATION

SUBJECTS AND DISTRIBUTION OF MARKS

BPT - III								
Sl.No	Subject	Theory				Practical		Total
		Written		Viva- Voce	Internal Assessment	Practical	Internal Assessment	
		Time	Maximum Marks	Maximum Marks	Maximum Marks	Maximum Marks	Maximum Marks	Maximum Marks
1	General Medicine	3 Hrs	80	-	20	-	-	100
2	General Surgery	3 Hrs	80	-	20	-	-	100
3	Orthopedics & Traumatology	3 Hrs	80	-	20	-	-	100
4	Musculoskeletal & Sports Physiotherapy	3 Hrs	100	30	20	40	10	200
5	Cardio- Pulmonary & General Physiotherapy	3 Hrs	100	30	20	40	10	200

General Medicine

- At the end of the course, the candidate will be able to describe Aetiology, Pathophysiology, Signs & Symptoms and Management of the various medical disorders & conditions.
- Be able to interpret Chest X-ray, Blood gas analysis, P.F.T. findings, Blood and other investigations done for various medical conditions.
- Be able to describe the principles of management at the Medical Intensive Care Unit.

Subject Title	GENERAL MEDICINE
Duration	25 – 36 Months
Total Hours	75
Theory / Lecture	2 Hours / Week
Method of assessment	Written

S.No.	Topic	Total hours
I	CARDIO VASCULAR DISEASES	15
1	Symptoms & Signs	
2	Routine + Relevant investigations (ECG/ 2D Echo/Treadmill test - TMT)	
3	Congenital Heart Disease:- CHD 1) Congenital-Ventricular septal defect - VSD/ TOF - tetralogy of fallot	
4	Rheumatic Fever	
5	Valvular Heart Disease-MS - mitral stenosis /MR - mitral regurgitation /AS - aortic stenosis /AR - aortic regurgitation	
6	Infective endocarditis	
7	Systemic Hypertension	
8	IHD - Ischemic Heart Disease-Acute Coronary Syndrome - ACR /Myocardial infarction - MI	
9	Cardiac Arrest/ Cardi Pulmonary Resuscitation - CPR	
10	Congestive Cardiac failure - CCF	
11	Vascular Diseases- Deep Vein Thrombosis - DVT /Thromboangitis obliterans - TAO	
12	ICU: Intensive care unit settings monitor/ventilator/ Defibrillator/Central lines/feed. Assessment, monitoring & Management of patient in ICU.	

II	RESPIRATORY DISEASES	11
1	Symptoms & Signs	
2	Relevant Investigations - X RAY , ABG , PFT	
3	Upper Respiratory Tract Infection - URTI	
4	Pneumonia	
5	Supportive lung disease	
6	Chronic Obstructive Pulmonary Disease (Obstructive Airway Disease) - ASTHMA , EMPHYSEMA , CHRONIC BRONCHITIS	
7	Tuberculosis	
8	Restrictive Lung Disease - (Interstitial Lung Disease - ILD)	
9	Diseases of Pleura - pleural effusion	
10	Respiratory failure- Type1+2	
11	Pulmonary Thrombo Embolism - PTE	
III	Gastro Intestinal Tract Disorders	7
1	Symptoms & Signs	
2	Relevant Investigations:- Ultrasonography /Endoscopy	
3	Oesophagus Disorders -GERD	
4	Peptic Ulcer Disease (PUD)	
5	Pancreatitis	
6	Hepatitis - Viral	
7	Cirrhosis: Alcoholic Liver Disease & complications	
8	Inflammatory Bowel Diseases (IBD)	

IV	Hematology system	6
1	Hemopoiesis & functions of each lineage	
2	Investigations:- Hemogram+Peripheral Smear + Bone marrow	
3	Anaemia (Iron Deficiency Anemia)	
4	B ₁₂ Deficiency anemia	
5	Leukemia classification- Chronic Myeloid Leukemia+Acute Myeloid Leukemia	
6	Blood transfusion + Reactions	
7	Approach to Thrombocytopenia	
V	Endocrine system	6
1	Overview	
2	Thyroid - Hypothyroid, Hyperthyroid	
3	Diabetes Mellitus	
4	Osteoporosis	
VI	Food & Nutrition	2
1	Obesity and Malnutrition	
2	Vitamins - requirement & Deficiency	
VII	Poisoning	3
1	Common agents & Management	
2	Organophosphorus (OP) poisoning	
3	Snake bite	

VIII	Infections	4
1	Fever & Rashes - Dengue	
2	Gastroenteritis	
3	Typhoid fever	
4	HIV - Human immunodeficiency virus	
5	Adult vaccination	
IX	Rheumatology	5
1	Rheumatoid Arthritis	
2	Systemic Lupus Erythematosus (S L E)	
3	Ankylosing spondylitis	
4	Gout	
X	Geriatric Medicine	2
1	Falls	
2	Geriatric care	
XI	Renal system	3
1	Urinary Tract Infection (UTI)	
2	Acute & Chronic Renal Failure	
3	Nephrotic Syndrome	

XII	Dermatology	6
1.	Leprosy: Clinical features, Pathology, Investigations, Treatment	
2.	Psoriasis: Etiology, Pathogenesis, Clinical features, Treatment	
3.	Pigmentary anomalies: Etiology, Classification, Clinical features, Investigation, Management	
4.	Vasomotor disorder: Classification, Clinical features, Management	
5.	Dermatitis: Classification, Etiology, Clinical features, Management	
6.	Infection: Bacterial, Viral, Fungal, parasitic : Etiology -Clinical features- Diagnosis- & Treatment	

XIII	Psychiatry	5
1.	Classification of Psychiatric Disorders	
2.	Causes of Psychiatric Disorders	
3.	Clinical Manifestations of Psychiatric Disorders	
4.	Treatment Methods: Pharmacological	
5.	Treatment Methods : Non-Pharmacological	

SUGGESTED READINGS

1. Davidson's Principles and Practice of Medicine
2. Harrison's Internal Medicine
3. Braunwald Text of Cardiology
4. Text Book of Cardiology by Hurst

GENERAL SURGERY

OBJECTIVE: The Physiotherapy student should develop basic understanding of General Surgery so as to perform his duties efficiently.

