JSS COLEGE OF PHYSIOTHERAPY

RAMANUJA ROAD
MYSORE 570004

BPT IV YEAR LESSON PLAN

2018 – 2019

SUBJECTS

NEURO PHYSIOTHERAPY NEUROLOGY

AND NEUROSURGERY

COMMUNITY BASED REHABILITATION

COMMUNITY MEDICINE

RESEARCH METHEDOLOGY AND BIOSTATISTICS

EVIDENCE BASED PRACTICE.

JSS COLLEGE OF PHYSIOTHERAPY

VISION

JSS College of physiotherapy is committed to provide quality education at the Under Graduate and Post Graduate levels with emphasis on practicing the profession with dignity and compassion in keeping with global excellence standards and human values

MISSION

- To inculcate professional competence through education
- To define current needs to promote research
- To nurture relationships to foster development with societal engagement
- To encourage future leaders with a commitment to accountable patient care

FOREWORD

The purpose of this Lesson Plan is to guide the students on resources that are recommended to master the syllabus of each subject. This document consists of the detailed topic wise plan, along with the time table, assignment list for the entire year, recommended books, sample questions and practical manual.

Each subject syllabus is divided into modules and each module is divided into units.

Every unit is provided with prescribed book, reference books and supplementary material. It is intended to help the students to refer the appropriate book. Students are directed to go through the supplementary material wherever it is required in the form of videos or web links.

Each subject lesson plan is followed by sample questions. It helps students to understand the format of questions in university examinations.

Practical manual contains practical components which are required in assessment, interpretation and physiotherapy intervention. Students must have this practical manual during practical classes and perform the procedure in presence of subject teacher. They must get each skill signed by the subject teacher. This is a pre-requisite before using these skills on the patients. A companion book “SCALB” will be used during clinical rotation to assess clinical competency.

This is a general guideline and the subject teachers will provide additional instructions during the course of the year.

SCOPE OF BPT GRADUATES

A graduate physiotherapist is qualified to work as an

- Autonomous practice in an interdisciplinary team in hospital, rehabilitation centres, rehab project undertaken by Govt.and NGOs.
- Autonomous reflective practitioner in a variety of practice settings like private practice, rural health, sports and fitness centre , special schools , Govt. projects, NGOs, corporate health centres.

BPT course objective

At the end of the course a physiotherapy graduate will be able to-

- Apply knowledge learnt in basic science and clinical science to arrive at a PT diagnosis and reasoning based treatment decision.
- Use appropriate methods of evaluation to asses a patient/client to identify PT needs and set SMART goals.
- Identify situation where referral to other professionals is needed and to comply.
- Apply principles of management to accurately treat and manage the patient in timely and effective manner.
- Communicate health information adequately and appropriately to patient, other health care professionals and public.
- Employ and use research to practice with current recommendation in an ethical and effective manner with patient preference and available resources

Physical therapists are qualified and professionally required to:

- Undertake a comprehensive examination/assessment of the patient/client or needs of a client group
- Evaluate the findings from the examination/assessment to make clinical judgments regarding patients/clients
- Formulate a diagnosis, prognosis and plan
- Provide consultation within their expertise and determine when patients/clients need to be referred to another healthcare professional
- Implement a physical therapist intervention/treatment programme
- determine the outcomes of any interventions/treatments
  make recommendations for self-management

Student code of conduct

While attending college during regular hours including library hours or during college-sponsored activities, students are expected to follow these basic rules, procedures, and expectations:

1. Your first priority is to learn. Avoid distractions that interfere with or are counter-intuitive to that mission.
2. Be in the assigned place with appropriate materials as listed in the lesson plan, ready to work at the designated time that class begins.
3. Never intentionally harm another student.
4. Use appropriate and respectful language and behavior at all times while maintaining friendly and courteous behavior to all.
5. Be polite and respectful to everyone including students, teachers, administrators, support staff, patients, care givers and visitors.
6. Follow individual teacher instructions, class rules, and expectations at all times.
7. Do not rag. If you see someone being ragged, intervene by telling them to stop or immediately report it to college authorities as per guidelines.
8. Do not become a distraction for others. Give every other student the opportunity to maximize their potential. Encourage your fellow students. Never belittle them. Work together as a team..
9. Attendance and participation in class are an essential part of the educational process. Regular attendance is necessary for success. Furthermore, it allows students to achieve the maximum possible benefits from their educational experience. All students are expected to be present and prompt. Attendance is the responsibility of both parents and students.
10. Comport themselves in a manner befitting a healthcare professional
11. Respect institutional and national property, identity and symbols
12. Must not engage in any activity that is against human values and rights.
13. Be respectful, compassionate and use polite language with patients, clients and vulnerable sections of society
14. Participate in all college activities
15. Participate and follow all national policies

Instructions to students

All assignments must follow the following format --

- Title should be underlined and written in capitals
- Name of the student
- Introduction
- Body
- Summary
- Take home message
- References in Vancouver referencing style

Seminars –

- Seminars must be in PowerPoint format
- Must have the following slides
- Title of topic with name of presenters
- Objective or aim of the presentation
- Body of presentation
- Summary and references
- Ending slide should contain thank you
- Video or pictures where necessary
- Font of all the main heading should be Arial, times new roman, or Calibri – font size 38

- Text should be font size 32, font style should be uniform throughout, bold or italicized important points
- Background must be professional, avoid too much animation

Avoid *PLAGIARISM* in all assignment and seminars Self-Study

Be present in library at the appointed class time. Give attendance to librarian.

Read the allotted topic from multiple references book and digital sources.

(Ask your subject supervisor)

Practical dress code—

Boys: Shorts and T shirt

Girls: Tights/leggings and Tshirt

Code of conduct - Ethics in Research

The aim of the code of conduct for researcher (Student/ Staff) is to ensure that all research activities follows the below principles

1. **Autonomy** – Respect for persons including informed consent, privacy and confidentiality . understanding that every individual has the right to make decisions about him/ her self
2. **Beneficence** – Perform only those activities that is expected to do good
3. **Non-Maleficence** – Do no deliberate harm
4. **Justice** – Ensure equitable distribution of risks and benefits

All researchers in the institution must abide by this code of conduct which are governed by the following principles

1. **Principles of non-maleficence** whereby, it is ensured that the conduct of and discoveries of research and knowledge generated do no harm to humans, animals, plants and environment by taking precautions to protect self and others from any harmful effects and reporting immediately to concerned authorities if any untoward incident happens or likely to happen.
2. **Principles of beneficence** whereby, it is ensured that legitimate benefits are being sought and that they out-weigh the risks and harms. The researcher must work for the ethical and beneficent advancement, development and use of scientific knowledge
3. **Principles of risk minimization** whereby, due care and caution is to be taken to minimize the potential ill effects that may occur and restrict the dual use information and knowledge to those who need to know.
4. **Principle of Confidentiality** whereby, the researcher must uphold the basic principle of maintaining all private information highly confidential and reveal it to only legitimate individuals.
5. **Principle of Ethical review** whereby, all relevant research activities are subjected to ethical and safety review. All the research work (academic, sponsorship, collaborative) should be reviewed and approved by Institutional ResearchCell (IRC). Research involving patient/ vulnerable persons' participation should be reviewed and approved by IRC and a registered ethical committee. Informed consent forms(formal or non formal) should be submitted to IRC by the researcher.
6. **Principles of transmission of ethical values** whereby (the duties and

obligations embodied in this code), the ethical principles upon which it is

based are transmitted faithfully to all who are, or may become, engaged in the conduct of such scientific research.

7. **Principles of voluntariness** whereby, researchers are fully apprised of the research, the impact and risk of such research, and whereby scientists retain the right to abstain from further participation in research that they consider ethically or morally objectionable.
8. **Principles of institutional arrangements** whereby, appropriate care is taken to ensure that all procedures are required to be complied with and all institutional arrangements appropriate. Researcher is responsible for usage, damage or loss of materials or equipment.
9. **Principles of totality of responsibility**. All the researchers' individual contributions should be disclosed to IRB. Gift authorship is strictly discouraged. Those who have contributed to the research but do not credit authorship must be acknowledged. A document describing each author's contribution to the research must be submitted to the IRC.
10. **Principles of research integrity** whereby, scientists are expected to adhere to highest professional standards in proposing, doing and reporting of research results to ensure reproducibility. During the conduct of research, data should be collected, collated, analyzed and reported with honesty and integrity. During publication, unethical practices such as fabrication, falsification, plagiarism etc. should be avoided and appropriate credit be given to collaborators who have contributed to the intellectual content of research being reported as reflected in the authorship of manuscripts sent for publication. The interests of students should be credited and provided with appropriate guidance.

* Code of conduct will be revised based on updates/Modification based on ICMR code of conduct for researchers.

How to use this manual

The purpose of this Lesson Plan is to guide the students on resources that are recommended to master the syllabus of each subject. This document consists of the detailed topic wise plan, along with the Time table, Assignment list for the entire year, recommended books, Sample questions and Practical manual.

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Date	Day	Event	Working days (180)

JSS College of Physiotherapy
Calendar 2018-19

May 14	**Monday**	**Commencement of ODD batch classes**	
June 16	**Saturday**	**Ramzan**	**June ☹25)**
July			**July (26)**
August 15	**Tuesday**	**Independence day**	**August(25)**
August 22	**Wednesday**	**Bakrid**	
August 27-31	**Odd batch 1st IA**		
August 21	**RGUHS exams**		
September 1st week RGUHS exams			**September (23)**
September 3	**Monday**	**1st BPT commencement (2018-19)** **MPT 18-19 commencement**	
September 1st week RGUHS exams			
September 05	**Observe –Teachers Day**		
September 08	**Observe- World Physiotherapy day**		
September13	**Thursday**	**Ganesha chaturdarshi**	
September 21	**Friday**	**Last day of Muharam**	
October 02	**Tuesday**	**Gandhi Jayanti**	

October 03	**Wednesday**	**COLLEGE RE-OPENS-for exam appeared students**	**October (22)**
October 18	**Thursday**	**Ayudh pooja**	
October 19	**Friday**	**Vijaydashmi**	
October 24	**Wednesday**	**Vaalmiki Jayanti**	
November 01	**Thursday**	**Kannada Rajyothsava**	
November 02	**Friday**	**Observe Kannada Rajyothsava**	**November (21)**
November 06	**Tuesday**	**Naraka chaturdarshi**	
November 8	**Thursday**	**Balipadyami**	
November 16	**Wednesday**	**Last day of BPT admission**	
November 15	**Wednesday**	**Online uploading of admission statement on RGUHS website**	
November 18	**Saturday**	**Online payment of admission fee to RGUHS**	
November 22	**Monday**	**Getting admission register certified by registrar**	

November 21	**Wednesday**	**Eid Meelad**	
November 19-25		**2nd IA for ODD batch**	
November 26	**Monday**	**Kanakadas jayanthi**	
December 3	**Monday**	**Observe – International day of parson with disability**	**December(23)**
December 3-9		**1st Internals**	
December 17-22		**Cultural week**	
December 22nd to27th	**Christmas vacation (can we make it 23 -29)**		
December 25	**Tuesday**	**Christmas**	
2019-January	**Sports week- Indoor events**		

7-13			
January 21-27	**Sports week- Outdoor events Classes to be suspended**		
January 19	**NSS regular camp**		
January 26	**Republic day**		
January last week	**Sutturjathra**		
February 4-9	**3rd IA for Odd batch**		
March 04-09	**2nd Internals**		
March 08	**Observe International women's day**		
March 12-16	**NSS Camp**		
March 26 – April 3	**Mid term vacations Only for 1st BPT**		
March 29	**Thursday**		
March 30	**Friday**	**Good Friday**	
March 30		**Last date for submission of Synopsis to RGUHS.**	
April 13	**Observe – AmbetkarJayanthi**		
April 14	**Saturday**		
April 2nd week	**University exams for repeaters Repeaters will not be exempt from classes. They will be exempt from clinics for 2 weeks prior to exam. No**		

	post exam vacation		
April 2nd week	RGUHS Exams for ODD Batch		Dissertation – Fine of Rs. 1,500/- per candidate,
April 15	Monday		
April 29	Saturday	Dissertation –Fine of Rs. 4,000/- per candidate	
May 01	Tuesday	May Day	
May 04	Saturday	College day	May(24) Idulfitr
May last week	2nd MPT exams		
June 15	Friday		
June 15	Saturday	Graduation Day	June(20)
June 24-30	3rd internal assessment		
July	IA and attendance calculations, Improvement exams		
July 22			
August 1	Wednesday	Last day – RGUHS IA marks display	July(19)
			Study holidays

CLASS TIME TABLE

	8am-9am	9am-10am	10am-11am	11am-12noon	12 noon-1pm	2pm-3pm	3pm-4pm	4pm-5pm
Monday		Practical-PT NEURO/CBR (AMR\AN)	PG seminar	PT Neuro (AMR)	PT Neuro (AMR)	Library	CBR (PS)	
Tuesday	Fitness		PT Neuro (AMR)	PT Neuro Practicals demo (AMR)	PT Neuro (PHS)	CBR (PS)	PT Neuro Practicals demo(PHS)	Seminar
Wednesday		Practical-PT NEURO/CBR (PHS/AN)	PT Neuro (PHS)	CBR (KR)	Community Medicine& Statistics	Community Medicine& Statistics		
Thursday	Fitness		CBR (AN)	PT Neuro (AMR)	CBR (AN)	Project Work	EBP	
Friday		Practical-PT NEURO/CBR (PHS/KR)	PT Neuro(PHS)		Library	Telemedicine		PT Neuro Practical demo (PHS/AMR)
Saturday		Professional Skill	PBL			NEURO SURG/ 1st 3rd Saturdays academic society session		

Library calendar

Month	Activity
December	Power Point Computer Skill
January	Plagarism
March	Mendeley & SPSS software
June	How to search Journal

ACADEMIC SOCIETY PRESENTATIONS

Date	Topic
6/10/2018	Recreational Therapy Part-1
3/11/2018	Recreational Therapy Part-2
17/11/2018	Gait Part-1
1/12/2018	Gait Part-2
15/12/2018	Reflexes Part-1
29/12/2018	Reflexes Part-2
5/1/2019	Peripheral venous/ Arterial disease Part-1
19/1/2019	Peripheral venous/ Arterial disease Part-2
2/2/2019	Lever system and its application in PT Part-1
16/2/2019	Lever system and its application in PT Part-2
2/3/2019	Posture Part-1
16/3/2019	Posture Part-2
30/3/2019	Anterior cruciate ligament Part-1
6/4/2019	Anterior cruciate ligament Part-1Part-2
20/4/2019	Aging Part-1
4/5/2019	Aging Part-1

Academic celebration week – May 3rd week

RAJIV GANDHI UNIVERSITY OF HEALTH SCIENCES
SPORTS CALENDER 2018-19

EVENT	Organizing team	Dates	Zone
Kabbadi(Men)	Kempegowda Institute of medical Sciences, Bangalore	September 1st to 2nd	Bangalore Zone
Table Tennis (Men & Women)	Dr.B.R.Ambedkar Medical college , Bangalore	September 8th and 9th	Bangalore Zone
Volley Ball (Men & Women)	Dayanandsagar college of Dental sciences , Bangalore	September 20th and 21st	Bangalore Zone
Kabbadi (Men)	Hassan Institute of Medical Sciences, Hassan	September 6th and 7th	Mysore Zone
Table Tennis (Men & Women)	Fr. Muller's Medical college , Mangalore	September 20th and 21st	Mysore Zone
Volley ball (Men & Women)	A J Institute of Medical sciences, Mangalore	September 29th and 30th	Mysore Zone
Throw ball (Men & Women)	Fr. Muller's Medical college ,Mangalore	October 10th & 11th	Mysore Zone
Tennikoit (Men & Women)	Fr. Muller's Medical college ,Mangalore	October 10th & 11th	Mysore Zone
Basket ball (Men)	J J M Medical college, Davangere	October 10th to 12th	InterZonal Selection
Badminton Men	SDM college of Dental Sciences,Dharwad	October 23rd to 25th	InterZonal Selection
Cricket (MEN)	Mandya Institute of Medical Sciences, Mandya	November 14th to 17th	InterZonal Selection
Football (Men)	Mandya Institute of Medical Sciences, Mandya	November 28th to 30th	InterZonal Selection
Athletic (Men & Women)	Alvas E F, MOODBODRI,	November 2nd week	InterZonal Selection
Kho Kho (Men & Women)	BNM Rural ayurvedic college, Bijapur	November 8th & 9th	InterZonal Selection
Ball Badminton (men & Women)	CODS Davanagere	November 2nd & 3rd	InterZonal Selection

