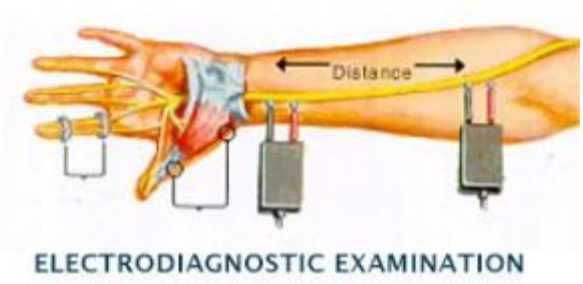
STUDY GUIDE

REHABILITATION MODULE

FOURTH YEAR MBBS
SEMESTER 8

24th April – 3rd May 2019
Duration: 2 week



ELECTRODIAGNOSTIC EXAMINATION

LIAQUAT NATIONAL HOSPITAL
& MEDICAL COLLEGE

STUDY GUIDE FOR REHABILITATION MODULE

Module name: **Rehabilitation**

Semester: **Eight** *Year:* ***Four*** *Duration:* ***2 weeks (April - May 2019)***

Timetable hours: **Interactive Lectures, Case-Based Discussion (CBD), Clinical Rotations, Presentations, Demonstrations, Skills, Self-Study**

MODULE INTEGRATED COMMITTEE

MODULE COORDINATOR:	Dr. Saba Zaidi (Neurology)
CO-COORDINATOR:	Dr. Sobia Ali (DHCE)

DEPARTMENTS' & RESOURCE PERSONS' FACILITATING LEARNING

CLINICAL AND ANCILLARY DEPARTMENTS
CARDIOLOGY Dr. Nouman Kakepoto
NEUROLOGY Dr. Syed Ahmed Asif Dr. Saba Zaidi
OCCUPATIONAL THERAPY: Dr. Naveed-ud-Din Ahmed Ms. Tooba Jarrar
ORTHOPEDICS: Dr. Kazim Rahim Dr. Muhammad Sufyan
PHYSIOTHERAPY Mr. Syed Hassan Abbas Rizvi Mr. Syed Muhammad Fahad
DEPARTMENT of HEALTHCARE EDUCATION • Professor Nighat Huda • Dr. Sobia Ali • Dr. Afifa Tabassum • Dr. M. Suleman Sadiq • Dr. Mehnaz Umair
LNH&MC MANAGEMENT Professor Karimullah Makki, Principal LNH&MC Dr. Shaheena Akbani, Director A.A & R.T LNH&MC
STUDY GUIDE COMPILED BY: • Dr. Sobia Ali, Associate Professor, Department of Health Care Education

INTRODUCTION

WHAT IS A STUDY GUIDE?

It is an aid to:

- Inform students how student learning program of the semester-wise module has been organized
- Help students organize and manage their studies throughout the module
- Guide students on assessment methods, rules and regulations

THE STUDY GUIDE:

- Communicates information on organization and management of the module.
  This will help the student to contact the right person in case of any difficulty.
- Defines the objectives which are expected to be achieved at the end of the module.
- Identifies the learning strategies such as lectures, small group teachings, clinical skills, demonstration, tutorial and case based learning that will be implemented to achieve the module objectives.
- Provides a list of learning resources such as books, computer assisted learning programs, web- links, journals, for students to consult in order to maximize their learning.
- Highlights information on the contribution of continuous and semester examinations on the student's overall performance.
- Includes information on the assessment methods that will be held to determine every student's achievement of objectives.
- Focuses on information pertaining to examination policy, rules and regulations.