Subject Title	GENERAL SURGERY
Duration	25 – 36 Months
Total Hours	65
Theory / Lecture	2 Hours / Week
Method of assessment	Written

THEORY & PRACTICAL CONTENTS

	THEORY CONTENTS	HOURS
1.	<p>Fluid, Electrolyte and Acid-Base disturbances – diagnosis and management</p> <ul style="list-style-type: none"> • Nutrition in the Surgical patient • Wound healing – basic process involved in wound repair, basic phases in the healing process, clinical management of wounds, factors affecting wound healing, Scars types and treatment • Hemostasis – Components, hemostatic disorders, factors affecting bleeding during Surgery • Transfusion therapy in Surgery – blood components, complications of transfusion • Surgical Infections • General Post-operative complications and its management 	6
2.	<p>Causes, Clinical Presentation, Diagnosis and treatment of the following Thoracic Trauma situations</p> <ul style="list-style-type: none"> • Airway obstruction, Pneumothorax, Hemothorax, Cardiac Tamponade • Tracheobronchial disruption, Aortic disruption, Diaphragmatic disruption, esophageal disruption, Cardiac and Pulmonary Contusions 	4
3.	<p>Surgical Oncology</p> <ul style="list-style-type: none"> • Cancer – definition, types, clinical manifestations of cancer, staging of cancer, surgical procedures involved in the management of cancer 	3

4.	<p>Disorders of the Heart</p> <ul style="list-style-type: none"> • Definition, Clinical features, diagnosis and choice of management for the following disorders • Congenital Heart diseases – A cyanotic congenital heart disease and • Cyanotic congenital heart disease • Patent Ductus Arteriosus • Coarctation of Aorta • Atrial Septal Defect, Ventricular Septal Defect, Tetralogy of Fallot, Transposition of Great vessels • Acquired Heart Disease – Mitral Stenosis and Insufficiency, Aortic Stenosis and Insufficiency, • Ischemic Heart Disease – Coronary Artery Disease, Cardiac Tumors 	7
5.	<p>Disease of the Arteries and Veins:</p> <ul style="list-style-type: none"> • Definition, Aetiology, Clinical features, signs and symptoms, complications, management and treatment of following diseases • Arteriosclerosis • Atherosclerosis • Aneurysm • Buerger's Disease • Raynaud's Disease • Thrombophlebitis • Deep Vein Thrombosis, Pulmonary Embolism, Varicose Veins 	5
6.	<p>Burns</p> <ul style="list-style-type: none"> • Definition, Classification, Causes, Prevention, Pathological changes, Complications, Clinical features and management • Skin Grafts – Types, Grafting Procedures, Survival of skin Graft • Flaps – Types and uses of Flaps 	5
7.	<p>Women's Health</p> <ul style="list-style-type: none"> • Menstrual cycle and its disorders. • Hormonal disorders of females – obesity and female hormones • Cancer of the female reproductive organs – management • Infections and sexually transmitted disease in female • Menopause – its effects on emotions and 	8

	<p>musculoskeletal system</p> <ul style="list-style-type: none"> • Malnutrition and deficiencies in females. • Sterility – pathophysiology investigations – management • Maternal physiology in pregnancy • Prenatal complications – Investigations – Management • Child Birth – stages – complications – investigations – management – pain relief in labour • Puerperium – Post Natal Care. Surgical procedures involving child birth • Incontinence – Types, Causes, Assessment and Management • Definition, Indications and Management of the following Surgical Procedures – Hysterosalpyngography, Dilation and Curettage, Laparoscopy, Colposcopy, Hysterectomy • Musculoskeletal disorders during pregnancy 	
8.	<p>Reasons for Surgery.</p> <ul style="list-style-type: none"> • Types of anaesthesia and its effects on the patient • Types of Incisions • Clips Ligatures and Sutures • General Thoracic Procedures – Radiologic Diagnostic procedures • Endoscopy – types. • Biopsy – uses and types • Overview and Drainage systems • Tubes used in Surgery 	3
9.	<p>Disorders of the Chest Wall, Lung and Mediastinum</p> <ul style="list-style-type: none"> • Definition, Clinical features, diagnosis and choice of management for the following disorders • Chest wall deformities, chest wall tumours • Spontaneous Pneumothorax, Pleural Effusion, Empyema Thoracis, Lung abscess • Bronchiectasis, Tuberculosis, Bronchogenic Carcinoma, Bronchial Adenomas, Metastatic tumours of the Lung, Tracheal Stenosis, Congenital tracheomalacia, Neoplasms of the Trachea. • Lesions of the Mediastinum. • Carcinoma of the female breast 	5
10.	<p>Thoracic Surgeries</p> <ul style="list-style-type: none"> • Thoracotomy – Definition, Types of Incision with emphasis to the site of incision, muscles cut and 	6

	<p>complications.</p> <ul style="list-style-type: none"> • Lung Surgeries: Pneumonectomy, Lobectomy, segmentectomy – Indications, Physiological changes and Complications, Thoracoplasty, Pleurectomy, Pleurodesis and Decortication of the Lung. • Cardiac Surgeries – An overview of the Cardio-Pulmonary Bypass Machine – Extra – Cardiac operations. • Closed Heart Surgery • Open Heart Surgery • Transplant Surgery – Heart, Lung and Kidney – Indications, Physiological changes and complications. 	
11.	<p>Definition, Indication, Incision, Physiological changes and complications following common operations like</p> <ul style="list-style-type: none"> • Cholecystectomy • Colostomy • Ileostomy • Gastrectomy • Hernias – Types and Management • Appendicectomy • Mastectomy • Nephrectomy • Prostatectomy • Circumcision • Peptic ulcer • Prolapse Rectum 	4
12.	<p>ENT</p> <ul style="list-style-type: none"> • Common problems of ear • Otitis Media • Otosclerosis • Functional achonia and deafness, management • Facial Palsy classification, medical and surgical management of lower motor neuron types of facial palsy 	3
13.	<p>Ophthalmology</p> <ul style="list-style-type: none"> • Anatomy and Physiology of eye • Anatomy, Physiology, Pathology, of Lacrimal Excretory Apparatus • Anatomy, Physiology and Disease of conjunctiva <ul style="list-style-type: none"> a. Allergic, Bacterial and Viral b. Degenerative conditions of conjunctiva 	6