Ball Badminton (men & Women)	CODS Davanagere	November 2nd & 3rd	InterZonal Selection
Wrestling	TMAES, Badravathi	December 3rd & 4th	InterZonal Selection
Throwball & Tennikoit (Men & Women)	SDMCDS, Darwad	January 18th to 20th 2019	InterZonal Selection

Sports week	JSS COLLEGE OF PHYSIOTHERAPY	January 2019	
Table Tennis (men & Women	JSSCPT	February 2019	Monthly
Chess (Men % Women)	JSSCPT	March 2019	Monthly
Cricket (men)	JSSCPT	April 2019	Monthly

NSS Calendar

Month	Activities
October 2018	Enrolment of new members BPT & MPT
November 2018	Meet with college principal and staff to assign the theme of regular camp and place for special camp
November 2018	Regular Camp-I
January 2019	Regular camp-II
February 2019	Special camp –one week

Physiotherapy in Neurology

IV BPT

Physiotherapy in Neurology

Scheme of curriculum delivery

Lesson Plan 2018-19

Faculty

Mr. Sandeep

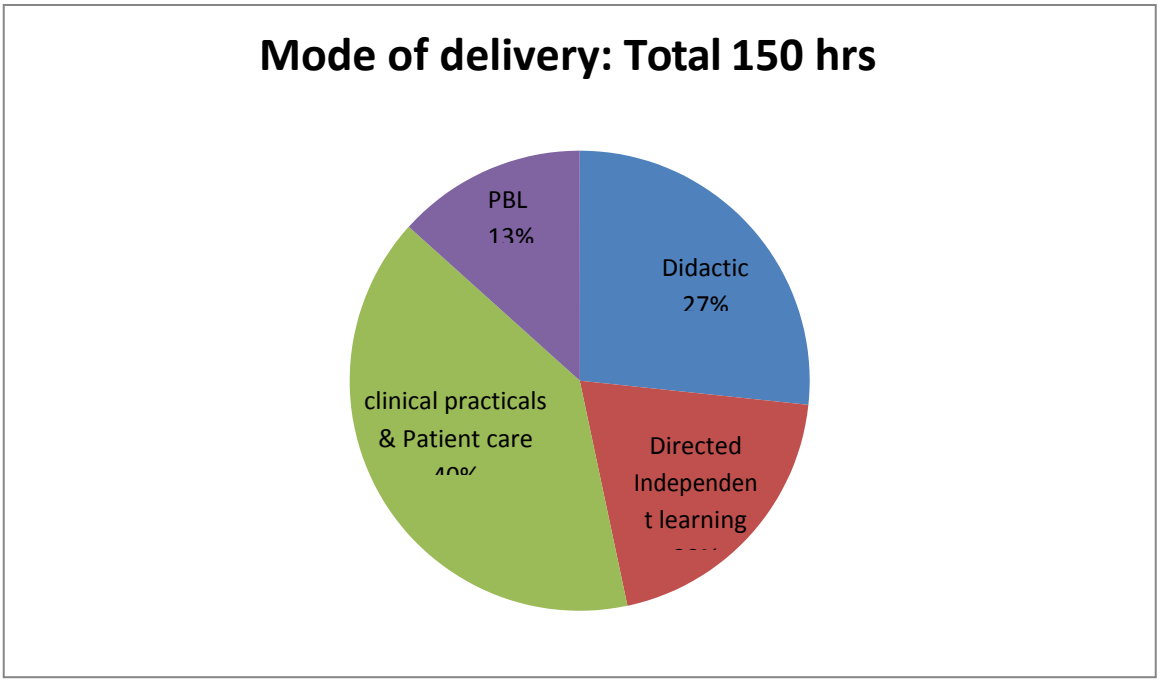
Mr.Mansoor

Mrs.Sharvani

Mr.Asif

Venue: IV year classroom

NEURO-PHYSIOTHERAPY



1. Didactic: Written exams, quiz , IA exams
2. Directed independent learning: Assignments
3. Practical and patient care : Practical exam, Practical manual completion , SCALB completion, case presentations
4. PBL: seminars , case scenario

Subject Description

The subject serves to integrate the knowledge gained by the students in neurology and neurosurgery with skills to apply these in clinical situations of dysfunction and neurological pathology.

Objectives of the subject

At the end of 4th year BPT the students will be able to incorporate knowledge gained in basic sciences in conjunction with foundation courses to-

- Integrate the knowledge gained in neurology and neurosurgery with skills to apply these in clinical situations of dysfunction and neurological pathology.
- Able to identify disabilities due to neurological dysfunction, plan and set treatment goals and apply the skills gained in exercise therapy and electrotherapy in these clinical situations to restore neurological function.

PRESCRIBED SYLLABUS BY RGUHS

1. **Neurological Assessment** . [10 hours]

Subjective :
Chief complaints,
History taking – Present, Past, medical, familial, personal histories

Objective:
Observation,
Palpation,
Higher mental function – Consciousness, Orientation, Wakefulness, memory, Speech, Reading, Language, Writing, Calculations,
Perception, Left right confusion,
Reasoning, and Judgment
Examination:
Motor Examination – Muscle power, Muscle tone, Spasticity, Flaccidity,Reflexes –Developmental reflexes, deep tendon reflexes, Superficial reflexes,
Sensory examination –Superficial, Deep and Cortical sensations,
Special tests – Romberg's sign
Kernig's sign
Brudenzkisign
Tinels's sign
Slum test
Lehermitte's sign
Bells Phenomenon
Gower's sign
Sunset sign
Battle's sign
Glabellar tap sign
Balance examination
Coordination examination
Gait analysis –
Spatio temporal parameters;Kinetics& Kinematics (Quantitative & Qualitative analysis)
Functional evaluation and movement analysis

Assessment tools & Scales
Modified Ashworth scale
Berg balance scale
FIM
Barthel index

Glasgow coma scale
Mini mental state examination
Rancho Los Amigos Scale for Head injury
APGAR score
ASIA scale
Reflex Grading

2. **Neuro physiological Techniques (Concepts, Principles, Techniques, Effects)** [14 hours]

i. NDT
ii. PNF
iii. Vojta therapy
iv. Rood's Sensory motor Approach,
v. Sensory Integration Approach
vi. Brunnstorm movement therapy
vii. Motor relearning program
viii. Contemporary task oriented approach
ix. Muscle re-education approach
x. Constraint induced movement therapy.

3. **Paediatric Neurology** . [14 hours]

1. Paediatric Examination-
   Developmental milestones
   Developmental reflexes
   Neuro developmental screening tests
2. Evaluation- History
   Observation
   Palpation
   Milestone Examination
   Developmental reflex Examination
   Higher mental function
   Cranial nerve examination
   Motor & Sensory examination
   Reflex testing
   Differential Diagnosis
   Balance & Coordination examination
   Gait analysis
   Functional analysis
   List of Problems & Complications
   Short & Long Term goals
3. Management ofsystemic complications

4. Management of Mechanical Complications
5. Use of variousNeurophysiological approaches & Modalities in
   Risk babies
   Minimum brain damage
   Developmental disorders
   Cerebral palsy
   Autism
   Down's Syndrome,
   Hydrocephalus
   Chorea
   Spina bifida
   syringomyelia

4. Evaluation and Management of Brain and Spinal Cord Disorders : [10 hours]

1. Assessment - History, Observation,Palpation, Higher mental function, Cranial nerve examination, Motor & Sensory examination,Reflex testing, differential Diagnosis, Balance & Coordination examination, Gait analysis,Functional analysis, List of Problems & Complications, short& Long Term goals
2. Management of systemic complications, Management of Mechanical Complications, Use ofvarious Neurophysiological approaches& Modalities in
   Cerebrovascular Accident,
   Meningitis,
   Encephalitis,
   Head Injury,
   Brain Tumours,
   Perceptual disorders,
   Amyotrophic lateral sclerosis,
   Multiple sclerosis.

5. Evaluation and Management of Cerebellar, Spinal Cord and Muscle Disorders : [10hours]

1. History Observation, Palpation, Motor & Sensory examination, Reflex testing, differential Diagnosis, Balance & Coordination examination, Gait analysis, Functional analysis, List of Problems &Complications, short & Long Term goals
2. Management of systemic complications, Management of Mechanical Complications, Use of various Neurophysiological approaches Modalities in Ataxia,Sensory Ataxia,Parkinson's disease,Muscular dystrophy (DMD),Myasthenia Gravis,Eaton-Lambert Syndrome,Spinaltumors,Spinal cord injury,Transversemyelitis,Bladder&BowelDysfunction,Spinal muscular atrophies,Poliomyelitis& Post-PolioSyndrome.

6. Evaluation and Management of Peripheral Nerve Injuries and Disorders: [10 hours]

1. History,Observation, Palpation, Motor & Sensory examination, Reflex testing, differential Diagnosis,Balance& Coordination examination, Gait analysis, Functional analysis, List of Problems &Complications, short & Long Term goals,
2. Management of system complications,Management of Mechanical Complications, Use of variousNeurophysiologicalapproaches&Modalities in
   - Hereditary motor sensoryneuropathy
   - Guillain-Barre syndrome
   - Brachial plexus palsy
   - Thoracic outlet syndrome
   - Lumbosacral plexus lesions
   - Phrenic &intercostalnerve lesions
   - Median nerve palsy
   - Ulnar nerve palsy
   - Radial nerve palsy
   - Musculocutaneous nerve palsy
   - Anterior & Posterior interosseous nerve palsy
   - Axillary nerve palsy
   - Long thoracicnerve palsy
   - Suprascapular nerve palsy
   - sciatic nerve palsy
   - Tibial nerve palsy
   - Common peroneal nerve palsy
   - Femoral nerve palsy
   - Obturator nerve palsy
   - Pudental nerve palsy

7. Assessment and management of Neurological gaits: [10 hours]

1. Quantitative and Qualitative(Kinetic &Kinematics) analysis,List of Problems, short & Long Term goals
2. Management of followingNeurological Gaits –
   - Hemiplegic gait
   - Parkinson gait
   - High step gait
   - Hyperkinetic gait
   - Hypokinetic gait
   - Waddling gait
   - Scissoring gait
   - Spastic gait
   - Choreaform Gait

DiplegicGait
Myopathic Gait

8. Pre and Post surgical assessment and treatment [9 hours]

Spinal dischernіation
Spinal stenosis
Spinal cord trauma
Head trauma
Brain tumours
Tumours of the spine
Spinalcord and peripheral nerves
Cerebral aneurysms
Subarachnoid haemorrhages
Epilepsy
Parkinson's disease
Chorea
Hemiballism
Psychiatric disorders
Malformations of the nervous system
Carotid artery stenosis
Arteriovenous malformations
Spina bifida

9. Applied Yoga in Neurological conditions [3 Hours]

Reference Books

Reference Books

	Title of Book	Author	Edition
1	Traumatic brain injury rehabilitation	MarkJAshley,David K Krych	
2	Treatment of cerebral palsy and motor delay	Sophie Levitt	3rd edition
3	Occupational Therapy for physical dysfunction	Catherine A Trombly	4th edition
4	Clinics in physical therapy, Gait in rehabilitation	Gary L Smidt	_
5	Physical therapy of cerebral palsy	Freeman Miller	_
6	Neurological Rehabilitation	Darcy A Umphred	5th edition
7	Yoga and rehabilitation	Nilima Patel	
8	Occupational therapy for children	Jane Case Smith	5th edition
9	Neurological physiotherapy	Susan Edwards	2nd edition
. 10	Neurological Rehabilitation	Janet Carr, R Shepherd	_
. 11	Hand recovery after stroke	Johannes GSmits	_
. 12	Physical rehabilitation	Susan B O'Sullivan,Thomas J	5th edition
. 13	Pediatric physical therapy	Jans S Tecklin	4th edition
. 14	Motor control	Anne Shumway-Cook, Marjorie H Woollacott -	4th edition
. 15	Physical Rehabilitation ,Evidence based Examination ,Evaluation and Intervention	Michelle H Cameron,LindaG.Monroe	_
. 16	Physical Medicine Rehabilitation	Randall L Braddom	3rd edition
. 17	Neurological Physiotherapy	Maria Stokes	_
. 18	Tetraplegia and Paraplegia	Ida Bromley	6th edition
. 19	Dejongs Neurologic Examination	William Campbell	7th edition
. 20	Textbook of Human Neuroanatomy	Inderbir Singh	8th edition
. 21	Functional Neuro Rehabilitation	Dolores	
. 22	ABC of Spinal Cord Injry		
. 23	Hand book of practical Neuro physiotherapy	P.K.Mitra	
. 24	Neurological Physiotherapy	Susan Edwards	2nd edition
. 25	Early diagnosis and therapy in CP	Alfred schere Ingrid Tscharruter	2nd edition
. 26	Vestibular Rehabilitation	Susan T Herdman	3rd edition
. 27	Perceptual – Motor behavior In Downs Syndrome	Danid J Weeks Romeo Chua Digbu Elliott	
. 28	Sensory Integration Theory and Practice	Anita C Bundy Shelly J Lane Elizabeth A Murray	2nd edition
. 29	PNF in practice	Susan S Adler Dominic BeckersMath Buck	2nd edition
. 30	Stroke a Clinical approach	Lovism R Caplan	
. 31	Right in the Middle-Treatment of adults hemilegia	Patricia M Davies	
. 32	Starting again – Early rehabilitation after TBI	Patricia M Davies	
. 33	Steps to follow	Patricia M Davies	

Modules

Module I :Neuro Anatomy and Physiology

Module II : Neuro-Physiotherapy Evaluation

Module III : Paediatric Physiotherapy Evaluation

Module IV : Neurophysiologic techniques

Module V : Symptomatic physiotherapy management

Module VI : Paediatric Conditions

Module VII : Congenital and acquired Brain Disorders

Module VIII : Cerebellar Disorders

Module IX : Congenital and acquired Spinal cord Disorders

Module X : Peripheral nerve injuries and disorders

Module XI : Muscle and Neuromuscular junction Disorders

Module XII : Applied yoga in Neurological conditions

Module I: Neuro Anatomy and Physiology

Objectives **On completion of this module the student should be able to:**

1. Demonstrate a systematic and coherent knowledge of the anatomical and physiological functioning of the central nervous system , and critically appraise the implications of any alteration in the normal control points with respect to pathology.
2. Discuss and analyses structure-function relationships of the central nervous system.
3. Describe the mechanism of voluntary movements, recognize the important centers involved and explain the effects of their lesions.