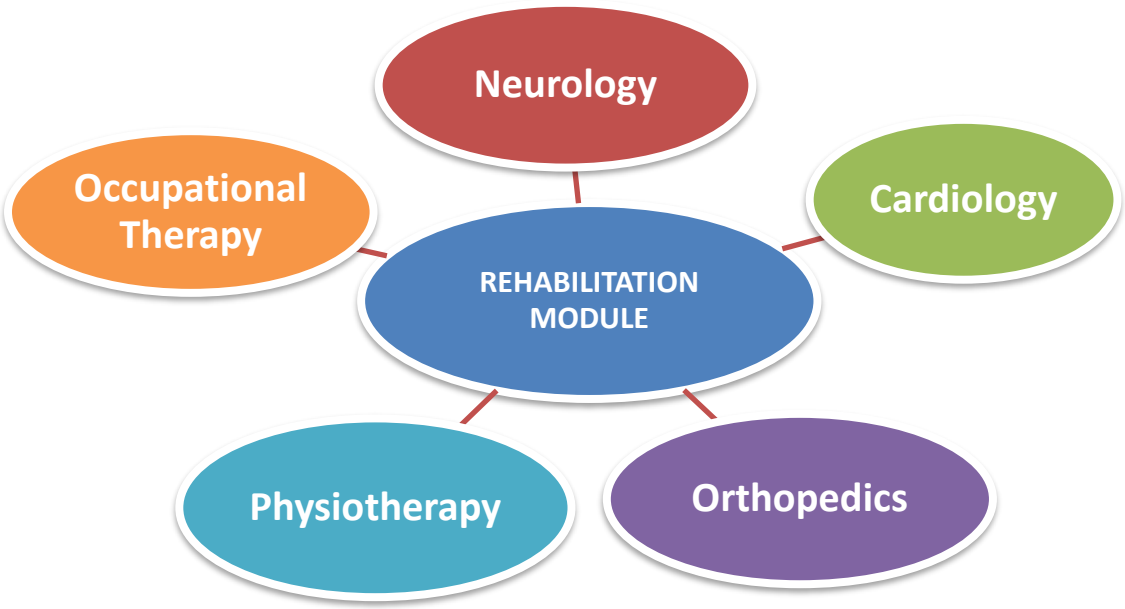
CURRICULUM FRAMEWORK

Students will experience *integrated curriculum* similar to previous modules of all 7 semesters**.**

INTEGRATED CURRICULUM comprises system-based modules such as Eye/ENT, dermatology, genetics, rehabilitation and neurosciences-II & psychiatry modules which links basic science knowledge to clinical problems. Integrated teaching means that subjects are presented as a meaningful whole. Students will be able to have better understanding of basic sciences when they repeatedly learn in relation to clinical examples.

LEARNING EXPERIENCES: Case based integrated discussions, Task oriented learning followed by task presentation, skills acquisition in skills lab, computer-based assignments, learning experiences in clinics, wards.

INTEGRATING DISCIPLINES OF REHABILITATION MODULE



LEARNING METHODOLOGIES

The following teaching / learning methods are used to promote better understanding:

- Interactive Lectures
- Small Group Discussion
- Case- Based Discussion (CBD)
- Clinical Experiences
  - Clinical Rotations
- Skills session

INTERACTIVE LECTURES: In large group, the lecturer introduces a topic or common clinical conditions and explains the underlying phenomena through questions, pictures, videos of patients' interviews, exercises, etc. Students are actively involved in the learning process.

SMALL GROUP SESSION: This format helps students to clarify concepts, acquire skills or desired attitudes. Sessions are structured with the help of specific exercises such as patient case, interviews or discussion topics. Students exchange opinions and apply knowledge gained from lectures, tutorials and self study. The facilitator role is to ask probing questions, summarize, or rephrase to help clarify concepts.

CASE-BASED DISUCSSION (CBD): A small group discussion format where learning is focused around a series of questions based on a clinical scenario. Students' discuss and answer the questions applying relevant knowledge gained previously in clinical and basic health sciences during the module and construct new knowledge. The CBD will be provided by the concern department.

CLINICAL LEARNING EXPERIENCES: In small groups, students observe patients with signs and symptoms in hospital wards, clinics and outreach centers. This helps students to relate knowledge of basic and clinical sciences of the module and prepare for future practice.