	<ul style="list-style-type: none"> - Pinguecula - Pterygium • Cornea – Anatomy and Physiology – Factors keeping cornea transparent <ul style="list-style-type: none"> - Bacterial, Viral and fungal corneal ulcer • Lens – Anatomy & Physiology <ul style="list-style-type: none"> - Cataract - Cataract surgeries • Glaucoma – Chronic simple glaucoma, angle closure glaucoma • Anatomy and Physiology of Retina • Refractive errors – contact lenses (Note on LASIK SURGERIES) • Contusion injury – Penetrating injuries, Sympathetic Ophthalmitis • LIDS – Blepharitis, Chalazion • Fundoscopy • Hypertensive Retinopathy – Diabetic Retinopathy – Anaemia • Optic Nerve Disc Examination <ol style="list-style-type: none"> a. Optic Neuritis b. Optic Atrophy • Retinal Detachment • Intraocular Tumours – Retinoblastoma • Endophthalmitis • Amblyopia – concomitant squint, paralytic squint • Proptosis – Orbital cellulitis • Vasculo-occlusive diseases • Secondary Glaucoma – Buphthalmos • Pupillary Pathway 	
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SUGGESTED READINGS

1. Russell RCG, Williams NS, Bulstrode CJK, Bailey and Love's short practice of Surgery. 24th Ed. Arnold, London, 2004.
2. Mowschenson PM: Aids to undergraduate Surgery. 3rd Ed, Churchill Livingstone, Edinburgh, 1989.
3. Farquharson M and Moran B: Farquharson's textbook of operative general surgery, 9th Ed, Hodder Arnold, London, 2005.
4. Lumley JSP, Hamilton Bailey's demonstrations of physical signs in clinical surgery, 18th Ed, Butterworth Heinman, Oxford, 1997.
5. Doherty MG: Current Surgical diagnosis and treatment. 12th Ed. Lange Medical Books, New York, 2006.
6. S. Das: A concise textbook of Surgery, 3rd Ed, Dr.S.Das, Calcutta, 2001.
7. S. Das: A manual on clinical Surgery, 6th Ed, Dr. S.Das, Calcutta, 2004.
8. Dutta DC: Text book of obstetrics / Textbook of gynecology, 5th / 6th Ed, New central book agency (P) Ltd, Kolkata, 2003/2004.
9. Basak KS: Essentials of ophthalmology, 3rd Ed, Current books International, Kolkata, 2004.
10. Bhargava KB, Bhargava SK and Shah TM: A short text book of ENT diseases. 7th Ed. Usha Publications, Mumbai, 2005.

ORTHOPAEDICS & TRAUMATOLOGY

Objectives

At the end of the training in Orthopaedics and Traumatology the undergraduate Physiotherapy student should be able to demonstrate reasonable competence in:

- Recognizing different traumatic and non-traumatic orthopaedic conditions by defining its etiology, pathophysiology and clinical presentation.
- Interpreting radiological and laboratory findings pertaining to the illness.
- Articulating the basis for the conservative and surgical management of different traumatic and non-traumatic orthopaedic conditions.
- Effectively partnering with the clinician in the wholesome team effort of rehabilitating the patient to his/her previous level of activity

Subject Title	ORTHOPAEDICS & TRAUMATOLOGY
Duration	25 – 36 Months
Total Hours	60
Theory / Lecture	2 Hours / Week
Method of assessment	Written

Outline of Teaching hours

Sl. No	Topics	Teaching hours
1	Introduction	2
2	Basics of Traumatology	3
3	Fractures of the Upper Limb	5
4	Fractures of the Lower Limb	5
5	Dislocations of the Upper Limb	2
6	Dislocations of the Lower Limb	2
7	Injuries to the Spine & Thoracic wall	3
8	Traumatic Spinal Cord Injuries	2

9	Hand Injuries	2
10	Soft Tissue Injuries	2
11	Peripheral nerve injuries	3
12	Amputation and Disarticulation	2
13	Inflammatory and Degenerative Conditions	2
14	Acquired Deformities (in adults)	4
15	Cervical and Lumbar Pathology	2
16	Musculo-skeletal Infections (in adults)	3
17	Orthopaedic Oncology and tumour like conditions (in adults)	3
18	Metabolic Bone Diseases	1
19	Miscellaneous Bone Diseases	1
20	Orthopaedic Surgeries	2
21	Regional Conditions	5
22	Sports injuries & management	4
	Total	60

Sl. No	Topics	Teaching hours
1	Introduction <ul style="list-style-type: none"> • Introduction to orthopaedics. • The role of a Physiotherapist in the treatment team for an Orthopaedic patient • Clinical examination in an Orthopaedic patient. • Imaging techniques in Orthopaedics X-ray, High Resolution USG, CT scans, DEXA Scan, MRI, Nuclear Imaging 	2
2	Basics of Traumatology <ul style="list-style-type: none"> • Closed Fracture: Definition, types, signs and symptoms. • Open Fracture: Definition, Classification • Pathological Fracture • Fracture healing. • Complications of fractures. • Conservative and surgical management of fracture • Subluxation and dislocations – definition, signs and symptoms, management (conservative and operative). 	3

3	<p>Fractures of the Upper Limb</p> <p>Fractures of Upper Limb - causes, clinical features, mechanism of injury, complications, conservative and surgical management of the following fractures:</p> <ul style="list-style-type: none"> • Fractures of clavicle and scapula. • Fractures of the proximal humerus. • Fracture shaft of humerus. • Supracondylar fracture of humerus. • Fractures around the elbow - Olecranon fractures, Radial head fracture, lateral condyle and medial condyle humerus fracture • Fractures of Radius and Ulna • Monteggia and Galaezzi fracture-dislocation. • Distal radius fracture • Eponymous distal radius fractures - Colles fracture, Smith fracture, Barton fracture & Chauffer fracture • Scaphoid fracture. • Eponymous metacarpal fractures - Bennett fracture, Rolando fracture, Boxer's fracture 	5
4	<p>Fractures of the Lower Limb</p> <p>Fractures of Lower Limb - causes, clinical features, mechanism of injury, complications, conservative and surgical management of the following fractures:</p> <ul style="list-style-type: none"> • Pelvic Fracture • Fracture neck of femur • Intertrochanteric fracture of femur • Fracture shaft femur • Distal femoral fractures • Patella fractures. • Proximal tibia fractures • Fractures of tibial condyles. • Fracture tibia – with an emphasis on closed and open tibia fractures • Ankle fractures – Bimalleolar and Trimalleolar fractures • Eponymous Ankle Fractures – Dupuytren fracture, Maisonneuve fracture, Pott's fracture • Fracture Calcaneum • Fracture Talus • Eponymous metatarsal fractures – Jones fracture, March fracture 	5