Module I	**Lesson name**	**Learning objective** ***At the end of the unit the student will be able to:***	**Type of instruction**	**Prescribed book with page numbers**	**Assessment**	**Items that the student must have with them in class**	**Supplementary material**	**References** **Photocopy** **Print** **E book** **Web resources**
Unit 1 lect-1	Neural system development	Describe formation of spinal cord, brain; grey and white matter from the neural tube. How the nervous system is modeled .Understand the developmental basis of certain congenital anomalies of the nervous system	PG seminars	Text book of Human neuroanatomy -p.no 23-31	MCQ	[redacted]	Video 1.1	Functional Neuro Rehab. Dolores P.No 42-48, 55-84
Unit 2 lect-1	Meninges and Cerebral cortex	Be able to list layers of meninges, areas, lobes, its connections. functions and clinical significance	PG seminars	Text book of Human neuroanatomy -p.no 170-180			Video 1.2,1.3,1.6	[redacted]
Unit 3 lect-1	Blood supply-arterial,venous and lymphatic system,ventricles,CSF	Describe the vascular supply to CNS-with its significance	PG seminars	Text book of Human neuroanatomy -p.no 248-258			Video 1.4,1.5	

Module I	Lesson name	Learning objective *At the end of the unit the student will be able to:*	Type of instruction	Prescribed book with page numbers	Assessment	Items that the student must have with them in class	Supplementary material	References Photocopy Print E book Web resources
Unit 5 lect-1	Clinical anatomy of cerebellum	List out the subdivisions and micro anatomy ,function, of Cerebellum	PG seminars	Text book of Human neuroanatomy -p.no 137-149			Video 1.8	
Unit 6 lect-1	Clinical anatomy Brainstem	List the structures ,function and clinical significance of Brainstem	PG seminars	Text book of Human neuroanatomy -p.no 77-95				
Unit 7 lect-1	Clinical anatomy Basal ganglia	List the structures ,function and clinical significance of Basal ganglia	PG seminar	Text book of Human neuroanatomy -p.no 190-195				
Unit 8 lect-1	Clinical anatomy cranial nerves1-6	List the cranial nerves, their origin and intracranial course, functions and clinical significance	PG seminar	Text book of Human neuroanatomy -p.no 111-130			Video 1.7	
Unit 9 lect-1	Clinical anatomy cranial nerves7-12	List the cranial nerves, origin and intracranial course, functions and clinical significance	PG seminar	Text book of Human neuroanatomy -p.no 111-130			Video 1.7	

Module I	Lesson name	Learning objective *At the end of the unit the student will be able to:*	Type of instruction	Prescribed book with page numbers		Items that the student must have with them in class	Supplementary material	References Photocopy Print E book Web resources
Unit 10 **lect-1**	Clinical anatomy of sympathetic and parasympathetic system	List the structures that form the sympathetic and parasympathetic systems, and their functional significance	PG seminar	Text book of Human neuroanatomy -p.no 234-247				
Unit 11 **lect-1**	Clinical anatomy peripheral nervous system and Neurochemical transmission	List the various peripheral nerves ,course, supply and physiology of nerve impulse transmission and clinical significance	PG seminar	Text book of Human neuroanatomy -p.no 2-12			Video 1.7	

Module I:Neuro Anatomy and Physiology

ASSIGNMENT LIST

1. Neat, coloured and labelled diagrams of cerebral hemisphere, cerebellum, basal ganglia, brain stem and connections, spinal cord and tracts ,vascular supply of brain and spinal cord.

SAMPLE QUESTIONS

1. Describe formation of spinal cord, brain; grey and white matter from the neural tube.
2. Describe functional areas of brain.
3. Describe the vascular supply to CNS-with its significance
4. Describe various ascending and descending tracts of Spinal cord.
5. Describe the structures, function and clinical significance of Basal ganglia

Module II : Neuro-Physiotherapy Evaluation

Objective : at the end of the module student should be able to

Knowledge : Understand the procedure of Neurological examination in Physiotherapy perceptive, normal and abnormal test results, can list the equipments required for the particular examination/ evaluation
Cognitive: Can document the questions to be asked for history, assessment, Differential diagnosis
Psychomotor : can demonstrate the Evaluation on model and apply the same on patient, which guides him to proper Physiotherapy goal setting and treatment plan

Module II	**Lesson name**	**Learning objective** ***At the end of the unit the student will be able to:***	**Type of instruction**	**Prescribed book with page numbers**	**Assessment**	**Items that the student must have with them in class**	**Supplementary material**	**References** **Photocopy** **Print** **E book** **Web resources**
Unit 1 **Lect - 2**	Required materials for examination, Subjective examination Chief complaints, History taking – Present, Past, medical, familial, personal histories	List the materials required for general neuro physiotherapy assessment, list the problem list from given scenarios, Lists the questions to be asked for a detailed history of patients.	Didactic	Dejong –section B Chapter 3	MCQ'S			Hand book of Practical Neuro Physiotherapy P K Mitr P.No 27-71
Unit 2 **Lect - 2**	ICU observations	Demonstrate examination of vitals i.e pulse, temperature, RR, HR, BP. List the abnormal vitals from ICU monitor print outs	Didactic/videos	Dejongs-Chapter 4,5	MCQ'S, Video interpretation	Stethoscope B.P Apparatus	ICU Monitor videos	Susan B O'Sullivan- P:81-116,

Module II	**Lesson name**	**Learning objective** ***At the end of the unit the student will be able to:***	**Type of instruction**	**Prescribed book with page numbers**	**Assessment**	**Items that the student must have with them in class**	**Supplementary material**	**References** **Photocopy** **Print** **E book** **Web resources**
Unit 3 **Lect - 2**	Objective examination Posture, Gait, External appliances,Speech and behavior manner, Attitude of limbs in case of paralysis &consciousness. Wasting, contractures, deformities, Oedema	List deviations from normal posture, attitude, behavior and deformities Demonstrate measurement of joint deformities, girth and length of limbs	Didactic /video	Dejongs-chapter 5	MCQ'S	Gait belt, video camera	Video 2.7	Susan B O'Sullivan-P:159-187
Unit 4 **Lect - 2**	Higher mental function – Consciousness ,GCS, GCS outcome scale, Orientation, Wakefulness, memory, MMSE	List out the questions needed for the evaluation of memory and describe interpretation Perform MMSE appropriately and accurately Perform GCS accurately and interpret accurately from videos	Didactic	Dejongs-Chapter 6,7,8,9,10	MCQ'S	GCS and MMSE	Video 2.1 C.D Tool 2	

Module II	**Lesson name**	**Learning objective** ***At the end of the unit the student will be able to:***	**Type of instruction**	**Prescribed book with page numbers**	**Assessment**	**Items that the student must have with them in class**	**Supplementary material**	**References** **Photocopy** **Print** **E book** **Web resources**
Unit 5 **Lect - 2**	Examination - Speech, Reading ,Language, Writing Calculations, Reasoning, and Judgment Perception	List the problems and differentiate the problems in speech, reading, language, writing, calculations, and perception. Demonstrate the evaluation procedure	Didactic	Dejongs-Chapter 6,7,8,9,10	MCQ'S	Copy of chart with different size letters-snellen chart		Randall L BraddomP:49 -60
Unit 6 **Lect 2**	Cranial nerve examination 1-6	Able to demonstrate the examination of cranial nerves Interpret examination of cranial nerves from videos and localize the lesion	Didactic/ practical's	Dejongs-Chapter 11 to 21	Demonstration	Cranial nerve examination kit	Video 2.2	Susan B O'Sullivan – P: 150-152
Unit 7 **Lect 2**	Cranial nerve examination7-12 Bells Phenomenon		Didactic/practical's	Dejongs-Chapter 11 to 21	Demonstration	Cranial nerve examination kit	Video 2.2	Susan B O'Sullivan – P:150-152

Module II	**Lesson name**	**Learning objective** ***At the end of the unit the student will be able to:***	**Type of instruction**	**Prescribed book with page numbers**	**Assessment**	**Items that the student must have with them in class**	**Supplementary material**	**References** **Photocopy** **Print** **E book** **Web resources**
Unit 8 **Lect 2**	Motor Examination – Muscle power, muscle girth, Muscle tone- Spasticity, MAS, Tardieu,Flaccidity, rigidity.	Demonstrate the procedure for Muscle power, Muscle tone evaluation Interpret from videos the types of muscle tone and grade on MAS/ Tardieu	Didactic/ practical's	Dejongs-section E	Demonstration	Inch tape Goniometer, T shirt and shorts, Serial No.7,15	Video 2.4 C.D Tool 3,7	Randall L Braddom - P:17-33
Unit 9 **Lect 2**	VCG, synergy, Myotomes, Muscle strength,ROM	List the myotomes. Various types of synergies. Demonstrate theevaluation procedure for VCG ,Demonstrate normal ROM Inter[ret from videos VCG and synergies	Didactic /practical's	Susan B O'SullivanP:227-259	Demonstration	Myotomechart,Goniometer, Inclinometer	Video 2.9	Randall L Braddom- P:17-33
Unit 10 **Lect 2**	Motor function- motor control, Motor learning	List the components in evaluation of motor functions. Demonstrate the examination process Interpret the deficits of motor function from videos	Didactic /practical's	Susan B O'Sullivan P:227-259	MCQ'S			Randall L Braddom- P:17-33 Maria Stokes - P:23-36

Module II	**Lesson name**	**Learning objective** ***At the end of the unit the student will be able to:***	**Type of instruction**	**Prescribed book with page numbers**	**Assessment**	**Items that the student must have with them in class**	**Supplementary material**	**References** **Photocopy** **Print** **E book** **Web resources**
Unit 11 **Lect 2**	Reflexes - Deep tendon reflexes, Superficial reflexes,reflex grading	Demonstrate the procedure of reflex examination. Interpret from videos	Didactic /practical's	Dejongs-section G	Demonstration	Knee hammer	Video 2.4	Susan B O'SullivanP:237-239
Unit 12 Lect 2	Sensory examination – Superficial, Deep ,ASIA	Demonstrate the sensory examination procedure.	Didactic /practical's	Dejongs-section-F	Demonstration	Dermatome chart,cotton, blunt pin, tuning fork, brush, Vernier caliper	CD- Video 2.3	Susan B O'Sullivan-P:121-153 Randall L Braddom–P:14-16
Unit 13 Lect 2	Cortical sensations	Demonstrate the cortical sensory examination procedure	Didactic /practical's	Dejongs-section-F	Demonstration	Cotton, blunt pin		Susan B O'Sullivan-P:121-153 Randall L Braddom – P:14-16
Unit 14 Lect 2	Balance examination, BBS	Articulate the differences in static and dynamic balance and able to perform BBS Interpret BBS from videos	Didactic /practical's	Michelle H Cameron -P: 311-321	Demonstration	BBS chart	CD-Video2.6 CD Tool 8	Janet Carr, Roberta Shepherd-P:154-176

Module II	**Lesson name**	**Learning objective** ***At the end of the unit the student will be able to:***	**Type of instruction**	**Prescribed book with page numbers**	**Assessment**	**Items that the student must have with them in class**	**Supplementary material**	**References** **Photocopy** **Print** **E book** **Web resources**
Unit 15 **Lect 2**	Coordination examination	Able to demonstrate the coordination examination in equilibrium and non-equilibrium positions Interpret from videos alterations in coordination	Didactic /practical's	Dejongs-section H Chapter 43	Demonstration	Chalk piece	CD Video 2.5	Susan B O'Sullivan - P: 193-223
Unit 16 **Lect 2**	Functional analysis-FIM&FAM ,Barthel Index	Able to evaluate the functional activities from lying to walking Interpret from videos and rate FIM, FAM, MBI	Didactic /practical's	Susan B O'Sullivan –P: 373-397 Randall L Braddom-P;581-583	Demonstration	Serial NO 18 C.D Tool 4,5,11,12		

Module II : Neuro-Physiotherapy Evaluation

ASSIGNMENTS

1. Lists the questions to be asked for a detailed history of patients suspecting neurological involvement
2. List out the questions needed for the evaluation of memory and describe interpretation.

SAMPLE QUESTIONS

1. List deviations from normal posture, attitude, behaviour and deformities
2. Describe various scales used in Neurological assessment.
3. List out Myotomes and dermatomes along with labelled diagram.
4. Describe balance and coordination examination.
5. List out various scales used in Function analysis. Describe any two.

MODULE III : Paediatric Physiotherapy Evaluation

Objective : at the end of the module student should be able to

Knowledge : Understand the procedure of examination/ Evaluation in Paediatric conditions, Physiotherapy perceptive, normal and abnormal test results, can list the equipments required for the particular examination/ evaluation.
Cognitive: can explain the normal and abnormal posture, tone, gait and cry of Paediatric condition.can be able to discuss the Differential diagnosis.
Psychomotor : can demonstrate the Evaluation on model and apply the same on patient, which guides him to proper Physiotherapy goal setting and treatment plan

MOD III	Lesson name	Learning objective *At the end of the unit the student will be able to:*	Type of instruction	Prescribed book with page numbers	Assessment	Items that the student must have with them in class	Supplementary material	References Photocopy Print E book Web resources
Unit 1 Lect 2	Observation of behavior, movements ,gait ,posture, Vitals,APGAR Score	List normal and abnormal behavior, posture and gait. Able to demonstrate vitals assessment in typical children	Didactic/videos	Pediatric physical therapy p.no 67-94	MCQ'S	Stethoscope,apgargrading sheet, video camera	C.D Tool 1	**Functional Neuro Rehab- Dolores P No – 90-133**
Unit 2 Lect 2	Developmental reflexes	Able to list different developmental reflexes and age of integration, demonstrate the reflex examination procedure on a doll,	Didactic/videos	Pediatric physical therapy p.no 67-94	MCQ'S	Developmental chart	Video 3.1	**Susan K Effgen Meeting Physical Therapy Needs of Children, David plus, 66 - 75**

MOD III	Lesson name	Learning objective *At the end of the unit the student will be able to:*	Type of instruction	Prescribed book with page numbers	Assessment	Items that the student must have with them in class	Supplementary material	References Photocopy Print E book Web resources
Unit 3 Lect 2	Higher mental functions - Children Coma Scale. Cranial nerve evaluation	demonstrate the evaluation of Children Coma Scale. interpretation of children from videos Able to demonstrate the cranial nerve examination in typical childrenInterpret from videos cranial nerve involvement	Didactic/videos	Printout	MCQ'S	Cranial evaluation kit		
Unit 4 Lect 2	Muscle tone-MMT, GMFCS, GMFM	Able to demonstrate the assessment procedure of muscle tone. Power and grade by using scales in typical children, list the levels of CP on GMFCS, MACS, CFCS	Didactic/videos	Pediatric physical therapy p.no 184-195	MCQ'S	MMT chart, GMFCS chart, GMFM.	C.D Tool 13	
Unit 5 Lect 2	Sensory Evaluation	Able to demonstrate the sensory examination procedure in typical children	Didactic/videos	Pediatric physical therapy p.no 184-195	MCQ'S	Sensory evaluation chart		

MOD III	Lesson name	Learning objective *At the end of the unit the student will be able to:*	Type of instruction	Prescribed book with page numbers	Assessment	Items that the student must have with them in class	Supplementary material	References Photocopy Print E book Web resources
Unit 6 **Lect 2**	Balance – Pediatric Balance Scale.	Able to demonstrate the evaluation procedure for balance in typical children.		Printouts	MCQ'S VIDEO'S Interpretation	Pediatric Balance Scale		
Unit 7 **Lect 2**	Gait – EVGS	Able to listthe common gait deviations and demonstrate the gait evaluation procedures in typical children including markers, camera placement and recording.Able to interpret EVGS from videos	Didactic/videos	Pediatric physical therapy p.no 184-195	MCQ'S	**Gait chart includes different patterns of gait**	**Videos**	

MODULE III : Paediatric Physiotherapy Evaluation

ASSIGNMENTS

1. List out the various developmental milestones prepare a chart model showing developmental milestones
2. Draw dermatome and myotome chart with clear colour differentiation

SAMPLE QUESTIONS

1. Describe various abnormal type of gait observed in Paediatric patients.
2. Explain various types of developmental reflexes and their significance.
3. Explain Paediatric GCS
4. Enumerate the various assessment tools used in paediatric assessment.
5. Describe paediatric gait evaluation. Add a note on EVGS.