- **CLINICAL ROTATIONS:** In small groups, students rotate in different wards like Medicine, Pediatrics, Surgery, Obs & Gyne, ENT, Eye, Family Medicine clinics, outreach centers & Community Medicine experiences. Here students observe patients, take histories and perform supervised clinical examinations in outpatient and inpatient settings. They also get an opportunity to observe medical personnel working as a team. These rotations help students relate basic medical and clinical knowledge in diverse clinical areas.

SKILLS SESSION: Skills relevant to respective module are observed and practiced where applicable in skills laboratory.

SELF-DIRECTED STUDY: Students' assume responsibilities of their own learning through individual study, sharing and discussing with peers, seeking information from Learning Resource Center, teachers and resource persons within and outside the college. Students can utilize the time within the college scheduled hours of self-study.

SEMESTER 8 MODULE 4 : REHABILITATION

INTRODUCTION

The WHO definition of rehabilitation, approved by the World Health Assembly, (WHA May 2001) is 'The use of all means aimed at reducing the impact of disabling and handicapped conditions, and at enabling disabled people to achieve optimal social integration'. Rehabilitation Medicine is offered to patients to assist them in achieving their maximum level of independence after an injury or illness. Rehabilitation offers a unique approach to patient management in which the treatment is focused on a patient holistically rather than an isolated painful condition. As such, the patient is managed through a patient-centered, multidisciplinary approach in which the specialists of various disciplines (e.g., physician, occupational therapist [OT] and physical therapist [PT], psychologist, nurse, social worker) contribute their expertise to an ongoing patient's care.

This module will provide a description of acute and chronic illness or injury together with a discussion of the basic framework of approaching patients from holistic point of view. The basic concepts of obtaining a functional history and assessing disease pattern, with various assessment techniques and treatment strategies will be discussed in this module. At the end, students will realize the contribution of each member of the interdisciplinary team.

COURSE OBJECTIVES AND STRATEGIES

By the end of Rehabilitation module students should be able to:

TOPICS & OBJECTIVES	FACULTY	TEACHING STRATEGY
Rehabilitation medicine: Introduction		
• Define concepts of primary, secondary and tertiary prevention in the context of rehabilitation medicine	Neurology	Interactive Lecture
• Describe the potentially disabling consequences of disease, disorders and injury		
Impairment and disability and handicap		
• Explain the purpose of rehabilitation		
• Discuss the rehabilitation journey following an amputation through the consideration of key factors from a physical and psychosocial perspective		
• Describe concepts of impairment, disability, activity limitation and participation restriction		
• Describe epidemiology, pathophysiology, clinical features and complications of diseases, disorders and injuries that may lead to impairment and disability		
Rehabilitation evaluation		
• Describe current tools and systems for the measurement of impairment, disability and activity limitation or participation restriction	Physiotherapy	Interactive Lecture
Assessment of disabilities		
• Describe the potential role and benefit of specific medical and rehabilitation therapies in the assessment and management of disability	Neurology	Interactive Lecture
• Interpret relevant diagnostic investigations, including radiological and electro-diagnostic tests		

Community based rehabilitation		
• Define community based rehabilitation	Occupational Therapy	Interactive Lecture
• Describe the strategies of incorporating rehabilitation in the community		
• List the benefits of community based rehabilitation		
Assistive Technology (AT)		
• Identify the steps in the clinician's assessment of AT for individuals with disabilities	Occupational Therapy	Case-Based Discussion
• Discuss the adaptive techniques and assistive devices for ADL		
Management of Arthritis		
• Describe assessment of patients presenting with complications of arthritis	Physiotherapy	Case-Based Discussion
• Explain the rehabilitation interventions to improve joint range of movement (ROM), muscular strength, pain relief, balance and coordination		
Paediatric Rehabilitation		
• Summarize the theories of child development	Neurology	Interactive Lecture
• Describe normal physical and cognitive developmental milestones		
• Describe normal sensory and social-emotional developmental milestones		
• Describe assessment methods and rehab interventions for paediatric patients which includes Cerebral Palsy, Talipes Equino Varus, Myopathies, Spina Bifida from physiotherapy perspective	Physiotherapy	Interactive Lecture
• Describe assessment methods and rehab interventions for paediatric patients which includes Cerebral Palsy, Talipes Equino Varus, Myopathies, Spina Bifida from occupational therapy perspective	Occupational Therapy	Interactive Lecture