5	<p>Dislocations of the Upper Limb Dislocations of the Upper Limb causes, clinical features, mechanism of injury, complications, conservative and surgical management of the following dislocations:</p> <ul style="list-style-type: none"> • Traumatic Anterior dislocation of shoulder • Traumatic Posterior dislocation of shoulder • Recurrent dislocation of shoulder with emphasis on shoulder instability • Traumatic Posterior dislocation of elbow 	2
6	<p>Dislocations of the Lower Limb Dislocations of the Lower Limb causes, clinical features, mechanism of injury, complications, conservative and surgical management of the following dislocations:</p> <ul style="list-style-type: none"> • Traumatic Anterior dislocation of hip. • Traumatic Posterior dislocation of hip. • Traumatic Central dislocation of hip. • Traumatic Knee dislocation • Recurrent dislocation of patella. 	2
7	<p>Injuries to the Spine & Thoracic wall Causes, clinical features, mechanism of injury, complications, conservative and surgical management of the following injuries:</p> <ul style="list-style-type: none"> • Cervical Spine Injuries • Atlas Fracture • Odontoid process fracture • Eponymous Cervical Spine Injuries – Clay-Shoveller’s fracture, Hangman’s fracture • Thoraco-Lumbar Spine Injuries • Rib fractures • Flail Chest 	3
8	<p>Traumatic Spinal Cord Injuries Clinical features, complications, medical and surgical management of:</p> <ul style="list-style-type: none"> • Paraplegia • Quadriplegia 	2
9	<p>Hand Injuries Causes, clinical features, management and complications of:</p> <ul style="list-style-type: none"> • Flexor tendon injuries • Extensor tendon injuries 	2

10	<p>Soft Tissue Injuries Causes, clinical features, mechanism of injury, complications, conservative and surgical management of the following injuries:</p> <ul style="list-style-type: none"> • ACL and PCL Injuries of the Knee • Meniscal Injuries of the Knee • Medial and Lateral Collateral Ligaments of the Knee • Rotator Cuff Injuries • Achilles Tendon Injuries 	2
11	<p>Peripheral nerve injuries Clinical presentation, assessment, medical and surgical management of the following peripheral nerve injuries</p> <ul style="list-style-type: none"> • Brachial plexus injury • Radial nerve injury • Ulnar nerve injury • Median nerve injury • Common peroneal nerve injury 	3
12	<p>Amputation and Disarticulation</p> <ul style="list-style-type: none"> • Definition, indications, complications with emphasis on different levels of amputation and disarticulation in the upper and lower limb 	2
13	<p>Inflammatory and Degenerative Conditions Etiology, clinical presentation, radiological findings and conservative and surgical management of the following conditions:</p> <ul style="list-style-type: none"> • Osteoarthritis. • Rheumatoid arthritis. • Ankylosing spondylitis • Gout • Psoriatic arthritis. • Hemophilic arthritis. 	2
14	<p>Acquired Deformities (in adults) : Clinical presentation, radiological findings and conservative and surgical management</p> <ul style="list-style-type: none"> • Genu Varum • Genu Valgum • Coxa Vara • Cubitus Valgus • Cubitus Varus 	4

15	<p>Cervical and Lumbar Pathology Causes, clinical feature, patho-physiology, investigations, management - Medical and Surgical for the following:</p> <ul style="list-style-type: none"> • Inter-vertebral Disc Prolapse (IVDP) • Cervical and Lumbar Spondylosis • Lumbar Canal Stenosis 	2
16	<p>Musculo-skeletal Infections (in adults) :</p> <ul style="list-style-type: none"> • Acute Osteomyelitis • Sub-acute Osteomyelitis with emphasis on Brodie's abscess • Chronic Osteomyelitis • Septic Arthritis • Tuberculosis of Spine • Tubercular arthritis of hip, knee and shoulder 	3
17	<p>Orthopaedic Oncology and tumour like conditions (in adults)</p>	3
18	<p>Metabolic Bone Diseases:</p> <ul style="list-style-type: none"> • Osteoporosis 	1
19	<p>Miscellaneous Bone Diseases:</p> <ul style="list-style-type: none"> • Avascular Necrosis 	1
20	<p>Orthopaedic Surgeries Indications, types and principles underlying the following surgical procedures</p> <ul style="list-style-type: none"> • Arthrodesis • Arthroplasty • Osteotomy • External fixators • Spinal fusion surgeries • Limb re-attachments. 	2
21	<p>Regional Conditions Definition, clinical features, radiological features and management of the following regional conditions</p> <ul style="list-style-type: none"> • Shoulder: Adhesive Capsulitis, Rotator cuff tendinitis, Supraspinatus tendinitis, Bicipital tendinitis, Subacromial bursitis. • Elbow: Tennis elbow, Golfer's elbow. Olecranon bursitis (student's elbow). • Wrist and Hand: De Quervain's Tenosynovitis, Ganglion, Trigger Finger/Thumb, Mallet Finger, Carpal Tunnel Syndrome, Dupuytren's Contracture. 	5

	<ul style="list-style-type: none"> • Knee: Prepatellar and Suprapatellar Bursitis. Popliteal Tendinitis. Patellar Tendinitis. Chondromalacia Patella. • Ankle and Foot: Ankle sprains, Plantar Fasciitis/Calcaneal Spur. 	
22	Sports injuries & management	4

SUGGESTED READINGS

1. Outline of Fractures - John Crawford Adams
2. Outline of Orthopedics - John Crawford Adams
3. Apley's System of Orthopaedics and Fractures – Alan Graham Apley

Clinical Exposure – 20 hours in Orthopaedic ward and out-patient department.