Module IV : Neuro physiological techniques

Objective : at the end of the module student should be able to

Knowledge : summarize the principles and concepts of the Neuro Physiological techniques.
Cognitive: discuss the application of appropriate techniques in various neurological conditions with it effects and modifications
Psychomotor : can demonstrate the particular technique on typical person/ Model and apply the same in Patient with neurological condition

Module IV	**Lesson name**	**Learning objective** ***At the end of the unit the student will be able to:***	**Type of instruction**	**Prescribed book with page numbers**	**Assessment**	**Items that the student must have with them in class**	**Supplementary material**	**References** **Photocopy** **Print** **E book** **Web resources**
Unit 1 **Lect 1**	PNF	Able to list out the principles and concepts of the technique. Able to demonstrate the particular technique on typical person. Able to list the clinical application of techniques in various treatments	Didactic /practical's	Jane Case Smith –P: 474-498	MCQ'S,Demonstration	Loose t shirt and shorts		**Functional Neuro Rehab-Dolores 180-181; PNF in Practice**
Unit 2 **Lect 1**	NDT		Didactic /practical's	Jane Case Smith –P: 446-462	MCQ'S, Demonstration			**Functional Neuro Rehab-Dolores 182-189**
Unit 3 **Lect 1**	Roods sensory and motor approach		Didactic /practical's	Jane Case Smith –P: 437-445	MCQ'S Demonstration			

Module IV	Lesson name		Type of instruction	Prescribed book with page numbers	Assessment	Items that the student must have with them in class	Supplementary material	References Photocopy Print E book Web resources
Unit 4 Lect 1	Motor relearning program		Didactic /practical's	Jane Case Smith –P: 501-509	MCQ'S Demonstration			Maria Stokes -P:280-281 **Functional Neuro Rehab- Dolores**
Unit 5 Lect 1	Contemporary Task oriented approach		Didactic /practical's	Jane Case Smith –P: 510-528	MCQ'S			**Functional Neuro Rehab- Dolores 192-209**
Unit 6 Lect 1	Sensory integration therapy		Didactic /practical's	Jane Case Smith – P:356-404	MCQ' Demonstration			**Functional Neuro Rehab- Dolores 190-192: SI Theory and Practice**
Unit 7 Lect 1	Vojta therapy		Didactic /practical's	Printout	MCQ'S Demonstration			http://posmodev.pagesperso-orange.fr/vojcongb.html

Module IV	**Lesson name**		**Type of instruction**	**Prescribed book with page numbers**	**Assessment**	**Items that the student must have with them in class**	**Supplementary material**	**References Photocopy Print E book Web resources**
Unit 8 Lect 1	Muscle re-education		Didactic /practical's	Printout	MCQ'S Demonstration			
Unit 9 Lect 1	Constraint induced therapy		Didactic /practical's	Darcy A Umphred-P-249-251	MCQ'S Demonstration			
Unit 10 Lect 1	Brunnstorm movement therapy		Didactic /practical's	Jane Case Smith –P: 463-473	MCQ'S Demonstration			**Functional Neuro Rehab-Dolores 189-90**
Unit 11 Lect 1	Applied Yoga in neurological conditions		Didactic	Nilima Patel-P:183-202	MCQ'S			
Unit 12 Lect 1	Recent advances-Virtualtherapy, motor imagery, mirror therapy, mime therapy, robotictherapy, Cranio-sacral therapy, FES		Didactic /practical's	Printout	MCQ'S			

Module IV : Neuro physiological techniques

1. Tabulate all PNF patterns for upper and lower limb. Draw respective PNF patterns
2. Write various muscle re-education approaches according to MMT grading 0 to 5

SAMPLE QUESTIONS

1. ist out various Neurophysiological approaches and explain any two.
2. Describe the principles and treatment techniques of NDT approach.
3. Explain Motor relearning program.
4. Describe the principles, techniques and patterns of PNF.
5. Explain the recovery stages of Brunnstrom approach

Module V : Symptomatic physiotherapy management

Objective : *At the end of the modulet the student will be able to*

Knowledge : Understand the normal and abnormal neurological condition, Signs and symptoms, Differential diagnosis
Cognition : discuss the goal setting, treatment plan by using neuro physiological techniques, modalities etc.
Psychomotor : demonstrate the treatment techniques in particular neurological symptom by application of knowledge in anatomy and neurophysiologic techniques

Module V	**Lesson name**	**Learning objective** ***At the end of the unit the student will be able to:***	**Type of instruction**	**Prescribed book with page numbers**	**Assessment**	**Items that the student must have with them in class**	**Supplementary material**	**References** **Photocopy** **Print** **E book** **Web resources**
Unit 1 **Lect 1**	Coma stimulation	Able to list the indications, and principles of coma stimulations. demonstrate the various techniques of coma stimulation on typical individual	Didactic/ practical's	Printout	MCQ'S			
Unit 2 **Lect 1**	Spasticity ,rigidity and Flaccidity	Able to differentiate tone on videos List the methods of management. Able to list and demonstrate of typical person the various facilitation techniques for flaccidity management.	Didactic/ practical's	Susan B O'Sullivan- P:496-497	MCQ'S and Demonstration			Randall L Braddom- P:651-662
Unit 3 **Lect 1**	Muscle weakness	Able to demonstrate techniques of strengthening based on dysfunction	Didactic/ practical's	Susan B O'Sullivan – P:492-494	MCQ'S and Demonstration			Randall L Braddom- P:651-662

Module V	Lesson name	Learning objective *At the end of the unit the student will be able to:*	Type of instruction	Prescribed book with page numbers	Assessment	Items that the student must have with them in class	Supplementary material	References Photocopy Print E book Web resources
Unit 4 **Lect 1**	Co-ordination and Balance	Able to list the components of coordination and balance Identify on videos the system at fault demonstrate the exercise program based on specific dysfunctions as identified on the videos Management	Didactic/ practical's	Susan B O'Sullivan - P:193 Michelle H Cameron - p:321-328	MCQ'S and Demonstration			
Unit 5 **Lect 1**	Posture	List postural deviations due to neurological reasons. Demonstrate corrective exercise program	Didactic/ practical	Susan B O'Sullivan- P:498-501	MCQ'S and Demonstration			
Unit 6 **Lect 1**	Gait training	List various neurological gait abnormalities. Identify gait deviations from videos Demonstrate the gait training for deviations identified on videos	Didactic/ practical	Susan B O'Sullivan– P:504-505,523-557	MCQ'S and Demonstration			Michelle H Cameron - P: 862-869
Unit 7 **Lect 1**	Vestibular training	List and differentiate various vestibular disorders. Demonstrate vestibular rehabilitation program: Epley'smaneuver, habituation exercises.	Didactic /practical	Michelle H Cameron - P: 324-327	MCQ'S and Demonstration			

Module V	Lesson name	Learning objective *At the end of the unit the student will be able to:*	Type of instruction	Prescribed book with page numbers	Assessment	Items that the student must have with them in class	Supplementary material	References Photocopy Print E book Web resources
Unit 8 Lect 1	Transfers and Wheel chair training	Demonstrate transfer training from bed –chair/wheel chair – toilet – floor using transfer board, gait belt, pivot disc, 2 person transfers List the parts of a wheelchair including accessories and their purpose Measure for a custom wheelchair. Demonstrate wheel chair activity training including falling, wheelies	Didactic/ practical	Susan B O'Sullivan –P: P:965-973 Susan B O'Sullivan - P:974-978	MCQ'S and Demonstration	Transfer belt		
Unit 9 Lect 1	Hand function training	Demonstrate evaluation of Hand various training activities for hand rehabilitation including mirror therapy, CIMT, motor imagery	Didactic /practical's		MCQ'S and Demonstration			

Nice to Know References :

Functional Neuro Rehab, Dolores – P. No : 224 – 381

Hand book of Practical Neuro Physiotherapy – P.No : 78-98

Module V : Symptomatic physiotherapy management

ASSIGNMENTS

1. List the components in components in coma stimulation, list various methods of application
2. List all perceptual impairments and mention assessment procedure for each. List questions to be asked to patient for assessment

SAMPLE QUESTIONS

1. Explain the various techniques of Coma stimulation.
2. Describe Spasticity, its beneficial and harmful effects in detail.
3. Differentiate between Spasticity and Rigidity
4. Describe the various transfer techniques and explain with labelled diagram.
5. Describe the various treatment approaches used for upper limb rehabilitation.

Module VI : Paediatric Conditions

Objective : By the end of the Module student should be able to

Knowledge : List the common neurological conditions in Paediatric group, signs and symptoms, aetiology, assessment and interpretation, PT Management

Cognition : discuss the differential diagnosis of Paediatric conditions, Goal setting, Plan the PT Managment , use of appropriate outcome measures to evaluate the prognosis.

Psychomotor : Demonstrate the treatment techniques, Handling and positioning the baby, Counselling and care giver education. Documentation of assessment, treatment, follow-up and prognosis

Module VI	**Lesson name**	**Learning objective** ***At the end of the unit the student will be able to:***	**Type of instruction**	**Prescribed book with page numbers**	**Assessment**	**Items that the student must have with them in class**	**Supplementary material**	**References** **Photocopy** **Print** **E book** **Web resources**
Unit 1 **Lect 2**	High risk babies	List the common conditions and complications of newborn and the possible reasons, and the fetal period when the insult may have occur Demonstrate assessment of babies in NICU on doll	Didactic	Darcy A Umphred - P:303-349	MCQ'S			Jane Case Smith -P:758-76,771-791
Unit 2	Developmental disorders,Asperger Disorder Attention Deficit/Hyperactivity Disorder, (ADHD/ADD) Autistic Disorder Mental Retardation Tourette's Disorder,	List the clinical features and management of said developmental disorders List the physiotherapy goal for each under varying severity Goal set for given scenarios/ videos List out intervention methods	Didactic	Darcy A Umphred -- P:386-412,	MCQ'S			Maria Stokes- P:229-240

	Lesson name	Learning objective *At the end of the unit the student will be able to:*	Type of instruction	Prescribed book with page numbers	Assessment	Items that the student must have with them in class	Supplementary material	References Photocopy Print E book Web resources
Unit 3 **Lect 2**	Disorder of Written Expression Expressive Language Disorder Mathematics DisorderReading DisorderRett's DisorderStereotypic Movement Disorder Stuttering	List the clinical features and management of said developmental disorders List the physiotherapy goal for each under varying severity Goal set for given scenarios/ videos List out intervention methods	Didactic	Darcy A Umphred -- P:418-461	MCQ'S			
Unit 4 **Lect 2**	Cerebral palsy Definition Clinical features Pathophysiology Types	Define C.P. Able to list the clinical features and types of CP under all classification systems	Didactic	Michelle H Cameron-P: 367-371	MCQ'S			Randall L Braddom 1243-1266 Sophie Levitt – P:1-300 Freeman miller P:27-133,207-338,345-398 Darcy A Umphred - P:357-382 TecklinP:179-225

	Lesson name	Learning objective *At the end of the unit the student will be able to:*	Type of instruction	Prescribed book with page numbers	Assessment	Items that the student must have with them in class	Supplementary material	References Photocopy Print E book Web resources
Unit 5 **Lect 2**	CP - Evaluation Management	List out questions to be asked in history for different age groups Demonstrate ability to use SAROMM, muscle length testing, reflex maturation, GMFM, EVGS, FMS, Tardieu	Didactic	Michelle H Cameron-P:371-373	Case scenario			
Unit 6 **Lect 2**	CP - Management of complications Surgical management	List the common neuro and Orthopedic interventions and their indications List Management protocol following invasive intervention	Didactic	Michelle H Cameron-P: 383-397	Case Scenario			
Unit 7 **Lect 2**	Autism, downs syndrome, Clinical features Pathophysiology Management	Interpret videos and goal set and list intervention methods	Didactic	Susan Edwards-P:89-115	MCQ'S/Video Interpretation			Jans S Tecklin –P: P-365-383
Unit 8 **Lect 2**	Hydrocephalus, spina bifida types clinical features Sunset sign conservative management pre and post op	List dysfunctions that are of importance to physiotherapy, goals set on videos and list intervention methods	Didactic	Michelle H CameronP: 373-397 Darcy A Umphred –P:567-600	MCQ'S			Jans S Tecklin-P: 231-243 Maria StokesP-243-254

Nice to Know References :

Early diagnosis and therapy in Cerebral Palsy, Alfred Scherzer & Ingrid Tscharnuter

Perceptual and Motor Behaviour in Down Syndrome , Daniel J Weeks

Module VI : Paediatric Conditions

Assignment

1. 1 Year old male baby complaines of difficulty in using left Upper limb and unable to walk. History : Pre term baby.Veginal delivery. Delayed birt cry.IUGR. Birt weight 2Kg. Respiratory distress and ICU observation for 15 days. Head circumference of 40 CM.and neonatal history of jaundice
   - paediatric assessment
   - Required assessment scales
   - Exercises for functional training from sitting to standing/standing to walking.
   - Describe the techniques to improve left upper limb
   - Home exercise programme

Sample question

1. Describe the developmental milestones along with its significance.
2. Explain the management techniques for high risk infants.
3. Explain APGAR score.
4. Describe the various types of Cerebral Palsy. Add a note on evaluation.
5. Describe the types of Spinal Dysraphism along with its management

Module VII Congenital and acquired Brain Disorders

Objective : *At the end of the module the student will be able to:*

Knowledge : explain and summarize signs and symptoms, aetiology, types, secondary complication in congenital and acquired brain disorders. Understands the perceptual disorders , gait , postural abnormalities and functional limitations in the same

Cognition : discuss the differential diagnosis, application of symptomatic management knowledge, goal setting and PT Management. Choose appropriate outcome measures of prognosis

Psychomotor skills : Demonstrate treatment techniques of particular neurological condition, positioning and handling, Counselling, care giver education and documentation of assessment , treatment, follow-up and prognosis. Prescribe and train required orthotic and assistive devices

Module VII	**Lesson name**	**Learning objective** ***At the end of the unit the student will be able to:***	**Type of instruction**	**Prescribed book with page numbers**	**Assessment**	**Items that the student must have with them in class**	**Supplementary material**	**References** **Photocopy** **Print** **E book** **Web resources**
Unit 1 **Lect 1**	Cognition perception, indicators, Approaches	Able to define cognition,perception and perceptual disorders. Able to list clinical features and differentiate perceptual disorders	Didactic	Susan B O'SullivanP:1150-1155	MCQ'S			Jane Case SmithPP:529-548 Janet Carr, Shepherd-P:222-236
Unit 2 **Lect 1**	Examination of cognition and perceptual disorders and management Apraxia-	Demonstrate evaluation of perception Apraxia tests List interventions for each	Didactic	Susan B O'Sullivan P:1156-1181	MCQ'S			
Unit 3 **Lect 1**	Cerebrovascular accident - types clinical features	List the causes and clinical features of CVA based on vessel and type of stroke List current epidemiology of	Didactic	Michelle H Cameron – P:406-431	MCQ'S			Randall L Braddom– P:1175-1210 Jane Case Smith-

	with lesions pathophysiology Transient Ischemic Attack,RIND, Central Venous Thrombus Stroke in young	stroke Able to list clinical features according to lesion site.						P:677-699 Darcy A Umphred-P:857-897,1036-1054 Janet Carr, Roberta Shepherd-P:242-276 JohannesGSmits-Hand Recovery after stroke Susan B O'Sullivan - P:705-761,1189-1204 Maria StokesP:75-90
Unit 4 **Lect 1**	CVA - evaluation with tools Management	Demonstrate evaluation procedure by using appropriate tools and systems- MRP, Brunnstrom, functional-CMSA List the features of importance for mobility, shoulder in hemiplegia, and hand in hemiplegia, importance of cognitive evaluation and speech evaluation. Management for CVA acute, post-acute, chronic, management for hand, young stroke	Didactic/ Practical	Michelle H Cameron – P:406-431	Case scenario	Video 2.4.1 C.D Tool 6		

Module VII	**Lesson name**	**Learning objective** ***At the end of the unit the student will be able to:***	**Type of instruction**	**Prescribed book with page numbers**	**Assessment**	**Items that the student must have with them in class**	**Supplementary material**	
Unit 5 **Lect 1**	Management of complications- hand in stroke, Hemiplegic gait	List the common gait deviations and the implications for energy expenditure, and safety Demonstrate the ability to perform gait evaluation List the indications for prescription of AFO On the given videos discuss the need for AFO, Adaptive equipment and walking aids	Didactic/Videos/ Practical	Michelle H Cameron – P:406-431	MCQ'S, Demonstration			
Unit 6 **Lect 1**	Traumatic brain injuries- Acute and chronic brain injury evaluation	List the causes and clinical features of TBI according to lesion site List and demonstrate evaluation procedure by using appropriate tools. On the given scenario, classify stage of recovery	Didactic	Mark J Ashley, David K Krych- P:3-29, 319-363	MCQ'S			Darcy A Umphred -P:532-562,209-261 Carr, Shepherd – P:277-300, Susan P:895-922 Maria Stokes- P:77-90,Jane Case Smith- PP:705-729 Cameron P:406-431