Rehabilitation management of common neurological disorders		
• Describe a comprehensive assessment plan for a patient presenting with a neurological disease	Physiotherapy	Interactive Lecture
• Formulate differential diagnosis and therapeutic interventions for neurological conditions from physiotherapy and Occupational Therapy perspective	Physiotherapy + Occupational Therapy	Interactive Lecture
• Justify a rehabilitation management plan that specifies appropriate modalities of assessment and treatment from physiotherapy and Occupational Therapy perspective	Physiotherapy + Occupational Therapy	Interactive Lecture
Rehabilitation management of common musculoskeletal disorders		
• Describe a comprehensive assessment of a patient presenting with musculoskeletal disease and evaluate the potential for rehabilitation	Physiotherapy	Interactive Lecture followed by Hands-On
• Formulate differential diagnosis and therapeutic interventions for musculoskeletal conditions		
• Justify a rehabilitation management plan that specifies appropriate modalities of assessment and treatment		
Rehabilitation management of common cardiac conditions		
• Describe a comprehensive assessment of a patient presenting with common cardiac conditions and evaluate the potential for rehabilitation	Cardiology	Interactive Lecture
• Formulate differential diagnosis and therapeutic interventions for common cardiac conditions		
• Justify a rehabilitation management plan that specifies appropriate modalities of assessment and treatment	Physiotherapy	Interactive Lecture followed by demonstration
Rehabilitative Management of Stroke		
• Explain the process of assessment and management of rehabilitation of a patient with cerebro-vascular disease from physiotherapy and Occupational Therapy perspective	Physiotherapy + Occupational Therapy	Interactive Lecture followed by demonstration + Case-Based Discussion

• Summarize rehabilitation management of stroke deficit from physiotherapy and Occupational Therapy perspective	Physiotherapy + Occupational Therapy	Interactive Lecture followed by demonstration + Case-Based Discussion
Rehabilitation of Amputee		
• Describe epidemiology of major limb loss including etiology, incidence, morbidity and mortality	Orthopedics	Interactive Lecture
• Summarize surgical principles of limb amputation and levels of amputation including digit(s), thumb, partial hand, trans-carpal wrist disarticulation trans-radial, elbow disarticulation etc		
Prosthesis Upper & Lower Limbs		
• Describe components of the limb prosthesis: types, characteristics and indications	Physiotherapy	Interactive Lecture followed by demonstration
• Explain postoperative patient management		
• Justify the prescription of appropriate temporary and definitive prostheses		
Management of Fractures		
• Summarize rehabilitation methods following surgical intervention for fractures	Orthopedics	Small Group Discussion
Rehabilitative Management of Osteoporosis		
• Justify a rehabilitation management plan for osteoporosis	Orthopedics	Small Group Discussion

Apart from attending daily scheduled sessions, students too should engage in self-study to ensure that all the objectives are covered