MUSCULOSKELETAL AND SPORTS PHYSIOTHERAPY

Objective of this subject:

After completing the specified hours of lectures and demonstrations student will be able to identify disabilities due to musculoskeletal dysfunction, list out problems of the patient, set treatment goals and plan the treatment through applying the skills gained in exercise therapy and electrotherapy in these clinical situations to restore musculoskeletal function.

The student should be able to reassess as necessary, to monitor the patient in regard to provide appropriate further interventions.

Subject Title	MUSCULOSKELETAL AND SPORTS PHYSIOTHERAPY
Duration	25 – 36 Months
Total Hours	150 hours
Theory	90 hours
Practical	60 hours
Total Hours / Week	5 hours
Lecture	3 hours / Week
Practicals	2 hours / Week
Method of Assessment	Written, Oral, Practical

Sl No	TOPICS	HOURS
1	Review of basics Nervous system: (sensory and motor system), Bone and soft tissue (muscle, tendon, capsule and ligament,) -anatomy and physiology Biomechanics of joints (revision)	1
2	Musculoskeletal conditions and sports injury Assessment SOAP format. Subjective - informed consent, chief complaint, HOPI, personal, past, medical, surgical history and socioeconomic history, Pain assessment- intensity, character, aggravating and relieving factors, site and location, body chart and scales (VAS and NPRS). Pain neuroscience education (in brief): <ul style="list-style-type: none"> • Pain sciences into clinical reasoning models. Chronic 	5

	<p>pain, central sensitization and peripheral sensitization</p> <ul style="list-style-type: none"> • Biopsychosocial framework in assessment ,screening and management of musculoskeletal pain • Pain assessment and management strategies in musculoskeletal pain conditions • Pain Neuroscience Education (PNE) <p>Objective- on observation - body built swelling, skin colour changes, muscle atrophy, deformities, Posture, gait and External appliances and scars.</p> <p>On palpation- tenderness-grades, muscle spasm, swelling- methods of swelling assessment and its types, bony prominences, soft tissue texture and integrity, warmth and vasomotor disturbances.</p> <p>On examination – ROM, – active and passive, Accessory movement testing (grades)resisted isometric tests, limb length- apparent, true and segmental , girth measurement, muscle length testing-tightness, contracture and flexibility, manual muscle testing, peripheral neurological examination (dermatomes, myotomes and reflexes), special tests, balance and proprioception testing and functional tests. Prescription of home program. Documentation of case records, reassessment and follow up.</p> <p>Outcome measures of pain: Patient-reported outcome measures (PROMs) for musculoskeletal disorders</p>	
3	<p>Investigations: Indications and Common findings relevant to X-ray (X ray - Chest and Musculoskeletal), CT scan and MRI of Chest, Brain and Spinal Cord, musculoskeletal, PFT, Arterial Blood Gas analysis, , ECG, exercise stress testing, modified Bruce protocol,6minute walk test, shuttle walk test, Harvard step test etc. its skills and interpretation.</p> <p>Complete Blood Picture</p>	2
4	<p>Basics of Fractures - types, classification, signs and symptoms, complications. Fracture healing – factors affecting fracture healing. Principles of fracture management - reduction - open and closed, immobilization - sling, cast, brace, slab, traction - manual, mechanical, skin, skeletal, lumbar and Cervical</p>	10

	<p>traction, external fixation, functional cast bracing.</p> <p>PT management in complications - early and late - shock, compartment syndrome, VIC, fat embolism, delayed and mal union, RSD, myositis ossificans, AVN, pressure sores etc.</p> <p>Physiotherapy assessment in fracture cases. Aims of PT management in fracture cases - short and long term goals.</p> <p>Principles of PT management in fractures - Guidelines for fracture treatment during period of immobilization and guidelines for treatment after immobilization period.</p>	
5	<p>Specific fractures and dislocations : PT assessment and management (post conservative and surgical) of</p> <ul style="list-style-type: none"> • Upper limb fractures and dislocations. • lower limb fractures and dislocations • Spinal fractures and pelvic fractures. 	8
6	<p>Principles of various schools of thought in manual therapy. (anatomy, biomechanics of joint, Principles, indications, contraindications, grades, (Maitland, Kaltenborn, Mulligan and Mc Kenzie).</p>	2
7	<p>PT assessment, management (post conservative and surgical) and home program for Degenerative and Inflammatory conditions: (Osteoarthritis – knee, hip, hand & shoulder, Rheumatoid Arthritis, Ankylosing spondylitis, Gout, Perthes disease, Periarthritic shoulder)</p> <p>Definition, signs and symptoms, clinical features, patho physiology, investigations, deformities, post medical and surgical rehabilitation of the above conditions.</p>	3
8	<p>PT assessment, management (post conservative and surgical) and home program for Infective conditions: Conditions include: Osteomyelitis – acute and chronic, Septic arthritis, Pyogenic arthritis, TB spine and major joints - knee and hip</p>	3
9	<p>PT assessment, management (post conservative and surgical) and home program for postural abnormalities of spine: Conditions include: Acquired scoliosis, kyphosis, lordosis forwards shoulder posture and forward neck posture.</p>	3
10	<p>PT assessment, management (post conservative and surgical) and home program for Deformities: Conditions include: Torticollis, pes planus, pes cavus and other</p>	3

	common deformities, coxa vara, genu varum, valgum and recurvatum.	
11	PT assessment (post conservative and surgical) and home program for Poliomyelitis./leprosy PT. assessment and management after surgical corrections and reconstructive surgeries - emphasis on tendon transfer and home program.	4
12	Amputations: <ul style="list-style-type: none"> • Definition, levels, indications, types, PT assessment, aims, management pre and post operatively. • Stump shape, its care and bandaging. • Complications of amputations and its management. • Pre and post prosthetic training, checking out prosthesis. 	3
13	PT assessment, aims, management(post conservative and surgical) and home program for Spinal conditions: Review the causes, signs and symptoms, investigations, radiological features, neurological signs for Cervical spondylosis, Lumbar spondylosis, Spondylolisthesis, Spinal canal stenosis, Spondylolysis, Sacro-iliac joint dysfunction, Sacralisation, Lumbarisation, Intervertebral disc prolapse, Coccydynia, Spina bifida occulta.	5
14	Metabolic & hormonal disorders of the bone tissue - Osteoporosis- causes, predisposing factors, investigations and treatment.	1
15	Orthopedic surgeries: Pre and post operative PT assessment, goals, precautions and PT management of following surgeries such as : Arthrodesis, Osteotomy, Arthroplasty-partial and total - Excision arthroplasty, excision arthroplasty with implant, interpositional arthroplasty and total replacement; Tendon transplant, Soft tissue release- tenotomy, myotomy, lengthening; Arthroscopy, Spinal stabilization, Re-attachment of limbs, External fixators, Synovectomy., Flexor and extensor tendon lacerations, Repair of ruptured tendons. Carpal tunnel syndrome.	4
16	PT assessment, aims, management and home program for Shoulder instabilities, TOS, RSD, Impingement syndrome, Total shoulder replacement and Hemi replacement. Pre and post PT assessment and management for AC joint	4