Module VII	**Lesson name**	**Learning objective** ***At the end of the unit the student will be able to:***	**Type of instruction**	**Prescribed book with page numbers**	**Assessment**	**Items that the student must have with them in class**	**Supplementary material**	**References** **Photocopy** **Print** **E book** **Web resources**
Unit 7 **Lect 1**	TBI Management , Management of Complications of Head injury Battle's sign	Able to list the medical surgical managements for TBI. Able to list the common complications and managements for TBI	Didactic	Mark J Ashley, David K Krych -P-23-29, 319-363	MCQ'S/Demonstration/case scenario			Darcy A Umphred P:532 562,209-261 Janet Carr, Roberta Shepherd–P:277-300,Sullivan P:895-922
Unit 8 **Lect 1**	Brain Tumor's Post op management with lesion	Able to list post operative management in brain tumor surgeries and implications for physiotherapy	Didactic	Darcy A Umphred–P:811-830	MCQ'S			
Unit 9 **Lect 1**	Meningitis, Encephalitis clinical features pathophysiology Kernig's sign Brudenzkisign evaluation management	Able to list the etiology, clinical features and management of Meningitis and Encephalitis. List squeal and secondary impairments based on severity Plan physiotherapy goals and interventions	Didactic	Darcy A Umphred -P: 658-679	MCQ'S			

Nice to Know References :

Stroke a Clinical approach	Lovism R Caplan
Right in the Middle-Treatment of adults hemilegia	Patricia M Davies
Starting again – Early rehabilitation after TBI	Patricia M Davies
Steps to follow	Patricia M Davies

Module VII Congenital and acquired Brain Disorders

Assignment

1. 60 year male,coolie by occupation admitted in ICU 3 days back. Presented with sudden onset of weakness in right upper and lower limb follwed by loss of consciousness.On observation he showed deviation of angle of mouth to left side.Known case of HTN with chronic smoker.Dyspasia .VCG – Grade 3 and MAS 3 tone

- Complete neurologolical assessment
- Positioning of the patient
- Treatment plan
- Dos and Donts to patient and attendents
- Functional training of the right upper and lower limb

Sample Questions

1. What are the key strategies in positioning the patient with right hemiplegia during acute stage,draw neat line diagrams. List precautions should be taken for positioning.
2. Stroke case scenario (to be given in monthly unit plan)
3. Describe GCS,RLA levels of functioning,Rappaports disability rating scales,Glasgow outcome scales and interpretation
4. Tabulate Physiotherapy management with respect to RLA stages
5. Make a model chart for transfer activities for diplegicand paraplegia patient
6. Describe the various Perceptual disorders along with evaluation and management.
7. List out the causes of Cerebro-vacular accident. Add a note on risk factors of CVA.
8. List the common complications and managements for TBI
9. Describe the LOCF RLA scale and Stage wise management of TBI patients.
10. Explain the etiology, pathophysiology, clinical features and management of meningitis.

Module VIII : Cerebellar Disorders

Objective : *At the end of the module the student will be able to:*

Knowledge : explain and summarize signs and symptoms, aetiology, types, secondry complication in cerebellar disorders. Understands the balance, coordination ,gait , postural abnormalities and functional limitations in the same
Cognition : discuss the differential diagnosis, application of symptomatic management knowledge, goal setting and PT Management. Choose appropriate outcome measures of prognosis
Psychomotor skills : Demonstrate treatment techniques of particular neurological condition, positioning and handling, Counselling, care giver education and documentation of assessment , treatment, followup and prognosis. Prescribe and train required orthotic and assistive devices

Module VIII	**Lesson name**	**Learning objective** ***At the end of the unit the student will be able to:***	**Type of instruction**	**Prescribed book with page numbers**	**Assessment**	**Items that the student must have with them in class**	**Supplementary material**	**References Photocopy Print E book Web resources**
Unit 1 Lect 2	Parkinson's Disease,dystonia,chorea,hemiballismus, wilsons disease, Alzheimer's Disease, Huntington's Disease	Able to list etiology, clinical features, medical and physiotherapy management for said Progressive central nervous system Disorder List motor system impairments List strategies for management of motor impairments Identify movement disorders on videos and plan goals and Intervention	Didactic	Darcy A Umphred - P:782-787	MCQ'S		**C D Tool 14**	Susan B O'Sullivan-P: 853-885 Janet Carr, Roberta Shepherd-305-326 Maria Stokes P:149-159 Darcy A Umphred -P:787-793

Module VIII	**Lesson name**	**Learning objective** ***At the end of the unit the student will be able to:***	**Type of instruction**	**Prescribed book with page numbers**	**Assessment**	**Items that the student must have with them in class**	**Supplementary material**	**References** **Photocopy** **Print** **E book** **Web resources**
Unit 2 **Lect 2**	Management,Parkinsongait,Hypokinetic and hyperkinetic gait Glabellar tap sign		Didactic/ videos	Darcy A Umphred - P:782-787	MCQ'S/Video Interpretation			
Unit 3 **Lect 2**	**Ataxia** - Cerebellar Ataxia and sensory ataxia-Evaluation Romberg's sign	Able to define ataxia and list clinical features of Cerebellar and sensory ataxia. Able to evaluate with using appropriate tools Ataxia grading scales (SARA, ICARS)	Didactic	Darcy A Umphred – P:834-848	MCQ'S			Janet Carr, Roberta Shepherd-P:205-218
Unit 4 **Lect 2**	Ataxia-Management,ataxic gait	List goals and intervention strategies for Cerebellar and sensory ataxia	Didactic/videos/ practical	Darcy A Umphred – P:848-853	Demonstration	Gait belt		
Unit 5 **Lect 2**	Vestibular disorders	Able to list etiology, clinical features of vestibular disorders. List differences between central and peripheral causes Demonstrate evaluation procedure	Didactic	Darcy A Umphred - P:732-755	MCQ'S			Susan B O'Sullivan - P:999-1025
Unit 6 **Lect 2**	Management	Able to manage the vestibular conditions	Didactic /Practical	Darcy A Umphred - P:755-768	Demonstration			

1. Describe the etiology, clinical features, medical and physiotherapy management of Parkinson’s disease
2. Enumerate the various types of demyelinating disease.
3. Describe the types and clinical features of Multiple sclerosis.

Module IX : Congenital and acquired Spinal cord Disorders

Objective : *At the end of the module the student will be able to:*

Knowledge : explain and summarize signs and symptoms, aetiology, types, secondary complication in spinal cord disorders. Understands the sensory, motor, gait , postural abnormalities and functional limitations in the same
Cognition : discuss the differential diagnosis, application of symptomatic management knowledge, goal setting and PT Management. Choose appropriate outcome measures of prognosis
Psychomotor skills : Demonstrate treatment techniques of particular neurological condition, positioning and handling, Counselling, care giver education and documentation of assessment , treatment, followup and prognosis. Prescribe and train required orthotic and assistive devices

Module IX	**Lesson name**	**Learning objective** ***At the end of the unit the student will be able to:***	**Type of instruction**	**Prescribed book with page numbers**	**Assessment**	**Items that the student must have with them in class**	**Supplementary material**	**References** **Photocopy** **Print** **E book** **Web resources**
Unit 1 **Lect 1**	Spinal tumors Different levels and types of tumors in brief	Able to list different types of tumors and clinical features according to level of lesion	Didactic	Randall L Braddom P:1296-1301	MCQ'S			
Unit 2 **Lect 1**	Spinal cord injury types of injury level of lesion with features stages of recovery evaluation	Able to list different types of spinal cord injury and presenting clinical features Able to demonstrate the evaluation procedures by using appropriate tools – ASIA, SCIM Plan management for prevention of secondary complications	Didactic	Michelle H Cameron – P:538-555	MCQ'S/Case scenario	C.D Tool 9,10		Darcy P:605-655 Sullivan –P: 937-990,1287-1314 Jane Case PP:599-608,795-811 Maria-P:105 119 Randall L Braddom - P:1285-1340

	Lesson name	Learning objective *At the end of the unit the student will be able to:*	Type of instruction	Prescribed book with page numbers	Assessment	Items that the student must have with them in class	Supplementary material	References Photocopy Print E book Web resources
Unit 3 **Lect 1**	Management-pre and post op.and wheel chair management	Able to list surgical and physiotherapy management procedures for SCI. Able to demonstrate wheelchair training techniques	Didactic/Practical's	Michelle H Cameron – P:556-574	Demonstration/Case scenario	Video 4		
Unit 4 **Lect 1**	Bladder & Bowel Dysfunction	Able to list clinical features and differentiate the flaccid and spastic type of bowel and bladder dysfunction.Able to list bowel and bladder training techniques	Didactic	Braddom617-634,639-649	MCQ'S			
Unit 5 **Lect 1**	Spinal muscular atrophies,hereditary paraplegia	Able to list etiology, clinical features, medical and physiotherapy management of Spinal muscular atrophies	Didactic	Maria P-260-266	MCQ'S			Darcy A Umphred -P:395-396 Jans S Tecklin -P:335-358
Unit 6 **Lect 1**	Poliomyelitis, Post Polio syndrome, Syringomyelia	Able to list etiology, clinical features, medical and physiotherapy management of poliomyelitis and post polio Syndrome	Didactic	Darcy A Umphred –P: 940-957	MCQ'S			Randall L Braddom-P:1059-1060
Unit 7 **Lect 1**	Multiple sclerosis,managementLehermitte's sign		Didactic	Sullivan-P: 777-815	MCQ'S			Darcy A Umphred –-P:709-729 Janet Carr, Roberta Shepherd P-332-341

	Lesson name	Learning objective *At the end of the unit the student will be able to:*	Type of instruction	Prescribed book with page numbers	Assessment	Items that the student must have with them in class	Supplementary material	References Photocopy Print E book Web resources
Unit 8 **Lect 1**	Amyotrophic lateral sclerosis		Didactic	Darcy A Umphred – P:475-494	MCQ'S			Sullivan - P:819-843 Maria StokesP:171-179
Unit 9 **Lect 1**	Transverse myelitis-Management according to level of lesions	Able to list etiology, clinical features, medical and physiotherapy management of Transverse myelitis	Didactic	Randall L Braddom - P:1302	MCQ'S			

Nice to know : ABC of Spinal Cord Injury

Module IX : Congenital and acquired Spinal cord Disorders

Assignment

1. 35 Year male,presenting with loss of sensation in right palm and right lower limb since 3 weeks .He is not able to hold the things withright hand.Symptoms followed by self fall with influence of alchohal.Daignosed with cervical cord contusion at C4-C5 level and undisplaced Spine #C5

- Neurological assesement - Required assessment scales
- Positioning - Treatment plan

Sample questions

1. List different types of spinal tumors and clinical features according to level of lesion
2. Describe the various types of Spinal cord injury along with syndromes.
3. Describe the functional activities according to various levels of SCI
4. Describe etiology, clinical features, medical and physiotherapy management of Transverse myelitis

5. List clinical features and differentiate the flaccid and spastic type of bowel and bladder dysfunction

MODULE X : PERIPHERAL NERVE INJURIES AND DISORDERS

Objective : *At the end of the module the student will be able to:*

Knowledge : explain and summarize signs and symptoms, aetiology, secondary complication in peripheral nerve injuries and disorders.
Cognition : discuss the differential diagnosis, application of symptomatic management knowledge, goal setting and PT Management. Choose appropriate outcome measures of prognosis
Psychomotor skills : Demonstrate treatment techniques of particular neurological condition, positioning and handling, Counselling, care giver education and documentation of assessment , treatment, follow up and prognosis. Prescribe and train required orthotic and assistive devices

Module X	Lesson name	Learning objective *At the end of the unit the student will be able to:*	Type of instruction	Prescribed book with page numbers	Assessment	Items that the student must have with them in class	Supplementary material	References Photocopy Print E book Web resources
Unit 1 Lect 2	Brachial plexus palsy-types, OBBPI, Klempkes paralysis, evaluation and management Tinels's sign	Able to list causes, signs and symptoms ,evaluation ,conservative and surgical managements and physiotherapy management of peripheral nerve injuries Goal set according to Sunderland's classification Intervention including splinting and adaptive equipment Post-surgical rehabilitation including nerve graft,	Didactic	Randall L Braddom -P: 1086-1087	MCQ'S			Michelle H Cameron –P: P:473- 505 Maria Stokes - P:121-132
Unit 2 Lect 2	Thoracic outlet syndrome, Phrenic&intercostal nerve lesions- Evaluation and management		Didactic					

Module X	Lesson name	Learning objective *At the end of the unit the student will be able to:*	Type of instruction	Prescribed book with page numbers	Assessment	Items that the student must have with them in class	Supplementary material	References Photocopy Print E book Web resources
Unit 3 Lect 2	Median nerve palsy, Ulnar nerve palsy, Radial nerve palsy, Musculocutaneous nerve palsy, Anterior & Posterior interosseous nerve palsy, Axillary palsy, Long thoracic nerve palsy evaluation & m/m		Didactic	Randall L Braddom - P:1079-1084	MCQ'S		Video 4	
Unit 4 Lect 2	Lumbosacral plexus lesions, sciatic nerve palsy, Tibial nerve palsy, Common peroneal nerve palsy, Femoral nerve palsy, Obturator nerve palsy, and Pudendal nerve palsy,Slump test High stepping gait	Intervention including orthotics and walking aids Post surgical rehabilitation including nerve graft,narcotization	Didactic	Randall L Braddom - P:1084-1088	MCQ'S			
Unit 5 Lect 2	Hereditary motor sensory neuropathy, Guillain-Barre syndrome,alcoholicneuropathies,chronic neuropathies	Able to list different types of peripheral neuropathies,etiology, clinical features of Hereditary motor sensory neuropathy, Guillain-Barre syndrome	Didactic	Darcy A Umphred– P:498-500,	MCQ'S			Michelle H Cameron –P: 514-531 Maria Stokes P:181-192

Unit 6 Lect 2	Evaluation and management	Able to assess Hereditary motor sensory neuropathy, Guillain-Barre Syndrome and list the management procedures and Precautions	Didactic/practical	Darcy A Umphred - P:500-508	Case scenario			

Module X : Peripheral nerve injuries and disorders

1. Draw neat coloured diagrams of brachial plexus, lumbosacral plexus, upper and lower limb peripheral nerves with its course
2. Describe Brachial plexus injury.
3. Describe the pathophysiology, clinical features and PT management of Thoracic outlet syndrome.
4. Explain compartment syndrome with example.
5. Describe the physiotherapy management of GBS
6. Tabulate the presenting clinical features of Spinal cord injuries at cervical,thoracic,lumbar and sacral levels.
7. Tabulate types of muscular dystrophies with etiology, onset age, clinical feature

Module XI : Muscle and Neuromuscular junction Disorders

Objective : *At the end of the module the student will be able to:*

Knowledge : explain and summarize signs and symptoms, aetiology, types, secondry complication in Muscle and NMJ Disorders.
Cognition : discuss the differential diagnosis, application of symptomatic management knowledge, goal setting and PT Management. Choose appropriate outcome measures of prognosis
Psychomotor skills : Demonstrate treatment techniques of particular neurological condition, positioning and handling, Counselling, care giver education and documentation of assessment , treatment, followup and prognosis. Prescribe and train required orthotic and assistive devices