LEARNING RESOURCES

SUBJECT	RESOURCES	
	TOPIC	**REFERENCED BOOKS**
Occupational Therapy	Assessment of disabilities	Quick reference by Kehtlyn L Reed, Second Edition
	Pediatric rehabilitation	Occupational Therapy/Implementation of occupational therapy by Wllard's & Speckman's/Patrica Ann Ramm, Sixth Edition
	Rehabilitation of Amputee	The Practice of Occupational Therapy by Ann Turner, Second Edition
	Rehabilitation management of common neurological disorders	Quick reference/ The Practice of Occupational Therapy by Kethlyn L Reed/Ann Turner
	Stroke management	The Practice Of Occupational Therapy by Ann Turner/Willard & Specksman's, Second/Sixth Edition
	Assistive techniques	Quick reference/ The Practice Of Occupational Therapy by Kethlyn L Reed/Ann Turner, Second Edition
	Community based rehabilitation	Disable village by David Werner
Orthopedics	**TEXT BOOK** 1. Bailey & Love's Short Practice of Surgery , 26th Edition	
	WEBSITES (ORTHOPAEDICS): www.orthobullets.com	
Physiotherapy	**REFERENCED BOOK** 1. Neuromuscular Rehabilitation by Darcy Umphred, Sixth edition 2. Assesment of Neuromusculoskeletal examination by Nicola J Petty 3rd edition 3. Optimizing motor control by Carr and Shephered	

ADDITIONAL LEARNING RESOURCES

Hands-on Activities/ Practical	Students will be involved in Practical sessions and hands-on activities that link with the Rehabilitation Module to enhance learning.
Museum	Models available in the museum are a rich learning resource for quick review of anatomy and related educational activities
Skills Lab	Skills acquisition in a simulated environment in the skills lab involving experiential learning will ensure patient safety and will also help to build confidence in approaching the patients
Videos/Podcasts	Videos and podcasts will familiarize the student with the procedures and protocol which they can watch and listen to at any time and wherever they are, as part of task oriented learning
Internet Resources	Students will use easily accessible internet resources with added time flexibility to enrich and update their knowledge and its application

ASSESSMENT METHODS:

Theory:

- **Best Choice Questions (BCQs)** also known as MCQs (Multiple Choice Questions) are used to assess objectives covered in each module.

- A BCQ has a statement or clinical scenario followed by four options (likely answer).
- Students after reading the statement/scenario select ONE, the most appropriate response from the given list of options.
- **Correct answer carries one mark, and incorrect 'zero mark'. There is no negative marking.**
- Students mark their responses on specified computer-based/OMR sheet designed for LNHMC.

OSPE/OSCE: Objective Structured Practical/Clinical Examination:

- Each student will be assessed on the same content and have same time to complete the task.
- Comprise of 12-25 stations.
- Each station may assess a variety of clinical tasks, these tasks may include history taking, physical examination, skills and application of skills and knowledge
- Stations are observed, unobserved, interactive and rest stations.
- Observed and interactive stations will be assessed by internal or external examiners.
- Unobserved will be static stations in which there may be an X-ray, Labs reports, pictures, clinical scenarios with related questions for students to answer.
- Rest station is a station where there is no task given and in this time student can organize his/her thoughts.

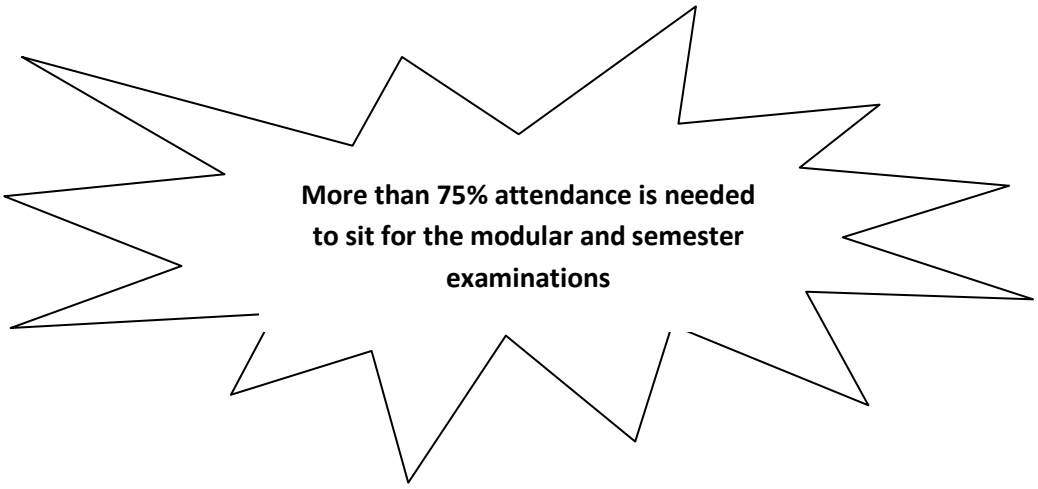
Internal Evaluation

- Students will be assessed to determine achievement of module objectives through the following:
  - **Module Examination:** will be scheduled on completion of each module. The method of examination comprises theory exam which includes BCQs and OSPE (Objective Structured Practical Examination).
  - **Graded Assessment of students by Individual Department**: Quiz, viva, practical, assignment, small group activities such as CBL, TBL, TOL, online assessment, ward activities, examination, and log book.
- Marks of both modular examination and graded assessment will constitute 20% weightage.
- As per JSMU policy, this 20% will be added by JSMU to Semester Examination.

Example : Number of Marks allocated for Semester Theory and Internal Evaluation			
Semester	**Semester Examination Theory Marks**	**Internal Evaluation (Class test + Assignments + Modular Exam)**	**Total (Theory)**
	80%	20%	100%

Formative Assessment

- Individual department may hold quiz or short answer questions to help students assess their own learning. The marks obtained are not included in the internal evaluation



MODULAR EXAMINATION RULES & REGULATIONS (LNH&MC)

- Student must report to examination hall/venue, 30 minutes before the exam.
- **Exam will begin sharp at the given time.**
- No student will be allowed to enter the examination hall after 15 minutes of scheduled examination time.
- Students must sit according to their roll numbers mentioned on the seats.
- **Cell phones are strictly not allowed in examination hall.**
- If any student is found with cell phone in any mode (silent, switched off or on) he/she will be not be allowed to continue their exam.
- No students will be allowed to sit in exam without University Admit Card, LNMC College ID Card and Lab Coat
- Student must bring the following stationary items for the exam: Pen, Pencil, Eraser, and Sharpener.
- Indiscipline in the exam hall/venue is not acceptable. Students must not possess any written material or communicate with their fellow students.

JSMU Grading System

- It will be based on GPA – 4 system

Marks obtained in Percentage range	Numerical Grade	Alphabetical Grade
80-100	4.0	**A+**
75-79	4.0	**A**
70-74	3.7	**A-**
67-69	3.3	**B+**
63-66	3.0	**B**
60-62	2.7	**B-**
56-59	2.3	**C+**
50-55	2.0	**C**
<50 Un-grade-able	0	**U**

- A candidate obtaining GPA less than 2.00 (50%) is declared un-graded (fail).
- Cumulative transcript is issued at the end of clearance of **all** modules.

SCHEDULE:

WEEKS	4th Year SEMESTER 8	MONTH
WEEK 1	OPHTHALMOLOGY/ ENT	1st April 2019
WEEK 2		
WEEK 3		20th April 2019
	MODULAR EXAM	22nd April 2019
WEEK 1	REHABILITATION	24th April 2019
WEEK 2		3rd May 2019
WEEK 1	GENETICS	6th May –11th May 2019*
WEEK 1	DERMATOLOGY	13th May 2019*
WEEK 2		25th May 2019*
	DERMATOLOGY, GENETICS & REHABILITATION MODULAR EXAM**	May 2019*
WEEK 1	NEUROSCIENCES-II & PSYCHIATRY	June 2019*
WEEK 2		
WEEK 3		
WEEK 4		
WEEK 5		
WEEK 6		
WEEK 7		
WEEK 8		Aug 2019*
	MODULAR EXAM	Aug 2019*

*Final dates will be announced later

** There will be combined module exam for Dermatology, Genetics and Rehabilitation modules