	injuries, Rotator cuff tear, Subacromial decompression.	
17	PT assessment, aims, management and home program for excision of radial head, Total elbow arthroplasty, wrist arthroplasty, hemi and total hip replacement, total knee replacement	3
18	PT assessment, aims, management (post conservative and surgical) and home program for Knee disorders: Lateral retinacular release, chondroplasty, Realignment of extensor mechanism, ACL and PCL reconstruction surgeries, Meniscectomy, meniscal repair, Patellar tendon ruptures, Patellectomy: Postoperative rehabilitation PFPS, Plica syndrome, patellar dysfunction and Hoffa's syndrome: conservative management	4
19	Ankle and foot: Ankle instability, Ligamentous injuries grade wise PT management and Postoperative rehabilitation, Plantar fasciitis, TA rupture, hammer toe and truf toe.	2
20	Bio-Engineering; Classisfication of Orthoses and prostheses; Biomechanical principles of orthotic and prosthetic application; Designing of upper extremity, lower extremity and spinal orthosis, indications and check out; Designing of upper extremity and lower extremity prostheses, indications and check out; Psychological aspects of orthotic and prosthetic application; prescription and designing of footwear and modifications; Designing and construction of adaptive devises.	8
21	Sports Physiotherapy : Physical fitness assessment Sports injuries and its types, Stages of soft tissue healing. Treatment guidelines for soft tissue injuries- Acute, Sub acute and chronic stages. PT management following Repair of soft tissues such as of muscle, tendon and Ligamentous tears. Rehabilitation following Ligamentous sprain: lateral ankle sprain, Collateral and Cruciate injuries of knee, Meniscal injuries of knee and Wrist sprains. Rehabilitation following bursitis: Pre patellar and Subacromial bursitis. Rehabilitation following strain/tendinitis: Tennis elbow, Golfer's	6

	elbow, Hamstring strains, Quadriceps contusion, TA rupture, Rotator cuff injuries. Trigger and Mallet finger, Supraspinatus tendinitis, Bicipital tendonitis, Dequervain's tenosynovitis.	
22	Selection and application of physiotherapeutic techniques, maneuver's, modalities for preventive, curative and rehabilitative means in all conditions.	2
23	Effects of spinal traction , types, mode of application, indications, contraindications, precautions and limitation of spinal traction	1
24	Applied Yoga in orthopedic conditions	2
25	Evidence based practice in Musculoskeletal and Sports Physiotherapy (DESIRABLE TO KNOW)	1

PRACTICAL -60 HOURS

Practical shall be conducted for all the relevant topics discussed in theory in the following forms.

- Bedside case presentation and case discussions
- Lab sessions consisting of evaluation and assessment methods on student models, treatment techniques and practical sessions.
- Pre and post -surgical evaluation of orthopedic conditions
- Investigations and their interpretation-X RAY,CT,MRI,LAB INVESTIGATIONS ,ECG, PFT, ABG
- Manual therapy : Different schools of thoughts

SUGGESTED READINGS:

1. Orthopedic Physical therapy – by Donatelli.
2. Clinical orthopedic rehabilitation- Brotzman.
3. Orthopedic physiotherapy - Jayant Joshi
4. Manual mobilization of extremity joints – by Freddy Kaltenborn, Maitland.
5. Neural tissue mobilization – Butler
6. Textbook of Orthopaedic Medicine – By James Cyriax.
7. Outline of orthopedics – Adams Hamblen
8. Taping Techniques – by Rose Mac Donald.
9. Physical Rehabilitation Assessment and Treatment – O’Sullivan Schmitz
10. Tidy's physiotherapy.
11. Sports physiotherapy- Maria Zuluaga
12. Cash’s Text Book of orthopedic Disorders for Physiotherapists.
13. David, J., MAGEE, M., & ROBERT, C. (2020). ORTHOPEDIC PHYSICAL ASSESSMENT. Saunders
14. Magee, D. J., Zachazewski, J. E., Quillen, W. S., & Manske, R. C. (2015). Pathology and intervention in musculoskeletal rehabilitation (Vol. 3). Elsevier Health Sciences
15. Maitland, G. D. (2013). Vertebral manipulation. Butterworth-Heinemann.
16. Maitland, G., Hengeveld, E., Banks, K., & English, K. (2005). Maitland’s Peripheral Manipulation.
17. McKenzie, R. (1990). The cervical and thoracic spine: mechanical diagnosis and therapy. Orthopedic Physical Therapy.
18. McKenzie, R., & May, S. (2003). The lumbar spine: mechanical diagnosis and therapy (Vol. 1). Orthopedic Physical Therapy.
19. Kisner, C., Colby, L. A., & Borstad, J. (2017). Therapeutic exercise: Foundations and techniques. Fa Davis.
20. Anderson K Marcia, Hall J Susan : Sports injury Management (2018): lippincott williams and wilkins.
21. Reid, D. C. (1993). Sports injury, assessment and rehabilitation. Medicine & Science in Sports & Exercise, 25(10), i
22. Hoppenfeld, S., & Murthy, V. L. (Eds.). (2000). Treatment and rehabilitation of fractures. Lippincott Williams & Wilkins.
23. Ebnezar, J. (2003). Essentials of orthopaedics for physiotherapist. JAYPEE BROTHERS PUBLISHERS

CARDIO-RESPIRATORY & GENERAL PHYSIOTHERAPY

Subject Description -The subject is designed to provide knowledge in assessing and planning physiotherapy interventions for various General, Medical and Surgical conditions.