Module XI	**Lesson name**	**Learning objective** ***At the end of the unit the student will be able to:***	**Type of instruction**	**Prescribed book with page numbers**	**Assessment**	**Items that the student must have with them in class**	**Supplementary material**	**References** **Photocopy** **Print** **E book** **Web resources**
Unit 1 **Lect 2**	Muscular dystrophy (DMD) types	Able to list types of Muscular dystrophies,etiology,clinical features ,medical and physiotherapy management of muscular dystrophies including home modifications, care giver training and wheelchair prescription	Didactic	Darcy A Umphred -P:508-523	MCQ'S		**Video 5**	Randall L Braddom -P: 1099-1124
Unit 2 **Lect 2**	Myasthenia Gravis, Eaton-Lambert Syndrome	Able to list etiology, clinical features of NMJ disorders	Didactic	Jans s Tecklin -P:335-359	MCQ'S			
Unit 3 **Lect 2**	Evaluation and Management,myopathicgait,waddlinggait Gower's sign	Able to list medical and physiotherapy management of NMJ disorders	Didactic/videos	Darcy A Umphred-P:508-523	Case scenario	Gait belt		

Module XII : Applied yoga in Neurological conditions

Lect 2

Neurology and Neurosurgery

NEUROLOGY

Units	Time Duration	Ref Book Adam's & Victor's Principle of Neurology
Unit -1 CSF examination principles, methods, views, normal/abnormal features, types of investigation procedures	1 hour	Chapter 2, Pg 12 – 14
Unit-2 NCV and Evoked potentials- examination principles, methods, views, normal/abnormal features, types of investigation procedures	4 hours	Chapter 45, Pg 34 -40
Unit-3 EMG-examination principles, methods, views, normal/abnormal features, types of investigation procedures	3 hours	Chapter 45, Pg 1353 – 1366
Unit 1 Etiology, clinical features, investigations, and management of following disorders - lesions in trigeminal nerve, trigeminal neuralgia, trigeminal sensory neuropathy, lesions in facial nerve, facial palsy, bell's palsy, hemi facial spasm	1 hours	Chapter 47, Pg 1446 – 1456
Unit-2 Etiology, clinical features, investigations, and management of Glossopharangial neuralgia, lesions of Vagus nerve, lesions of spinal accessory nerve, lesions of hypoglossal nerve	1 hours	Chapter 47, Pg 1456 – 1463
Unit-1 Define stroke, TIA, RIA, Stroke in evolution, multiinfarct dementia, lacunar infarcts. Classification of stroke – Ischemic, hemorrhagic, venous infarcts. Risk factors, cause of ischemic stroke, causes of hemorrhagic stroke		Chapter 34 Pg 821 – 829
Classification of hemorrhagic stroke, classification of stroke based on symptoms, stroke syndrome, investigations, differential diagnosis, medical and surgical management.		Chapter 34, Pg 830 – 903
Unit 1		
Perceptual disorders, types, classification, Assessment		Chapter 22 Pg 483 – 493
Apraxia ,types, assessment		Pg 486

Unit 1 Definition, etiology, risk factors, pathophysiology, classification, clinical signs & symptoms, investigations, differential diagnosis, medical management, surgical management and complications of Parkinson		Chapter 39, Pg 1128 – 1137
Unit 2 Definition, etiology, risk factors, pathophysiology, classification, clinical signs & symptoms, investigations, differential diagnosis, medical management, surgical management and complications of dystonia, chorea and athetosis	1 hour	Chapter 4 Pg 77 – 84
Unit 3 Definition, etiology, risk factors, pathophysiology, classification, clinical signs & symptoms, investigations, differential diagnosis, medical management, surgical management and complications of Ballism, Tics, Myoclonus and Wilson's disease	I hour	Chapter 4, Pg 79 Chapter 6, Pg 116, 107 – 111, Chapter 37, Pg 1026-1029
Unit 1 Etiology, pathophysiology, classification, clinical sign & symptoms, investigations, differential diagnosis, management of Congenital ataxia, Friedreich's ataxia		Chapter 38 Pg 1086- 1087 Chapter 39 Pg 1145 – 1147
Etiology, pathophysiology, classification, clinical sign & symptoms, investigations, differential diagnosis, management of Ataxia talengiectasia, Metabolic ataxia, Hereditary cerebellar ataxia, Tabesdorsalis and Syphilis.		Chapter 37, Pg 1010-1012 Chapter 5 Pg 93 -97 Chapter 32 Pg 762-767
Unit 1 Transverse myelitis, viral myelitis, Subaute combined degeneration of the cord-causes, clinical features, pathophysiology, Investigations, diagnosis, management		Chapter 44 Pg 1304 – 1311 Chapter 41 Pg 1218 – 1222
Hereditary spastic paraplegia, Radiation myelopathy, Progressive encephalomyelitis, and Sarcodosis- causes, clinical features, pathophysiology, diagnosis, management		Chapter 44 Pg 1302 – 1303 Chapter 32 Pg 761 – 762
Bladder & bowel dysfunction- causes, clinical features, pathophysiology, diagnosis, management		Chapter 26 Pg 570 – 574

NEUROSURGERY

Units	Time Duration
Unit 1 Head injury: Etiology, classification clinical signs & symptoms	
Unit 2 Investigations, differential diagnosis, medical management, surgical management and complications	
Unit 1 Neural basis of consciousness, causes & investigations of Coma,	**1 hour**
Unit 2 criteria for diagnosis of Brain death	**1 hour**
Unit 1 Etiology, risk factors, pathophysiology, classification, clinical signs & symptoms, investigations, differential diagnosis, medical management, surgical management and complications of following disorders – Spinal cord injury,	
Unit 2 Etiology, risk factors, pathophysiology, classification, clinical signs & symptoms, investigations, differential diagnosis, medical management, surgical management and complications of Compression by IVD prolapse, Spinal epidural abscess, Conusmedullaris syndrome.	
Unit 3 Etiology, risk factors, pathophysiology, classification, clinical signs & symptoms, investigations, differential diagnosis, medical management, surgical management and complications of Syringomyelia, Spina bifida	
Unit 1 Classification, clinical features, investigations, medical and surgical management of Brain tumors	
Unit 2 Classification, clinical features, investigations, medical and surgical management of spinal tumors	
Unit 1 Introduction,Brief Procedure Indications and Complications of Craniotomy, Cranioplasty,	**1 hour**

Unit 2 Introduction,Brief Procedure Indications and Complications of Stereotactic surgery, Deep brain stimulation, Burr-hole, Shunting,	**1 hour**
Unit 3 Introduction,Brief Procedure Indications and Complications of Laminectomy, Hemilaminectomy, Rhizotomy	**1 hour**
Unit 4 Introduction,Brief Procedure Indications and Complications of Microvascular decompression surgery, Endarterectomy, Embolization, Pituitary surgery,	**1 hour**
Unit 5 Introduction,Brief Procedure Indications and Complications of Ablative surgery - Thalamotomy and Pallidotomy, Coiling of aneurysm, Clipping of aneurysm, and Neural implantation	**1 hour**

COMMUNITY BASED REHABILITATION

IV BPT

COMMUNITY BASED REHABILITATION

SCHEME OF CURRICULUM DELIVERY CBR

LESSON PLAN 2018 – 2019

FACULTY

KAVITHA RAJA

ANUSHREE

PRASHANTH V M

PRIYANKA

Subject objective:

At the end of the year, the student will be able to

- Apply knowledge of basic sciences and humanities in conjunction with physiotherapeutic skills and reasoning based knowledge and apply these to evaluate, goal set and plan and execute treatment in a tailored manner to an individual with
    - Chronic disabling conditions
    - Chronic static conditions
    - Chronic conditions characterised by exacerbations and remissions
    - Conditions characterised by changing needs and deficits
- Apply knowledge attained above in senior citizens to enhance health and decrease the deleterious effects of aging
- Apply ergonomic principles to minimise WRMSD
- Empathise with individuals with special needs to act as an advocate
- Acquire skills to perform health promotion and public education roles in society

	Lesson name	Learning objective *At the end of the unit the student will be able to*	Type of instruction	Instructor	Prescribed book with page numbers	Assessment	Items that the student must have with them in class	Supplementary material	References
Module I DISABILITY AND REHABILITATION	**Rehabilitation: [1 hour]:** Definition, Types Philosophy scope	Define rehabilitation and list the ways of delivering rehabilitation to individuals with disability.Trace the need for rehabilitation services within the healthcare spectrum.	seminar	I MPT	Rehabilitation – the use of theories and models Davis S- e book available in library as CBR resources DVD: -Rehabilitation the use of theories,models and practice -Rehabilitation and team work WHO material in DVD		**The required pages of text**	[redacted]	
	Disability: [6 hours] Definition of Impairment, Handicap and Disability, Difference between impairment, handicap and disability	Understand the difference between impairment and disability, ways of measuring and the burden of disability	Seminar		http://www.who.int/mediacentre/factsheets/fs352/en/ community based rehabilitation of people with disabilities- S Pruthvish 6-12; 14-21;22-34;36-40			Videos of barriers and facilitators Inclusive environments etc	Guide on the national planning of rehabilitation CBR management series-1 Available as CBR resources DVD in Lib
	Causes of disability, Types of disability		Seminar		Pruthvish 14-21				

	Lesson name	**Learning objective** ***At the end of the unit the student will be able to***	**Type of instruction**	**Instructor**	**Prescribed book with page numbers**	**Assessment**	**Items that the student must have with them in class**	**Supplementary material**	**References**
	Prevention of disability	Understand the need and ways of preventing disability	Seminar		Pruthvish 14-21				
	Disability in developed countries, Disability in developing countries	Understand the changing demographics in india	500 word Paper		Pruthvish 22-34				
	Disability Surveys: Demography Screening:	Participatory Survey and identify intervention strategy. Will be able to perform disability evaluation	Participatory Analysis of survey results		Pruthvish 32				
	Early detection of disabilities and developmental disorders		Participatory		Pruthvish 36-40				
	Prevention of disabilities- Types and levels		Seminar		Pruthvish 14-21				

	Lesson name	Learning objective *At the end of the unit the student will be able to*	Type of instruction	Instructor	Prescribed book with page numbers	Assessment		Supplementary material	References
	Disability Evaluation: [5 hours] Introduction, What, Why and How to evaluate? Quantitative versus Qualitative data Uses of evaluation findings	Learn to use PPI and WHO DAS instruments. Be able to appreciate difference between impairment and disability	Seminar Practical Participatory		Disability (permanent physical impairment) Assessment And Certification WHO-DAS				
	Screening & rehabilitation of paediatric disorders in the community: **[5 hours]** Early detection of high risk babies	Learn to use tools for identification of high risk infants and learn strategies to decrease disability in childhood disorders	Didactic Self learning		IAP textbook of paediatrics chapter 7 Physiotherapy in paediatrics. Shepherd R sections II, III, IV, V Physical medicine and rehabilitation Braddom R Chapter 54				Children with severe disabilities and the move curriculum, Pediatric Physical Therapy JanTecklin Pruthvish 25-31
	Maternal nutrition and education,		Seminar		IAP textbook of paediatrics pg 193 -194 Preventive and social medicine-Park pg 484				

	Lesson name	Learning objective *At the end of the unit the student will be able to*	Type of instruction	Instructor	Prescribed book with page numbers	Assessment		Supplementary material	References
	Rehabilitation of Cerebral Palsy Polio Downs Syndrome Muscular Dystrophies		Seminar		Braddom 3rd ed pg 54 Shephard chapter 5 Sullivan chapter 18 IAp textbook of paediatrics pg 350- 359 Shephard pg 185-193 Shephard Pg 165-181, Susan Effgen chapter 21 Susan K Campbell 4th Ed chapter 12				
	Prevention and rehabilitation of mental retardation and Behavioural disorders		Seminar		Shephard chapters 7,8				
	Immunization programmes, Genetic counselling		Didactic Self learning		IAP textbook of paediatrics chapters 9, 18				
	Early intervention in high risk babies,		Seminar		Susan K Effgen chapter 11				
	Extension services and mobile units: **[2 hours]** Introduction, Need, Camp approach	Types of CBR programmes and their strengths and limitations	Experiential	I MPT	WCPT briefing paper- available in library as CBR resources CBR of PWD Pruthvish chapter 6				

	Lesson name	Learning objective *At the end of the unit the student will be able to*	Type of instruction	Instructor	Prescribed book with page numbers	Assessment	Items that the student must have with them in class	Supplementary material	References
Module II									
Clinical rotation									
Module III Community based rehabilitation	The Community based approach, Community Entry strategies, CBR and Community development. Community initiated versus community oriented programme	To identify communities, plan strategies for entry, challenges and opportunities in CBR	Didactic Participatory		Community based rehabilitation Peat M-chapter 3 Textbook of sociology for physiotherapist students- Neeraja chapter 6 Material available in DVD CBR resources in library CBR health component	Seminar			
					Malcom Peat CBR resources				
	Community participation and mobilization								

	Lesson name	**Learning objective** ***At the end of the unit the student will be able to***	**Type of instruction**	**Instructor**	**Prescribed book with page numbers**	**Assessment**	**Items that the student must have with them in class**	**Supplementary material**	**References**
	Introduction to Community Based Rehabilitation: [6 hours] Definition, Historical review		Didactic Participatory		CBR Peat- chapter 4 WHO folder in CBR resources- CBR guidelines- 7 documents				
	Concept of CBR, Need for CBR, Difference between Institution based and Community based Rehabilitation				Malcom Peat chapter 4				
	Objectives of CBR, Scope of CBR, Members of CBR team	Identify potential strengths and limitations of different rehabilitation approaches Plan rehab strategies based on needs and limitations			Malcom Peat chapter 4				
	Models of CBR				Malcom Peat chapter 5				

	Lesson name	Learning objective *At the end of the unit the student will be able to*	Type of instruction	Instructor	Prescribed book with page numbers	Assessment	Items that the student must have with them in class	Supplementary material	References
	Principles of Community based Rehabilitation. [10 hours] W.H.O.`s policies-about rural health care concept of primary /tertiary health centres-district hospitals etc-	Understand the concept of CBR team National and international policies in rehabilitation of disabled.	Didactic		Textbook of community medicine and community rehabilitation Dr Bhaskara Rao chapter 10, 11, 12, 13 PWD act- in CBR resources Pruthvish chapter 10 Park chapter22,23 Material available in CBR resources in DVD in library	Interview other members of the team Then seminar			
	Role of P.T.- Principles of a team work of Medical person/P.T./O.T. audiologist/speech therapist /P.&O./vocational guide in C.B.R. of physically handicapped person		Participatory		Malcom Peat chapter 11				

	Lesson name	**Learning objective** ***At the end of the unit the student will be able to***	**Type of instruction**	**Instructor**	**Prescribed book with page numbers**	**Assessment**	**Items that the student must have with them in class**	**Supplementary material**	**References**
	Agencies involved in rehabilitation of physical handicapped		Self learning		Malcom Peat chapter 13				
	Legislation for physically handicapped		Self learning		Malcom Peat chapter 12				
	Concept of multipurpose health worker.								
	Role of family members in the rehabilitation of a physically handicapped		Self learning And participatory						
	Planning and management of CBR Programmes, [6 hours]	Understand the principles of programme planning, implementation and sustainability	Didactic and self learning		Pruthvish chapter 7 Peat chapters 6,7 Material available in CBR resources in DVD				

	Lesson name		Type of instruction	Instructor	Prescribed book with page numbers	Assessment	Items that the student must have with them in class	Supplementary material	References
	Ownership and Governance		Assignment						
	Decentralization and CBR								
	Management of CBR,								
	Programmed sustainability								
	Communication and Coordination								
	Community participation								
	Mobilization and awareness								
	CBR programme influence on promoting and developing public policies								

	Lesson name	Learning objective *At the end of the unit the student will be able to*	Type of instruction	Instructor	Prescribed book with page numbers	Assessment	Items that the student must have with them in class	Supplementary material	References
	Role of Social work in CBR: **[4 hours]** Definition of social work,	Understand the importance of MSW in the rehab team	Didactic Participatory		Textbook of community nursing Neelam kumara chapter 7 Pruthvish chapter 11 Textbook of sociology for physiotherapy students chapter 13 Document available in DVD CBR resources				
	Methods of social work								
	History of social work								
	Role of social worker in rehabilitation		Interview Seminar						
	National District Level Rehabilitation Programme: [5 hours] Primary rehabilitation unit	Understand the relevance of rehabilitation at different levels of health care delivery	Participatory Self learning		Textbook of community nursing Neelam kumara chapter 7 Document available in DVD CBR resources				
	Regional training centre								