The student must be able to reassess the patient as necessary, to monitor the patient in regard to treatment, to monitor the patient's vital signs, and to provide appropriate interventions to the patient.

Subject Title	CARDIO-RESPIRATORY & GENERAL PHYSIOTHERAPY
Duration	25 – 36 Months
Total Hours	150 hours
Theory	90 hours
Practical	60 hours
Total Hours / Week Lecture	7 hours
Practical's	4 hours / Week 3 hours / Week
Method of Assessment	Written, Oral, Practical

Sr no	TOPICS	HOURS
1	Review of basics Pulmonary -anatomy and physiology Cardiac – anatomy and physiology Biomechanics of Respiration (revision) Anatomical and Physiological difference between the adult and paediatric lung.	1
2	Cardiopulmonary assessment of adults Common signs and symptoms Physical evaluation /patient evaluation Or Subjective Assessment Objective Assessment Investigation Diagnosis Aims/goals, Management	5

3	<p>Respiratory diseases and its physiotherapy in adults Disease of nose, pharynx, larynx. Chronic obstructive pulmonary diseases Emphysema Chronic Bronchitis Bronchiectasis. Bronchial asthma Restrictive lung diseases Lung abscess Empyema thoracis Pleurisy Pleural effusion Rib fracture Pneumothorax Hemothorax Pneumonias Pulmonary tuberculosis Atelectasis Occupational lung diseases Lung cancer Disorders of ventilation Disorders of pleura, mediastinum and diaphragm. Respiratory failure Congenital anomalies in adults</p>	4
4	<p>Cardiac diseases and its related physiotherapy in adults Rheumatic heart disease Heart failure Diseases of pericardium Ischemic heart disease Myocardial infarction Hypertension and hypotension Cardiac arrhythmias Cardiac emergencies</p>	4
5	<p>Disease of vascular system and physiotherapy Atherosclerosis Diseases of veins Diseases of arteries Diseases of aorta Pulmonary hypertension Pulmonary embolism</p>	3

6	Physiotherapy techniques to clear secretions Hydration, Humidification & Nebulization, Mobilization and Breathing exercises, Postural Drainage, Manual techniques – Percussion, Vibration and Shaking, Rib Springing, ACBT, Autogenic Drainage, Mechanical Aids – PEP, Flutter, IPPB, Facilitation of Cough and Huff, Nasopharyngeal Suctioning	3
7	Physiotherapy techniques to increase lung volumes -controlled mobilization, positioning, breathing exercises, Neurophysiological Facilitation of Respiration, Mechanical aids -Incentive Spirometry, CPAP, IPPB	3
8	Physiotherapy techniques to decrease the work of breathing – Measures to optimize the balance between energy supply and demand, positioning, breathing re-education – Breathing control techniques, mechanical aids – IPPB, CPAP, BiPAP	3
9	MANAGEMENT OF BREATHLESSNESS	1
10	Respiratory failure – Oxygen Therapy and Mechanical Ventilation	4
11	Invasive and non-invasive tests and procedures-pulmonary and cardiac conditions, clinical implications such as Chest x-ray, PFT, ABG, bronchoscopy etc, its interpretation, ECG, echocardiography , cardiac catheterization, exercise stress testing, modified Bruce protocol, 6minute walk test, shuttle walk test, Harvard step test etc. its skills and interpretation, other biochemical and haematological tests.	5
12	Introduction to ICU/ICU evaluation and management Basic evaluation Principles of Icu monitoring Modes of mechanical ventilators -drains, catheters, lines, pacemakers, IABP. Medical gas therapy , nebulization and humidification Therapeutic intervention in tetanus, head injury, lung disease, pulmonary oedema, Multiple organ failure, neuromuscular disease, smoke inhalation, poisoning, aspiration, near drowning, ARDS, SHOCK, etc. dealing with emergency situation such as in ICU - BLS (C.P.C.R).	2

13	<p>Pulmonary rehabilitation-(A.A.C.V.P.R/ATS). History guidelines, definition, indications, contra indications, components of management, outcome measures. Or components of program, planning and implementation. Exercise prescription, breathing re-education Principles of lung expansion therapy, Principles of airway clearance therapy.</p>	3
14	<p>Cardiac rehabilitation- (A.H.A/A.C.S.M guidelines)- definition, structure, introduction, history, stratification of risk factors, Or components of program, planning and implementation. Definition Indication Contraindication Phases-1,2,3 and 4</p>	3
15	<p>Vascular rehabilitation Definition Team members Classification Initial assessment Examination and treatment of peripheral vascular diseases Special tests, investigations, PT finding in arterial, venous and lymphatic system. Outpatient vascular rehabilitation -Upper limb training vs lower limb training</p>	3
16	<p>Pharmacology or drug therapy for common cardiovascular disorders, respiratory disorders in adults Drug delivery doses, inhalers, nebulizers-AEROSAL THERAPY</p>	1
17	<p>Exercise testing, protocols/tests Definition, indications. Common protocols used in adults. Anaerobic testing Bicycle ergometry</p>	2
18	<p>Pulmonary surgeries and its related physiotherapy Anatomy of thoracic cage Incisions, indications, complications, chest wall surgeries, lung transplant types and care of drains Or pre- and post-surgery evaluation.</p>	2

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19	<p>Cardiac surgeries and its related physiotherapy Anatomy of heart and great vessels. Incisions, surgeries in congenital heart diseases, on pump/off pump surgeries, Pacemakers, Valvular surgeries, heart transplantation. Or pre and post-surgery evaluation. Or cardiac rehabilitation.</p>	2
20	<p>Vascular surgeries and its related physiotherapy Anatomy of the vascular system Surgeries in arterial disorders Surgeries in venous disorders Surgeries in lymphatic disorders Or pre- and post-surgery evaluation</p>	3
21	<p>Wound and its related physiotherapy Ulcer -definition, characteristics, types, evaluation. Decubitus ulcers -stages and grades. Diabetic foot and care. Definition, types and classification, stages, types of dressings, evaluation. Electrotherapy measures to relief of pain during mobilization of scar tissues Anesthetic hand and foot care.</p>	2
22	<p>Physiotherapy in dermatological conditions such as acne vulgaris, leprosy, psoriasis, vitiligo, alopecia etc. Electrotherapy used in such condition such as dosage of UVR, LASER, ULTRASOUND.</p>	1