	Lesson name	**Learning objective** ***At the end of the unit the student will be able to***		**Instructor**		**Assessment**	**Items that the student must have with them in class**	**Supplementary material**	**References**
	District rehabilitation centre								
	Primary Health centre								
	Village rehabilitation worker, Anganwadi worker		Field visit and paper						
	Role of Physiotherapy in CBR: **[5 hours]** Screening for disabilities	Understand the specific role of PT in the rehab team and in the CBR team and methods to optimise effectiveness of PT delivery	Didactic		Pruthvish chapter 12 Braddom section IV, section II	Practical			
	Prescribing exercise programme		Case presentation		CBRDVD resources				
	Prescribing and devising low cost locally available assistive aid								

	Lesson name	Learning objective *At the end of the unit the student will be able to*		Instructor	Prescribed book with page numbers	Assessment	Items that the student must have with them in class	Supplementary material	References
	Modifications physical and architectural barriers for disabled				Sullaivan Chapter 12, Assistive technologies principles & practice- Cook, Handbook of assistive devices for handicapped elders- Joseph M Breuer				
	Disability prevention		Seminar						
	Strategies to improve ADL, Rehabilitation programmes for various neuromusculoskeletal and cardiothoracic disabilities		Practical						
	Module IV FIELD VISIT								

	Lesson name	Learning objective *At the end of the unit the student will be able to*	Type of instruction	Instructor	Prescribed book with page numbers	Assessment	Items that the student must have with them in class	Supplementary material	References
Module V GERIATRICS	**Geriatrics [5 hours]** Physiology of Aging /degenerative changes- Musculoskeletal / Neuromotor / cardio – respiratory-/ Metabolic, Endocrine, Cognitive, Immune systems.	Articulate the specific physiological changes in elders and to tailor PT keeping these changes in mi Students will be able to differentiate strategies to be employed at different centres	Didactic		Geriatric physical therapy Guccione chapter 3 Physiotherapy practice in residential aged care –Jennifer Bradomm Chapter 60				
	Role of Physio Therapy in Hospital based care, Half-way homes, Residential homes, Meals on wheels etc. Home for the aged		Participatory Practical		CBR resources DVD Physiotherapy practice in residential aged care –Jennifer				
	Institution based Geriatric Rehabilitation.		Seminar						

	Lesson name	Learning objective *At the end of the unit the student will be able to*	Type of instruction	Instructor	Prescribed book with page numbers	Assessment	Items that the student must have with them in class	Supplementary material	References
	Few conditions:- [8 hours] Neurodegenerative -Alzheimer's disease -Dementia, -Parkinson's Disease	Understand the role of PT in the specified conditions Able to identify signs and symptoms Students will be able assess and tailor institute based strategy to improve quality of life of patient and caregiver keeping in mind disease characteristic	Case presentation		Braddom Chapter 60			Videos Of Strategies	
	Other systemic disorders -Incontinence -Diabetes Mellitus, -Chronic Kidney Disease.				Guccione				
	Degenerative musculoskeletal conditions -Osteoarthritis, -Rheumatoid arthritis				Guccione				

	Lesson name	**Learning objective** ***At the end of the unit the student will be able to***	**Type of instruction**	**Instructor**	**Prescribed book with page numbers**	**Assessment**	**Items that the student must have with them in class**	**Supplementary material**	**References**
	Cardivascular conditions -Congestive heart failure -COPD, -Hypertension -Ageing				Guccione				
	Falls in elderly Extrinsic, intrinsic, iatrogenic disorder and psychiatric illness	Student will be able to identify causes of fall and institute prevention strategies			Guccione				
	Ethics of Geriatric Rehabilitation. [**1 hour]**	Student will be able to interact with elder client with empathy compassion and respect.	Practical Experiential paper		PT practice in residential aged care 344-46 Document available in DVD in CBR resources			Video Of An Ethical Interaction And A Bad One	
Module VI **Clinical rotation**									

	Lesson name	Learning objective *At the end of the unit the student will be able to*	Type of instruction	Instructor	Prescribed book with page numbers	Assessment	Items that the student must have with them in class	Supplementary material	References
Module VII OCCUPATIONAL HEALTH	**Industrial Health & Ergonomics[10 hours** Occupational Hazards in the industrial area	Articulate occupational related risk factors to health Understand the various occupational biomechanical factors that are potentially contributory to WRMSD Learn to use standardised tools to identify biomechanical risk factors, plan intervention programs	Didactic Practical Seminar Practical		Park chapter 16 Bridger- entire book Material available in DVD			LSBM, OWAS, RULA, REBA, ROSA Videos Of Lifting, etc	
	Accidents due to Physical agents- e.g.-Heat/cold, light, noise, Vibration, U.V. radiation, Ionizing radiation, Chemical agents- Biological Hazards Inhalation, local action, ingestion		Didactic						

	Lesson name	**Learning objective** ***At the end of the unit the student will be able to***	**Type of instruction**	**Instructor**	**Prescribed book with page numbers**	**Assessment**	**Items that the student must have with them in class**	**Supplementary material**	**References**
	Mechanical hazards- overuse/fatigue injuries		Seminar		Park chapter 16 Bridger- entire book Material available in DVD				
	Ergonomic evaluation & alteration of work place- Mechanical stresses per hierarchy –		Practical						
	Sedentary table work –executives, clerk		Seminar						
	Inappropriate seating arrangement- vehicle drivers		Experiential						
	Constant standing- watchman- Defence forces, surgeons		Experiential						
	Over-exertion in laborers,-common accidents		Experiential						

	Lesson name	**Learning objective** ***At the end of the unit the student will be able to***	**Type of instruction**	**Instructor**	**Prescribed book with page numbers**	**Assessment**	**Items that the student must have with them in class**	**Supplementary material**	**References**
	Role of PT in Stress management, Psychological hazards- e.g.- executives, monotonicity & dissatisfaction in job, anxiety of work completion with quality		Experiential		Park chapter 16 Bridger- entire book Material available in DVD				
	Role of P.T. in Industrial setup & Stress management relaxation modes		Experiential						
Module VIII **Industry visit**									
Module IX **Clinical rotation**		end of term							

List of assignments

1. Write a critical assessment of disability profile in developed nations and India. The paper must include statistics that are at least within the past 5 years, charts and figures and a critical analysis of causes and what the future holds (minimum 50 words excluding charts, figures, references, title and TOC)
2. List commonly used screening tools for developmental disability and write a critical analysis of psychometric properties, applicability to India, challenges and strengths.
3. Demonstrate use on a child without disability
4. Perform PPI and WHO DAS on 2 patients with varying diagnoses and write a critical paper on your understanding of impairment and disability from the exercise
5. List the immunization programmes recommended by WHO, offered by govt hospitals in India and a critical analysis of immunization programmes as public policy. List all the possible genetic disorders and their prevalence in India. Write your opinion about possible public health strategies to address these.
6. List international, national and local NGO working with various types of disabilities. What is their scope and reach- critique
7. Enumerate the various disability specific legislation passed by GOI. Critique challenges.
8. Select a patient as a case study and enumerate the role of each member of the rehab team (including the patient and family) in full participation of the patient.
9. Interview a social worker and write excerpts from your interview on the role of a medical social worker in the rehabilitation of a person with disability. (you may use a case study)
10. Select a disability/ dysfunction and plan a community strategy for people affected by selected disability. Write a strategic plan on how the program will be developed, managed and sustained.
11. Visit district rehab centre and understand the working by interviews. Write a report.
12. Select a particular topic and train ASHA workers. Do a pre test post test, analyse the understanding, attitudes and behaviours of the ASHAs to your training
13. Interact with an older patient/ client and write a report on how you would effectively and ethically meet your goals.

All assignments must be done individually even if the activity is a group activity. Assignments must be written as essays not with bullet points. Add hierarchical charts/ relationships etc figures, photos to enhance the content. Each assignment must have a cover page, table of contents, references/ bibliography, acknowledgements etc.

SAMPLE QUESTIONS OF EACH MODULE

MODULE I

- Write the problems of disabled in urban community.
- Write about importance of early intervention in high risk babies. Add a note on Genetic counselling.
- Describe about Extension services and mobile units.
- Prevention of disabilities.
- Immunization programmes
- Role of Physiotherapy in rehabilitation of a child with Down's syndrome.
- Write about Disability evaluation and uses of evaluation findings
- Importance of parental counselling
- Barriers in employment of disabled
- What are the different levels of prevention of disease? What are the models of intervention at each level of prevention for mental retardation

MODULE III

- Write about Community based rehabilitation (CBR) under following headings – Historical review, Concept of CBR and Members of CBR
- Write about Social worker under following headings – Definition History of Social worker and Role of social worker in rehabilitation.
- Village rehabilitation worker
- Vocational training and its needs
- Role of family members in the rehabilitation of physically handicapped
- Name four International health organization
- Explain in detail about of Role of Voluntary organization in CBR
- Legal aspects of rehabilitation
- Low cost assistive devices
- Discuss Institution based rehabilitation versus Community based.

MODULE V

- Write a note on Meals on Wheels in Geriatrics.
- Write the changes in Cardio – respiratory system in Geriatrics.
- Write the changes in Neuromotor system in Geriatrics
- Define Geriatrics
- Define Ethics
- Physical problems of old age
- The need for geriatric centres
- Give two social problems of ageing
- Home exercise program for prevention of disability in leprosy.
- Diabetic foot care.

MODULE VII

- Role of Physiotherapist in Stress management in industrial set up.
- Ideal chair for computer worker.
- Describe ergonomics. Write occupational hazard secondary to chemical agents and your role in prevention of hazard.
- Write ergonomic advise to a patient who is having low back pain.
- Explain mechanical hazards – over use and fatigue.

COMMUNITY MEDICINE

COMMUNITY MEDICINE LESSON PLAN

S NO	TOPIC	HOURS
1	**Health and Disease:** Definitions, Concepts, Dimensions and Indicators of Health, Concept of well-being, Spectrum and Determinants of Health, Concept and natural history of Disease, Concepts of disease control and prevention, Modes of Intervention, Population Medicine, The role of socio-economic and cultural environment in health and disease.	5 HRS
2	**Epidemiology**, definition and scope. Principles of Epidemiology and Epidemiological methods: Components and Aims, Basic measurements, Methods, Uses of Epidemiology, Infectious disease epidemiology, Dynamics and modes of disease transmission, Host defenses and Immunizing agents, Hazards of Immunization, Disease prevention and control, Disinfection. Screening for Disease: Concept of screening, Aims and Objectives, Uses and types of screening.	7 HRS
3	**Epidemiology of communicable disease**: Respiratory infections, Intestinal infections, Arthropodborne infections, Zoonoses, Surface infections, Hospital acquired infections Epidemiology of chronic non-communicable diseases and conditions: Cardio vascular diseases: Coronary heart disease, Hypertension, Stroke, Rheumatic heart disease, Cancer, Diabetes, 0besity, Blindness, Accidents and Injuries.	7 HRS
4	**Public health administration**- an overview of the health administration set up at Central and state levels. The national health program-highlighting the role of social, economic and cultural factors in the implementation of the national program. Health problems of vulnerable groups- pregnant and lactating women, infants and pre-school children, occupational groups	4 HRS

5	**Health program in India**: Vector borne disease control program, National leprosy eradication program, National tuberculosis program, National AIDS control program, National program for control of blindness, Iodine deficiency disorders (IDD) program, Universal Immunization program, Reproductive and child health	4 HRS

	program, National cancer Control program, National mental health program. National diabetes control program, National family welfare program, National sanitation and water supply program, Minimum needs program	
6	**Demography and Family Planning**: Demographic cycle, Fertility, Family planning-objectives of national family planning program and family planning methods, A general idea of advantage and disadvantages of the methods	3 HRS
7	**Preventive Medicine in Obstetrics, Paediatric and Geriatrics**: MCH problems, Antenatal, Intranatal and post natal care, Care of children, Child health problems, Rights of child and National policy for children, MCH services and indicators of MCH care, Social welfare programs for women and children, Preventive medicine and geriatrics	6 HRS
8	**Nutrition and Health**: Classification of foods, Nutritional profiles of principal foods, Nutritional problems in public health, Community nutrition programs	4 HRS
9	**Environment and Health**: Components of environment, Water and air pollution and public health: Pollution control, Disposal of waste, Medical entomology.	3 HRS
10	**Hospital waste management**: Sources of hospital waste, Health hazards, Waste management	3 HRS
11	**Disaster Management**: Natural and man made disasters, Disaster impact and response, Relief phase, Epidemiologic surveillance and disease control, Nutrition, Rehabilitation, Disaster preparedness	4 HRS
12	**Occupational Health**: Occupational environment, Occupational hazards, Occupational Diseases, Prevention of occupational diseases. Social security and other measures for the protection from occupational hazard accidents and diseases. Details of compensation acts	4 HRS
13	**Mental Health**: Characteristics of a mentally healthy person, Types of mental illness, Causes of mental ill health, Prevention, Mental health services, Alcohol and drug dependence. Emphasis on community aspects of mental health. Role of Physiotherapist in mental health problems such as mental retardation	3 HRS
14	**Health Education**: Concepts, aims and objectives, Approaches to health education, Models of health education, Contents of health education, Principles of health education, Practice of health education	3 HRS

Research & Bio-Statistics

RESEARCH METHODOLOGY (30 hours)

Units	**Time Duration**	**Ref Books**
Unit -1 Introduction to research methodology- Meaning of research, objectives of research, motivation in research, types of research & research approaches, Research methods vs methodology, criteria for good research, Problems encountered by researchers in India.	3 hours	C.R.Kothari P.No: 1- 21
Unit-2 Research problem- Statement of research problem, statement of purpose and objectives of research problem, Necessity of defining the problem.	3 hours	C.R.Kothari P.No: 24-29
Unit-3 Research designs- Meaning of research design, Need for research design, Features for good design, Different research designs, Basic principles of research designs.	3 hours	C.R.Kothari P.No:31- 52
Unit -4 Sampling designs- Criteria for selecting sampling procedure, Implications for sampling design, Steps in sampling design, Characteristics of good sample designs, Different types of sample designs	3 hours	C.R.Kothari P.No: 55- 67
Unit-5 Measurement & Scaling techniques- Measurement in research, Measurement scales, Sources of error in measurement, Technique of developing measurement tools, Measuring of scaling & its classification, Important scaling techniques.	3 hours	C.R.Kothari P.No: 69-82
Unit-6 Methods of data collection- collection of primary data, collection of data through questionnaires & schedules, difference between questionnaires & schedules	3 hours	C.R.Kothari P.No: 95-111
Unit-7 Sampling fundamentals- Need for sampling & some fundamental definitions, sampling distributions .	3 hours	C.R.Kothari P.No: 152-157
Unit -8 Processing & analyzing of data- Processing operations, problems in processing, types of analysis, statistics in research, measures of central tendency, dispersion, Asymmetry relationship	3 hours	C.R.Kothari P.No: 367-385

Units	Time Duration	Ref Books
Unit -9 Testing of hypothesis- What is hypothesis, basic concepts concerning, testing of hypothesis, procedure of testing, measuring the power of hypothesis test, limitations of hypothesis testing	4 hours	C.R.Kothari P.No: 184- 229, Leslie Gross Portney P.No 387-404
Unit-10 Computer technology- Introduction to computers, computer application in research, computers and research	3 hours	C.R.Kothari P.No: 361-371

BIO-STATISTICS (30 hours)