23	<p>PT in burn management and reconstruction surgeries Principles, indications, Skin grafts and flaps Implants in reconstructive surgeries. Burns -skin anatomy and physiology. Types, classification, evaluation in hypertrophic scars and keloid management. Scars and keloids management. Splints in burns.</p>	3
24	<p>Surgeries in oncology (adults) and its related physiotherapy Introduction and common symptoms of cancer Breast cancer Head and neck cancer Lung cancer Oral cancer Bone cancer Pre- and post-surgical evaluation Lymphoedema management Palliative care Common PT approaches</p>	3
25	<p>Abdominal surgeries and its related physiotherapy Layers of abdominal wall, abdominal quadrants, types of incisions and surgeries, indications complications Pre- and post-surgical evaluation</p>	3
26	<p>Management of amputations following Diabetes-prosthesis in amputations in lower limb following ulcers and gangrenes-</p>	2
27	<p>Exercise and cardio vascular and respiratory system response to conditions such as hypertension , diabetes, obesity, renal failure, hyperthyroidism etc.</p>	3
28	<p>Nutrition -bioenergetics, total energy expenditure (MET) sources. (revision) Aerobic and anaerobic training. Principles of exercise prescription, oxygen debt, athlete heart Or Effects of aerobic exercise on cardiovascular and respiratory system Age related changes in cardiovascular and respiratory system.</p>	1

29	Obstetrics and gynecology and its related physiotherapy Anatomy and physiology of female reproductive system Pregnancy and stages of labor Musculoskeletal and cardiorespiratory problems in pregnancy Antenatal and perinatal and postnatal care Urinary and fecal incontinence Prolapse uterus and rectum Evaluation in obstetrics and gynecology.	5
30	Health, Fitness and Promotion Fitness evaluation, Analysis of body composition Evaluation and prescription of exercise Factors affecting exercise performance Exercise prescription for specific groups-elderly population. Home program and education of family members and physiotherapy care	2
31	Applied yoga in cardiorespiratory conditions	3
32	Rehabilitation, principles and its applications such as hand rehabilitation, geriatric and eye rehabilitation. Ergonomics accessibility and management.	3
33	Allied therapies -magnetotherapy, acupuncture, naturopathy	1
34	Evidence based practice in _Cardio-Respiratory & General Physiotherapy (DESIRABLE TO KNOW)	1

PRACTICALS -60 HOURS

Practical shall be conducted for all the relevant topics discussed in theory in the following forms.

1) **Bedside case presentation and case discussions in adults**

2) Lab sessions consisting of evaluation and assessment methods on student models, treatment techniques and practical sessions.

Or

Pre and post -surgical evaluation of cardiac and pulmonary systems -

Investigations and their interpretation-ECG, PFT, ABG

AMBU

Aerosol therapy

Suctioning apparatus

Equipment used in ICU-artificial airways

Mechanical ventilators
CPAP, BiPAP, drains
Catheters
Lines, Pacemakers
IABP
Pulse oximetry
Examination of abdomen-
Assessment of burns, interpretation of burn charts-
Examination of wound and ulcer
Exercise testing and prescription-
Positioning and other physiotherapy techniques-
Obstetric and gynecological assessment and exercise training

SUGGESTED READINGS

1. Tidy's physiotherapy.
2. Cash's Text Book of Chest, Heart, Vascular Disorders for Physiotherapists.
3. The Brompton Hospital Guide to chest physiotherapy Ed. 3 by Gaskell DV
4. Physical Rehabilitation Assessment and Treatment – O'Sullivan Schmitz
5. Elements in Paediatric Physiotherapy – Pamela M Eckersley
6. Essentials of Cardio Pulmonary Physical Therapy by Hillegass and Sadowsky
7. Cardio pulmonary Symptoms in physical Therapy practice Cohen and Michel
8. Chest Physiotherapy in Intensive Care Unit by Mackenzie
9. Cash's Text book of General Medicine and Surgical conditions for Physiotherapists.
10. Physiotherapy in mental health; a practical approach by Everett, Tina; Dennis, Maureen, Ricketts, Eirian
11. Physical Therapy for the Cancer patient by M.C Garvey
12. Physiotherapy in Obstetrics and Gynaecology by Polden

ALLIED THERAPEUTICS

Subject Title Duration Total Hours Theory Lecture	ALLIED THERAPIES 25 - 36 Months 60 60 2 Hour / week
Method of Assessment	Written

Basic Occupational Therapy

1. Introduction to Occupational Therapy
2. Principles of Occupational Therapy
3. Human Structure and Function in Occupational Therapy
4. Therapeutic Media in Occupational Therapy
5. Therapeutic Modalities in Occupational Therapy
6. Health Care Management in Occupational Therapy
7. Pathophysiology in Occupational Therapy
8. Mental Health in Occupational Therapy
9. Physical Function in Occupational Therapy

Basic Speech Therapy

1. Anatomy and Physiology of the Organs of Language
2. Introduction to Audiology
3. Neurological Basis of Language, Linguistics, Phonetics and Phonology
4. Introduction to Language Disorders
5. Speech Therapy Intervention in Language Development Disorders, Aphasia, Speech Articulation Disorders, Deafness
6. Dyslexias and dysgraphias

7. Stuttering
8. Alternative Systems of Communication
9. Intervention in autism and Psychopathological Disorders
10. Intervention in Basic Language, Psychomotor Development
11. New Educational Methodologies for Children with Auditory Alterations
12. Technology Applied to Speech Processing
13. Speech Therapy Intervention in Cochlear Implantation

Alternative Medicine

1. Accupuncture: Definitions, Principles, Techniques, Physiological and Therapeutic effects, Indications and Contra indications.
2. Introduction to Naturotherapy – Principles of application, Indications and Uses.
3. Magnetotherapy - Principles of application, Indications and Uses.
4. Yogasanas and their scientific studies.
5. Role of the above Alternative Medicine approaches including Yoga in comprehensive rehabilitation of patients.



SDM College of Medical Sciences & Hospital



SDM College of Dental Sciences & Hospital



SDM College of Physiotherapy &
SDM Institute of Nursing Sciences



Shri Dharmasthala Manjunatheshwara University



SDM Research Institute for Biomedical Sciences



Panoramic View of Campus