Units	Time Duration	Ref Books
Unit -1 Introduction- meaning, definition, characteristics of statistics, importance of the study of statistics, branches of statistics, statistics and health science including physiotherapy, parameters and estimates, descriptive and inferential statistics, variables and their types, measurement scales.	5 hours	Barbara Hazard P.No. 63-95 Leslie Gross Portney P.No 49-59
Unit-2 Tabulation of data- basic principles of graphical representation, types of diagrams- histograms, polygons, cumulative frequency curve, normal probability curve.	5 hours	C.R.Kothari P.No: 127-129
Unit-3 Measures of central tendency- need for measures of central tendency, definition and calculation of mean- ungrouped and grouped, meaning, interpretation and calculation of median- grouped and ungrouped, meaning and calculation of mode. Comparison of mean, median and mode, guidelines for the use of various measures of central tendency.	5 hours	Sunder Rao P.No:22- 30
Unit -4 Probability and standard distribution- meaning of probability of standard distribution, the binominal distribution, the normal distribution, divergence from normality- skewness, kurtosis.	5 hours	K. Visweswara Rao P.No: 20- 75
Unit-5 Sampling techniques- need for sampling, criteria for good sampling, application of sampling in community, procedures of sampling and sampling design, errors, sampling duration and significance	5 hours	Leslie Gross Portney P.No 137-150
Unit-6 Analysis of variance and co-variance- analysis of variance (ANOVA) what is ANOVA, basic principles of ANOVA, ANOVA technique, analysis of co-variance(ANCOVA)	5 hours	C.R.Kothari P.No: 256-275

Evidence Based Practice

Lesson plan for Evidence Based Practice

Recommended book : Evidence-based rehabilitation: a guide to practice Law M, MacDermid J

	Topic	**No of hours**		**Mode of delivery**
1	Introduction to Evidence Based Practice: Definitions, Evidence Based Practice, Evidence Based Physiotherapy Practice	**3**	**Pages 1-12**	**Lecture**
2	Concepts of Evidence based Physiotherapy: Awareness, Consultation, Judgment, Creativity	**1**	**15-36**	**Lecture, problem based**
3	Development of Evidence based knowledge, The Individual Professional, Professionals within a discipline, Professionals across disciplines	**2**	**36-64**	**Activity based**
4	Evidence Based Practitioner: The Reflective Practitioner, The E Model, Using the E Model	**1**	**Mark Jones-article**	**Lecture**
5	Finding the Evidence: Measuring outcomes in Evidence Based Practice, Measuring Health Outcomes, Measuring clinical outcomes, Inferential statistics and Causation	**3**	**65- 104**	**Activity-continuation from "3"**
6	Searching for the Evidence: Asking Questions, Identifying different sources of evidence, Electronic Bibliographic databases and World Wide Web, Conducting a literature search. Stepby- step search for evidence	**2**	**105-128**	**Lecture Activity continuation from "5"**
7	Assessing the Evidence: Evaluating the evidence; Levels of evidence in research using quantitative methods, Levels of evidence classification system, Outcome Measurements, Biostatistics, The critical review of research using qualitative methods	**4**	**129-156**	**Lecture Continuation from "6"**
8	Systematically reviewing the evidence: Stages of systematic reviews, Meta analysis, The Cochrane collaboration	**3**	**157-176**	**Lecture**

9	Economic evaluation of the evidence: Types of economic evaluation, Conducting economic evaluation, Critically reviewing economic evaluation, Locating economic evaluation in the literature	**2**	**175-186**	**Lecture**

10	Using the evidence: Building evidence in practice; Critically Appraised Topics (CATs), CAT format, Using CATs, Drawbacks of CATs	**2**	**187-204**	**Lecture**
11	. Practice guidelines, algorithms, and clinical pathways: Recent trends in health care, Clinical Practice Guidelines (CPG), Algorithms, Clinical pathways, Legal implications in clinical pathways and CPG, Comparison of CPGs, Algorithms and Clinical Pathways	**3**	**233-274**	**Lecture**
12	Communicating evidence to clients, managers and funders: Effectively communicating evidence, Evidence based communication in the face of uncertainty, Evidence based communication opportunities in everyday practice	**2**	**275-304**	**Lecture**
13	Research dissemination and transfer of knowledge: Models of research transfer, Concrete research transfer strategies, Evidence based policy	**2**	**305-324**	**Lecture**
14	Literature search	**2**		**Lecture and practical**
15	Reference Manager	**2**		**Lecture and practical**
16	Statistical software	**2**		**Lecture and practical**

INTEGRATED ASSIGNMENTS

List of integrated assignments

(It is a group activity/assignment . 4 – 8 Students can form group depends on the topic)

	Assignment
1	Perform kinematic analysis of various people during **ambulation on stairs** at self selected speed. Analyze individual differences
2	Perform kinematic analysis of various people during **ambulation on level** surfaces at self selected speed. Analyze individual differences
3	Test retest reliability of all measurements. subjective measures scales Identify sources of error under instrument sources of error patient sources of error therapist/ tester sources of error
4	Write an analytical report on the need to form and follow standard operating procedure and document any deviation
5	Use kinematic, energetics and subjective evaluation of lifting to various heights and various weights (overhead, shoulder level, waist level; 10% of bw to maximum possible)
6	Analyse optimum weight for different heights and optimum handle position and texture and type
7	**CBR** Identify a patient and conduct work conditioning program. Write a report Write reports on senior fitness fall evaluation and risk minimization strategies disability surveys asha training Patient education material (iec) development (user identification, interview, needs identification, method selection, prototype testing, interview, modification, finalization) School fitness

REFERENCE BOOKS

REFERENCE BOOKS

NEURO – PHYSIOTHERAPY

Sl.No	Title of Book	Author	Edition
1.	Traumatic brain injury rehabilitation	MarkJAshley,David K Krych	
2.	Treatment of cerebral palsy and motor delay	Sophie Levitt	3rd edition
3.	Occupational Therapy for physical dysfunction	Catherine A Trombly	4th edition
4.	Clinics in physical therapy, Gait in rehabilitation	Gary L Smidt	
5.	Physical therapy of cerebral palsy	Freeman Miller	
6.	Neurological Rehabilitation	Darcy A Umphred	5th edition
7.	Yoga and rehabilitation	Nilima Patel	
8.	Occupational therapy for children	Jane Case Smith	5th edition
9.	Neurological physiotherapy	Susan Edwards	2nd edition
10.	Neurological Rehabilitation	Janet Carr, Roberta Shepherd	
11.	Hand recovery after stroke	Johannes GSmits	
12.	Physical rehabilitation	Susan B O'Sullivan,Thomas J Schmitz -	5th edition
13.	Pediatric physical therapy	Jans S Tecklin	4th edition
14.	Motor control	Anne Shumway-Cook, Marjorie H Woollacott -	4th edition
15.	Physical Rehabilitation ,Evidence based Examination ,Evaluation and Intervention	Michelle H Cameron,LindaG.Monroe	
16.	Physical Medicine Rehabilitation	Randall L Braddom	3rd edition
17.	Neurological Physiotherapy	Maria Stokes	
18.	Tetraplegia and Paraplegia	Ida Bromley	6th edition
19.	Dejongs Neurologic Examination	William Campbell	7th edition
20.	Textbook of Human Neuroanatomy	Inderbir Singh	8th edition

NEUROLOGY AND NEUROSURGERY

1. Davidson's Principles and Practice of Medicine.
2. Textbook of Neurology- Victor Adams.
3. Brains Clinical Neurology.
4. Illustrated Neurology & Neurosurgery.
5. Brains Diseases of Nervous System.

COMMUNITY MEDICINE

1. Textbook of Preventive & Social Medicine, Dr. J E Park.

COMMUNITY BASED REHABILITATION

1. Rehabilitation – the use of theories and model, Davis S
2. Physical medicine and rehabilitation, Sullivan
3. Community based rehabilitation of people with disabilities- S Pruthvish
4. Disability (permanent physical impairment)Assessment And Certification WHO-DAS
5. Physiotherapy in paediatrics. Shepherd R
6. Physical medicine and rehabilitation Braddom R
7. Community based rehabilitation Peat M
8. Textbook of sociology for physiotherapist students- Neeraja
9. Textbook of community medicine and community rehabilitation Dr Bhaskara Rao
10. Textbook of Preventive & Social Medicine, Dr. J E Park.
11. Textbook of community nursing Neelam kumara
12. Geriatric physical therapy Guccione
13. Physiotherapy practice in residential aged care

ETHICS, ADMINISTRATION & SUPERVISION

1. Medical Ethics by C M Francis.
2. George V Lobo – Current Problems in Medical Ethics.
3. Consumer Protection Act – 1986, Government of India, New Delhi.
4. Francis C M – Hospital Administration.
5. Davies, R and Macaulay, BMC – Hospital Planning and Administration.
6. Health Services Management, Analysis& Application , Wadsworth Publishing Company, Belmont

EVIDENCE BASED PHYSIOTHERAPY

Evidence-based rehabilitation: a guide to practice Law M, MacDermid J.

SAMPLE QUESTIONS

NEUROLOGY AND NEUROSURGERY

1. Define and classify polyneuropathy and discuss the management of diabetic neuropathy
2. Explain axon and dendrite with labelled diagram
3. Differentiate between UMN and LMN lesion
4. Discuss the clinical features of minimal brain damage
5. Explain alcoholic neuropathy
6. Glassgow coma scale
7. Bulbocavernous reflex
8. Uses of Lumbar puncture
9. Optic nerve testing
10. Classification of muscular dystrophy
11. Enumerate various functions of Basal ganglia
12. Synergy
13. Computerized tomography
14. Neurogenic bladder
15. Explain Chronic reaction of degeneration
16. Define Rigidity and Spasticity
17. Care of diabetic foot
18. Difference between Bulbar and Pseudobulbar palsy
19. Write a note on Reflex sympathetic dystrophy
20. Trigeminal neuritis

NEURO PHYSIOTHERAPY

1. Discuss the management of head injury patient in various phases of rehabilitation
2. Define Duchene's muscular dystrophy and discuss the management of the same
3. Explain the assessment of a patient with MCA lesion and explain the role of Physiotherapist in rehabilitation of the same.
4. Explain bell's palsy and management of the same
5. Roods approach
6. Write in detail about the assessment protocol of neurological conditions
7. Discuss the classical signs of Parkinson's disease and management of same
8. Discuss assessment and treatment of cerebellar dysfunctions
9. Discuss the principles of all the neurodevelopmental approaches in detail
10. Primitive reflexes
11. Neonatal screening
12. Ideomotor apraxia
13. Vertical disorientation
14. A 60 year old lady has been suffering from Right PCA infract involving the thalamus and posterior horn of internal capsule since 20 days. Outline her clinical picture and Physiotherapy management

15. A 40 year old male has been diagnosed as a complete brachial plexus injury. Outline the long term goals and discuss the management in detail
16. Discuss the assessment and outline the management of a 8 year old girl with Spina bifida at L4 – L5
17. A 8 year old suffers from C5 – C6 dislocation after a fall from a height. Outline the clinical picture and discuss the management for the same
18. Discuss the management of a 15 year old boy diagnosed with Acute Transverse Myelitis of the L1
19. Explain the principles of bobath technique in Stroke
20. Outline the post surgical assessment of a patient who has undergone Craniotomy

COMMUNITY MEDICINE

1. Define Epidemiology. What is the use of doing epidemiological studies
2. Define Infant Mortality rate. Mention the various factore responsible for IMR. What measures have been taken to prevent IMR
3. Field level classification of Leprosy. Mention the drugs used in management of Leprosy
4. Sickness absenteeism
5. Nutritional problems in public health
6. ICDS
7. Water borne diseases
8. Approach to health education
9. Define biomechanical waste. Mention the various treatment and disposal technologies for health care waste
10. Control of typhoid fever
11. Define Incidence and prevalence
12. Epidemiological triad
13. Mention the various methods of mosquito control measures
14. Mention the various components under RCH program
15. Composition of ORS
16. Differentiate between impairment and handicap with example
17. Rural health scheme
18. Genetic counselling and its importance
19. Two international level health programs
20. What are the problems of disabled in urban community

COMMUNITY BASED REHABILITATION

1. Discuss about three tier health care delivery system in India
2. What is Community awareness? Explain various community awareness programmes
3. Explain about group physiotherapy in community
4. Explain in detail about Role of Voluntary organization in CBR
5. Write about disability evaluation and uses of evaluation findings
6. Describe ergonomics. Write Occupational hazard secondary to chemical agents and your role in prevention of hazard
7. Vocational training – need and evaluation
8. Rehabilitation of spastic diplegic cerebral palsy child
9. Legal aspects of rehabilitation
10. Maternal nutrition and education
11. Architectural barriers for disabled
12. Explain low cost assistive aids
13. Explain about District Rehabilitation centre
14. Discuss Institution Based rehabilitation versus Community Based Rehabilitation
15. Explain about health delivery systems in India
16. Hurdles in CBR
17. Survey and its importance
18. Environment modifications for wheel chair bound paraplegic
19. Discuss health promotion in your work place
20. Bracing materials in rural rehabilitation

ANTI – RAGGING AFFIDAVIT FROM STUDENT

ANNEXURE I AFFIDAVIT

BY THE STUDENT

I,…….(full name of student with admission/registration/enrolment number) S/o D/o Mr./Mrs./Ms…..., having been admitted to ……..……..(name of the institution)……., have received a copy of the UGC Regulations on Curbing the Menace of Ragging in Higher Educational Institutions, 2009, (hereinafter called the "Regulations"), carefully read and fully understood the provisions contained in the said Regulations.

2). I have, in particular, perused clause 3 of the Regulations and am aware as to what constitutes ragging.

3). I have also, in particular, perused clause 7 and clause 9.1 of the Regulations and am fully aware of the penal and administrative action that is liable to be taken against me in case. I am found guilty of or abetting ragging, actively or passively, or being part of a conspiracy to promote ragging.

4). I hereby solemnly aver and undertake that

a) I will not indulge in any behaviour or act that may be constituted as ragging under clause 3 of the Regulations.
b) I will not participate in or abet or propagate through any act of commission or omission that may be constituted as ragging under clause 3 of the Regulations.

5). I hereby affirm that, if found guilty of ragging, I am liable for punishment according to clause 9.1 of the Regulations, without prejudice to any other criminal action that may be taken against me under any penal law or any law for the time being in force.

6). I hereby declare that I have not been expelled or debarred from admission in any institution in the country on account of being found quality of, abetting or being part of a conspiracy to promote, ragging; and further affirm that, in case the declaration is found to be untrue, I am aware that my admission is liable to be cancelled.

Declared this ……day of ……month of…..... year.

_____

Address: **Signature of deponent**

Name:

Telephone/Mobile No.:

ANTI RAGGING AFFIDAVIT FROM PARENTS

ANNEXURE II

AFFIDAVIT BY PARENT/GUARDIAN

I,Mr./Mrs./Ms…..... (full name of parent/guardian)father/mother/guardian of ……(full name of student with admission/registration/enrolment number……..., having been admitted to ……..(name of the institution)……., have received a copy of the UGC Regulations on Curbing the Menace of Ragging in Higher Educational Institutions, 2009, (hereinafter called the "Regulations"), carefully read and fully understood the provisions contained in the said Regulations.

2). I have, in particular, perused clause 3 of the Regulations and am aware as to what constitutes ragging.

3). I have also, in particular, perused clause 7 and clause 9.1 Regulations and am fully aware of the penal and administrative action that is liable to be taken against may ward in case he/she is found guilty of or abetting ragging, actively or passively, or being part of a conspiracy to promote ragging.

4). I hereby solemnly aver and undertake that

a) My ward will not indulge in any behavior or act that may be constituted as ragging under clause 3 of the Regulations.
b) My ward will not participate in or abet or propagate through any act of commission or omission that may be constituted as ragging under clause 3 of the Regulations.

5). I hereby affirm that, if found guilty of ragging, my ward is liable for punishment according to clause 9.1 of the Regulations, without prejudice to any other criminal action that may be taken against my ward under any penal law or any law for the time being in force.

6). I hereby declare that my ward has not been expelled or debarred from admission in any institution in the country on account of being found quality of, abetting or being part of a conspiracy to promote, ragging; and further affirm that, in case the declaration is found to be untrue, the admission of my ward is liable to be cancelled.

Declared this ……day of ……month of…..... year.

Address:

Signature of deponent

Name:

Telephone/Mobile No.: