

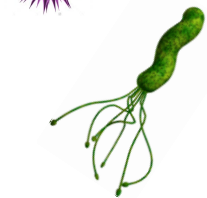
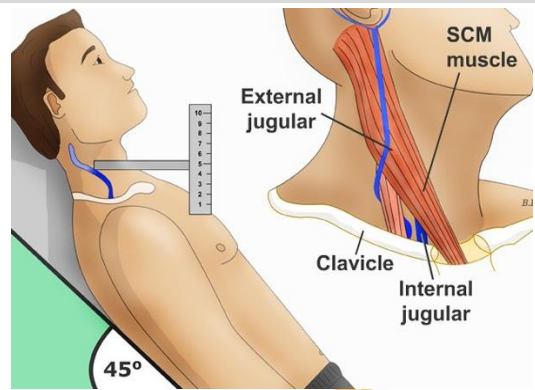


STUDY GUIDE

INFECTIOUS DISEASES MODULE

THIRD YEAR MBBS SEMESTER 5

03 Dec 2018– 05 Jan 2019



**LIAQUAT NATIONAL HOSPITAL
& MEDICAL COLLEGE
2018-2019**



STUDY GUIDE FOR INFECTIOUS DISEASES MODULE

S.No	CONTENTS	Page No
1	Overview	3
2	Introduction to Study Guide	4
3	Learning Methodologies	5
4	Module 1: Infectious Diseases	7
5	Introduction	7
5.1	Objectives and Strategies	8
5.2	Learning Resources	17
6	Assessment Methods	19
7	Modular Examination Rules and Regulations (LNMC)	21
8	Schedule	22

Module name: Infectious Diseases

Semester: Five

Year: Three

Duration: 5 weeks

Timetable hours: Lectures, Case-Based Integrated Learning (CBIL), Clinical Rotations, Practical, Demonstrations, Skills, Self-Study

Credit hours: 3 credit hours in theory and 1.5 credit hours in practical

MODULE INTEGRATED COMMITTEE

MODULE COORDINATORS:	<ul style="list-style-type: none"> • Dr. Sadia Amir (Medicine) • Dr. Beenish Syed (Medicine)
CO-COORDINATOR:	<ul style="list-style-type: none"> • Dr. Afifa Tabassum (DHCE)

DEPARTMENTS & RESOURCE PERSONS

BASIC HEALTH SCIENCES	CLINICAL AND ANCILLARY DEPARTMENTS
COMMUNITY MEDICINE <ul style="list-style-type: none"> • Professor Rafiq Soomro 	GENERAL MEDICINE <ul style="list-style-type: none"> • Professor KU Makki
FORENSIC MEDICINE <ul style="list-style-type: none"> • Professor Murad Zafar 	FAMILY MEDICINE <ul style="list-style-type: none"> • Dr. Faridah Amin
MICROBIOLOGY <ul style="list-style-type: none"> • Professor Syed Khursheed H. Hashmi 	PEDIATRICS <ul style="list-style-type: none"> • Professor Samina Shamim
PHARMACOLOGY <ul style="list-style-type: none"> • Professor Nazir Ahmad Solangi 	RESEARCH & SKILLS DEVELOPMENT CENTER <ul style="list-style-type: none"> • Dr. Kahkashan Tahir
RESEARCH <ul style="list-style-type: none"> • Dr. Shaheena Akbani 	BIOETHICS <ul style="list-style-type: none"> • Dr. Saleha Shahzad
DEPARTMENT of HEALTH CARE EDUCATION Professor Nighat Huda Dr. Sobia Ali Dr. Afifa Tabassum Dr. Muhammad Suleman Sadiq Dr. Mehnaz Umair	
LNH&MC MANAGEMENT <ul style="list-style-type: none"> • Professor KU Makki, Principal, LNH&MC • Dr. Shaheena Akbani, Director A.A & R.T, LNH&MC 	
STUDY GUIDE COMPILED BY: Dr. Afifa Tabassum, Senior Lecturer, DHCE	

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:

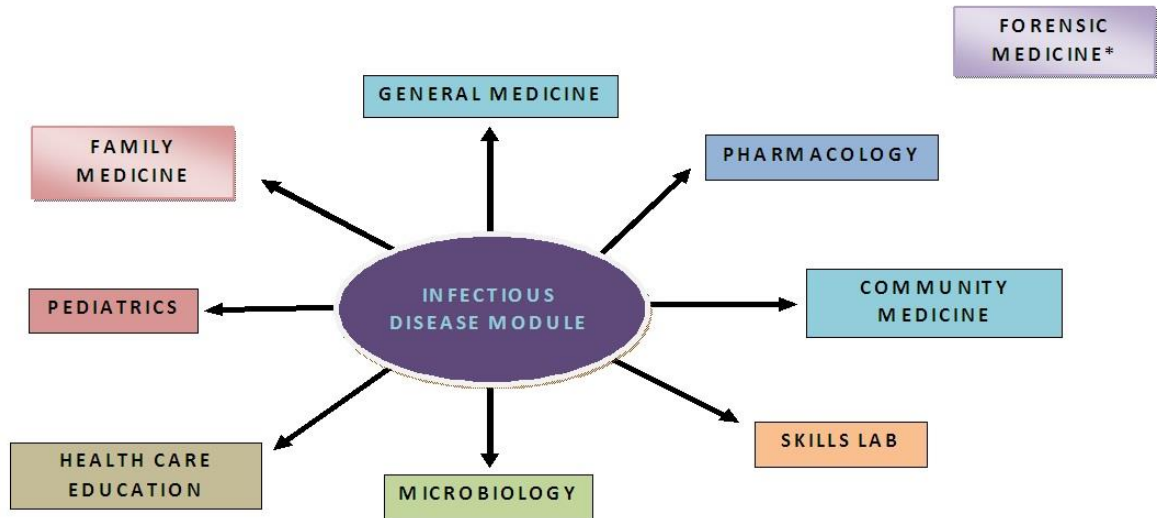
- Communicates information on organization and management of the module.
This will help the student to contact the right person in case of any difficulty.
- Defines the objectives which are expected to be achieved at the end of the module.
- Identifies the learning strategies such as lectures, small 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 4 semesters.

INTEGRATED CURRICULUM comprises of system-based modules such as Infectious Diseases, Hematology, Respiratory system and CVS 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 discussions, skills acquisition in skills lab. computer-based assignments, learning experiences in clinics, wards, and outreach centers

INTEGRATING DISCIPLINES OF INFECTIOUS DISEASE MODULE

Note: *Forensic Medicine Curriculum will run parallel in 5th and 6th Semester

LEARNING METHODOLOGIES

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

- Interactive Lectures
- Small Group Discussion
- Case- Based Integrated Learning (CBIL)
- Clinical Experiences
 - Clinical Rotations
 - Experience in LNH outreach centers
- Practicals
- Skills session
- Self-Directed Study

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 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 INTEGRATED LEARNING (CBIL): 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 in clinical and basic health sciences during the module.

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.
- **EXPERIENCE IN LNH OUTREACH CENTERS:** Learning at outreach centers of LNH have been organized and incorporated as part of training of third year medicinal students. The objective of these visits is to provide clinical training experiences for students in primary care settings.

PRACTICAL: Basic science practicals related to pharmacology, microbiology, forensic medicine, and community medicine are schedule for student learning.

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 5 MODULE 1 : INFECTIOUS DISEASES

INTRODUCTION

Infectious diseases remain a serious public health problem in the 21st century. WHO has classified Infectious diseases as the second leading cause of death with approximately 15 million deaths worldwide every year. HIV/AIDS, tuberculosis, and malaria have been nicknamed the 'big three' because of their important impact on global human health.

At home, the story is no different. Pakistan is one of several countries, which together bear 95% of the burden of infectious diseases. Pakistan is **ranked fifth** out of twenty-two on the list of high-burden tuberculosis countries. An alarming average of about one million lives are also claimed yearly by malaria.¹ Worst of all, Pakistan is one of the two remaining countries where **polio is still endemic**². Hence, it is important to spread knowledge and information on the importance of immunization to the general public. Other factors such as overcrowding, poor hand washing practices and lack of effective prescriptions contribute to further worsening the situation. An estimated 32% of general practitioners in Pakistan fail to administer the proper medication thus increasing the disease burden.

It is therefore important as 3rd year medical students to enhance your existing knowledge of the prevalent infectious diseases, and build greater understanding and ability to recognize signs and symptoms, and relate with appropriate investigations, and therapeutics.

Students will experience orientation to history taking, professional behaviors and issues related to healthcare-associated infections. Clinical orientation at LNH and its outreach centers along with community medicine experience will help students to value the concepts of preventive medicine and experience general public health issues with the cost effective measures taken to treat long standing illnesses.

References:

1. USAID Health: Infectious Diseases, Tuberculosis, Countries, Pakistan." *U.S. Agency for International Development*.
2. <http://www.cdc.gov/mmwr/volumes/65/wr/mm6518a4.htm>

COURSE OBJECTIVES AND STRATEGIES

At the end of the module the students will be able to:

OUTCOMES & OBJECTIVES	FACULTY	LEARNING STRATEGY
Introduction to Infectious Diseases		
<ul style="list-style-type: none"> Explain the importance of Infectious Diseases 	Medicine	Interactive lecture
<ul style="list-style-type: none"> Discuss history taking of patients with suspected infectious diseases 	Family medicine	Interactive lecture
<ul style="list-style-type: none"> Discuss the steps in general physical examination and specific systemic examination of patients with infectious diseases 	Medicine	Interactive lecture
<ul style="list-style-type: none"> Define the following terms: infection, infestation, infection agent, control, elimination and eradication, agent, host and environment 	Community Medicine	Interactive lecture
<ul style="list-style-type: none"> Discuss the role of incubation period, serial time period in control of infection Describe the epidemiologic triangle 		Interactive lecture
<ul style="list-style-type: none"> Classify bacterial, viral, fungal and parasitic diseases Describe clinical significance of infectious diseases with respect to organ systems 	Microbiology	Interactive lecture
<ul style="list-style-type: none"> Interpret the investigations relevant to infectious diseases 	Microbiology	Practical
<ul style="list-style-type: none"> Discuss the importance of bacterial culture for diagnosis of pathogen 		Practical
<ul style="list-style-type: none"> Discuss the classification, mechanism of action, clinical uses and pharmacology of the following antimicrobial agents: <ol style="list-style-type: none"> Cell Wall Inhibitors Protein Synthesis Inhibitors Explain the major action and effects of drugs used to treat infectious diseases Identify criteria, used to select an effective antimicrobial agent Explain the difference between bacteriostatic and bactericidal drugs Explain Minimum Inhibitory Concentration / Minimum Bactericidal Concentration Explain the rational use of antibiotics Elaborate the mechanism of resistance to antibiotics Explain the prophylactic use of antibiotics 	Pharmacology	Interactive lecture

<ul style="list-style-type: none"> Discuss empirical and definitive therapy List the major adverse effects of various antibiotics 		
<p>Antimetabolites drugs:</p> <ul style="list-style-type: none"> Classify the antimetabolites Discuss the mechanism of action ,clinical uses and adverse effects of anti metabolites Explain the basic and clinical pharmacokinetics and pharmacodynamics. 	Pharmacology	Interactive lecture
<ul style="list-style-type: none"> Perform general physical examination 	Skills Lab	Videos & Small Group hands-on session
Control of infection and communicable diseases		
<ul style="list-style-type: none"> Differentiate between infectious and communicable diseases Differentiate between the disinfection and sterilization Describe control measures for infectious & communicable diseases Explain the role of immunoprophylaxis & screening in the control of infection 	Community Medicine	Small group discussion
Medical ethics		
<ul style="list-style-type: none"> Describe consent and its types. Discuss the criteria for giving valid consent and exemptions of consent 	Family medicine/ Bioethics	Small group discussion
<ul style="list-style-type: none"> Discuss euthanasia and physician-assisted suicide 		Case based discussion
IMNCI		
<ul style="list-style-type: none"> Explain the role & goals of IMNCI Describe the components & structure of IMNCI. Describe the case management strategy of IMNCI 	Pediatrics	Interactive lecture
Fever with Rash		
<ul style="list-style-type: none"> Explain the pathogenesis of fever/fever with rash 	Microbiology	Interactive lecture
<ul style="list-style-type: none"> Discuss clinical presentations and management of fever with rash in adults 	Medicine	Interactive lecture
<ul style="list-style-type: none"> Discuss the dynamics of transmission of measles and its prevention Describe the clinical features, assessment and diagnosis of measles Explain the role of vaccines in the prevention of measles 	Community Medicine	Interactive lecture

<ul style="list-style-type: none"> Discuss measles, rubella, varicella, mumps 	Microbiology	Interactive lecture
<ul style="list-style-type: none"> Differentiate among various types of rashes in children Diagnose measles based on clinical features. Explain the management protocol for measles with complications 	Pediatrics	Interactive lecture
<ul style="list-style-type: none"> Classify the various drugs used in the treatment of various viral infections. Explain their pharmacokinetics and dynamics 	Pharmacology	Cased-based discussion
Malaria & Viral Hemorrhagic Fever (VHF)		
<ul style="list-style-type: none"> Discuss lifecycle of Plasmodium Describe the microbiology, pathology and lab investigations of Malaria 	Microbiology	Interactive lecture
<ul style="list-style-type: none"> Classify viral haemorrhagic fevers. Describe the microbiology, pathology and lab investigations of Dengue and VHF 		Interactive lecture
<ul style="list-style-type: none"> List the major antimalarial drugs Discuss the drug used for chemoprophylaxis Discuss drugs effective in chloroquine resistance Discuss dosages, mechanism of action and adverse effects of antimalarial drugs Classify Anti-protozoal drugs Describe their Pharmacokinetics and dynamics 	Pharmacology	Case based discussion
<ul style="list-style-type: none"> Explain clinical presentation of malaria Justify the diagnosis of Malaria List the complications of Malaria Discuss management plan of Malaria 	Medicine	Interactive Lecture
		CBIL
<ul style="list-style-type: none"> Explain clinical presentation of patient with Viral Hemorrhagic Fever such as Dengue & CCHF List the complications of Viral Hemorrhagic Fever specially Dengue Justify the diagnosis of common Viral Hemorrhagic fever Explain management of patients with suspected VHF 		Case-Based Lecture
Typhoid		
<ul style="list-style-type: none"> Discuss microbiology of typhoid and paratyphoid fever and its burden in endemic countries 	Microbiology	Interactive lecture
<ul style="list-style-type: none"> Describe Importance of blood culture and its significance in diagnosis of infectious diseases (endocarditis, typhoid) 		Practical
<ul style="list-style-type: none"> List the drugs used in typhoid fever Discuss mechanism of action and adverse effects of the drugs used in typhoid fever 	Pharmacology	Case-Based discussion

<ul style="list-style-type: none"> Explain the clinical features and complications of Typhoid fever Justify the diagnosis of Typhoid fever Discuss management of Typhoid fever 	Medicine	Case-Based Lecture
Acute Diarrhea		
<ul style="list-style-type: none"> Classify the organisms causing diarrhea and dysentery Summarize main features of bacterial agents salmonella, shigella, vibrio, campylobacter. Summarize main features of ova and parasites causing diarrhea and dysentery (entamoeba, ascaris, pinworm) 	Microbiology	Interactive Lecture
<ul style="list-style-type: none"> Discuss steps as per IMNCI protocols for the treatment of diarrhea Classify the drugs used to treat diarrhea & dysentery List the adverse effects of these drugs 	Pharmacology	Small Group Discussion
<ul style="list-style-type: none"> List the causes of Infectious diarrhea Discuss clinical presentations of infectious diarrhea Discuss the Investigations and management of patients with diarrhea 	Medicine	Case-Based Lecture
<ul style="list-style-type: none"> Describe the causes and prevention of acute diarrheal diseases Discuss the epidemiology of diarrheal diseases Describe the clinical features, assessment and diagnostic criteria of Acute Diarrheal diseases 	Community Medicine	Interactive lecture
<ul style="list-style-type: none"> Differentiate between acute and chronic diarrhea Enumerate the risk factors & causes for acute diarrhea Discuss the assessment and classification of a child with diarrhea and dysentery Discuss the evaluation and classification of dehydration Discuss the management plan of a child with diarrhea/dysentery 	Pediatrics	Interactive lecture
<ul style="list-style-type: none"> Discuss the dynamics of transmission of Cholera and its prevention Describe the clinical features & diagnostic criteria of Cholera 	Community Medicine	Interactive lecture
Sepsis		
<ul style="list-style-type: none"> Describe pathophysiology of acute and chronic inflammation, Sepsis/SIRS 	Microbiology	Interactive lecture
Fungal Infections, Clostridial Infection, Scabies and Leprosy		
<ul style="list-style-type: none"> List risk factors for fungal infection List different types of fungal infections Discuss the clinical manifestation of fungal infection 	Medicine	Interactive Lecture

<ul style="list-style-type: none"> Explain the management of fungal infection 		
<ul style="list-style-type: none"> Classify fungi into yeast and mold. Describe various fungal infections causing Thrush, Ringworm, Aspergillosis and Mucormycosis 	Microbiology	Interactive lecture
<ul style="list-style-type: none"> Discuss clostridial infections of clinical significance including Tetanus Discuss the Pathogenesis of Tetanus 	Microbiology	Interactive lecture
<ul style="list-style-type: none"> Describe leprosy, its types and microorganisms 	Microbiology	Interactive lecture
<ul style="list-style-type: none"> Describe the etiology, epidemiology, control and prevention of Scabies Describe the clinical features, assessment and diagnostic criteria of Scabies Discuss the process of control and prevention of Scabies 	Community Medicine	Small group discussion
RTI, Pertussis and Pseudomonas infections		
<ul style="list-style-type: none"> Describe the clinical features of RTI in children. Classify RTIs according to the symptoms as per IMNCI classification. Diagnose pneumonia on the basis of clinical features Diagnose sore throat in children on the basis of information provided Explain the management protocol for sore throat & cough in children 	Pediatrics	Interactive lecture
<ul style="list-style-type: none"> Describe the etiology, epidemiology, control and prevention of Pertussis Describe the clinical features, assessment and diagnostic criteria of Pertussis Discuss the process of control and prevention of Pertussis 	Community Medicine	Interactive lecture
<ul style="list-style-type: none"> Summarize main features of Pertussis and Pseudomonas infections 	Microbiology	Interactive lecture
Leishmaniasis		
<ul style="list-style-type: none"> Describe the etiology, epidemiology, risk factors, control and prevention of Leishmaniasis Describe the clinical features & diagnostic criteria of Leishmaniasis Discuss the process of control and prevention of Leishmaniasis 	Community Medicine	Interactive lecture
Tuberculous and Non-Tuberculous Mycobacterial infection		
<ul style="list-style-type: none"> Briefly discuss Tuberculous and Non-Tuberculous Mycobacterial infection 	Microbiology	Interactive lecture

Sexually Transmitted Diseases (STDs)		
<ul style="list-style-type: none"> Describe the microbiology & pathology of STDs Describe the importance of gonococcal infections and its pathogenesis 	Microbiology	Interactive lecture
<ul style="list-style-type: none"> Describe the process of performing and interpreting: <ol style="list-style-type: none"> PCR Culture Stool D/R Urine D/R 	Microbiology	Practical
<ul style="list-style-type: none"> Discuss the risk factors and clinical features stages of HIV Justify the diagnosis of HIV Discuss management plan and complications of HIV 	Medicine	Interactive lecture
		CBIL
<ul style="list-style-type: none"> Describe Retrovirus in relation to HIV and its pathogenesis to cause AIDS Discuss the various tests for diagnosis and screening of HIV, Western blot, immunofloresence, ELISA 	Microbiology	Interactive lecture
<ul style="list-style-type: none"> Summarize main features of herpes family of viruses Describe Latent viral infections (hsv1-6, VZV, CMV,EBV) 	Microbiology	Interactive lecture
Immunization		
<ul style="list-style-type: none"> Describe the principles of immunization Discuss EPI schedule Describe safety of Immunization Discuss adverse effects associated with vaccination Explain the protocol for management of side effects of vaccination. List additional vaccines 	Pediatrics	Interactive Lecture
Parasites & Worms Infestation		
<ul style="list-style-type: none"> Describe the epidemiology, risk factors of worm infestations Describe the clinical features & diagnostic criteria of worm infestations Discuss the process of control and prevention of worm infestations 	Community Medicine	Interactive lecture
<ul style="list-style-type: none"> Discuss classification and pathogenesis of different worms infesting humans (Nematodes, Cestodes, Trematodes) 	Microbiology	Interactive lecture
<ul style="list-style-type: none"> Analyze the clinical features and investigations to reach diagnosis for different worms' infestations Discuss the management plan of worm infestation 	Medicine	Interactive lecture
<ul style="list-style-type: none"> Classify the various drugs used in the treatment of helminthic infections. 	Pharmacology	Case based

<ul style="list-style-type: none"> Explain their pharmacokinetics and dynamic 		discussion
Rabies and Zoonotic Diseases		
<ul style="list-style-type: none"> Discuss the zoonotic diseases endemic in Pakistan and their prevention 	Community Medicine	Interactive Lecture
<ul style="list-style-type: none"> Classify the rhabdoviruses Discuss the structure and replication of the rhabdoviruses Explain the pathology of rabies 	Microbiology	Interactive lecture
Pyrexia of Unknown Origin (PUO)		
<ul style="list-style-type: none"> Define Pyrexia of Unknown Origin Discuss the criteria of PUO List the investigations related to PUO Develop an outline of management plan for PUO 	Medicine	Interactive lecture
Emerging and re-emerging diseases and their prevention		
<ul style="list-style-type: none"> List different emerging diseases Describe the etiology, epidemiology, risk factors, control and prevention of emerging and re-emerging disease 	Community Medicine	Interactive Lecture
Introduction to Forensic Medicine		
<ul style="list-style-type: none"> Define Forensic Medicine, Medical Jurisprudence, Legal Medicine, and Forensic Science 	Forensic Medicine	Interactive lecture
<ul style="list-style-type: none"> Describe the branches of Forensic Science and their utility in crime detection and justice 		
<ul style="list-style-type: none"> Discuss medical documents prepared by medical man, dying declaration, dying deposition, testamentary capacity 		
<ul style="list-style-type: none"> Discuss the history of forensic medicine 		
<ul style="list-style-type: none"> Discuss the branches and scope of subject/career in Forensic Medicine 		Small Group Discussion
<ul style="list-style-type: none"> Discuss the importance of Forensic toxicology 		
<ul style="list-style-type: none"> Define and classify poisons Discuss the medico legal classification and International toxicity rating of poisons 		
<ul style="list-style-type: none"> Discuss difference between poison, toxin and medicine 		
<ul style="list-style-type: none"> Discuss the routes of administration, elimination and actions of poison 	Small Group Discussion	
<ul style="list-style-type: none"> Identify the factors modifying action of poisons 		
<ul style="list-style-type: none"> Explain the diagnosis of poisoning in living and dead Discuss the duties of doctor in poisoning case Discuss the indication and process of gastric lavage 		

<p>and the Antidote therapy</p> <ul style="list-style-type: none"> Describe the role of Poisoning Information Centre in control & treatment of poisons 		
Legal Procedures/ Court Process		
<ul style="list-style-type: none"> Name Criminal courts of Pakistan and their powers; identify sentences authorized by law. Describe the relevant legal/court procedures applicable to medico/legal practice 	Forensic Medicine	Interactive lecture
<ul style="list-style-type: none"> Define the terms: Summons, Warrant, Perjury, Testimony Deposition, Exhibit, Offence, Cognizable Offence, Non Cognizable Offence, Oath, Conduct Money, Bail, Court, Judge, Magistrate, Prosecutor, Lawyer, Law, Police Station, FIR 		Interactive lecture
<ul style="list-style-type: none"> Describe Inquest, crime investigation system in Pakistan including PPC, CrPC, Law of evidence & general presumptions of law 		Interactive lecture
Medico-legal systems and evidence (Forensic Medicine)		
<ul style="list-style-type: none"> Define Medico-legal case Describe the role and responsibilities of the doctor as medical expert witness 	Forensic Medicine	Interactive lecture
<ul style="list-style-type: none"> Discuss different kinds of evidence and witnesses. 		Interactive lecture
<ul style="list-style-type: none"> Describe recording of evidence in the court 		Interactive lecture
Medico-legal document		
<ul style="list-style-type: none"> Discuss the following documents prepared by a medical man <ul style="list-style-type: none"> Medical certificates- medical fitness certificate, Birth certificates sickness certificates, age certificate, disability certificate Medico Legal Reports- injury report, death certificate, autopsy report, sexual assault report, mental fitness certificates, testamentary certificate, (un)fitness to plead, dying declaration, dying deposition 	Forensic Medicine	Interactive lecture
PM&DC & Code of Conduct for Doctors		
<ul style="list-style-type: none"> Describe functions and disciplinary control of PM&DC Describe principles of ethics, Hippocratic oath, International code of medical ethics Describe Medical register, and privileges of registered medical practitioner Describe professional misconduct, negligence & disciplinary proceeding against medical practitioners 	Forensic Medicine	Interactive lecture

Medical Negligence		
<ul style="list-style-type: none"> Define the following: Types of negligence, Resp-Ispa-Loquotar, Novus Actus interveniens, Vicarious Liability List 5 D's for plaintiff's success. Describe the defenses for defendant doctor and defenses for reducing damages Discuss Compensation For Medical Negligence 		
Principles of medical law and ethics		
<ul style="list-style-type: none"> Discuss the significance of medical ethics 	Forensic Medicine	Interactive lecture
<ul style="list-style-type: none"> Explain the following concepts: <ol style="list-style-type: none"> Best possible care Standards of care Confidentiality Privileged communication 		Interactive lecture
<ul style="list-style-type: none"> Explain term doctor patient relationship, how such a relationship starts and ends 		Interactive lecture
<ul style="list-style-type: none"> Describe the concept of human organ tissue transplantation Act 2010 		Interactive lecture

LEARNING RESOURCES

SUBJECT	RESOURCES
COMMUNITY MEDICINE	<p><u>TEXT BOOKS</u></p> <ol style="list-style-type: none"> 1. Community Medicine by Parikh 2. Community Medicine by M Illyas 3. <i>Basic Statistics</i> for the Health Sciences by Jan W Kuzma
FORENSIC MEDICINE	<p><u>TEXT BOOKS</u></p> <ol style="list-style-type: none"> 1. Nasib R. Awan. Principles and practice of Forensic Medicine 1st ed. 2002. 2. Parikh, C.K. Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology. 7th ed.2005. <p><u>REFERENCE BOOKS</u></p> <ol style="list-style-type: none"> 3. Knight B. Simpson's Forensic Medicine. 11th ed.1993. 4. Knight and Pekka. Principles of forensic medicine. 3rd ed. 2004 5. Krishan VIJ. Text book of forensic medicine and toxicology (principles and practice). 4th ed. 2007 6. Dikshit P.C. Text book of forensic medicine and toxicology. 1st ed. 2010 7. Polson. Polson's Essential of Forensic Medicine. 4th edition. 2010. 8. Rao. Atlas of Forensic Medicine (latest edition). 9. Rao. Practical Forensic Medicine 3rd ed ,2007. 10. Knight: Jimpson's Forensic Medicine 10th 1991,11th ed.1993 11. Taylor's Principles and Practice of Medical Jurisprudence. 15th ed.1999 <p><u>CDs:</u></p> <ol style="list-style-type: none"> 1. Lectures on Forensic Medicine. 2. Atlas of Forensic Medicine. <p><u>WEBSITES:</u></p> <p>www.forensicmedicine.co.uk</p>
GENERAL MEDICINE	<p><u>REFERENCE BOOKS:</u></p> <ol style="list-style-type: none"> 1. Hutchison's Clinical Methods, 23rd Edition 2. MacLeod's clinical examination 13th edition 3. Davidson's Principles and Practice of Medicine 4. Kumar and Clark's Clinical Medicine 5. HCAI guidelines CDC 6. WHO TB guidelines
PATHOLOGY/MICROBIOLOGY	<p><u>TEXT BOOKS</u></p> <ol style="list-style-type: none"> 1. Robbins & Cotran, Pathologic Basis of Disease, 9th edition. 2. Rapid Review Pathology, 4th edition by Edward F. Goljan MD

	<u>WEBSITES:</u> 1. http://library.med.utah.edu/WebPath/webpath.html 2. http://www.pathologyatlas.ro/
PEDIATRICS	<u>TEXT BOOK:</u> 1. Basis of Pediatrics (8 th Edition Pervez Akbar) <u>WEBSITE</u> www.who.int/maternal_child_adolescent/documents/IMCI_chartbooklet/en/
PHARMACOLOGY	<u>A. TEXT BOOKS</u> 1. Lippincot Illustrated Pharmacology 2. Basic and Clinical Pharmacology by Katzung

ADDITIONAL LEARNING RESOURCES

<u>Hands-on Activities/ Practical</u>	Students will be involved in Practical sessions and hands-on activities that link with the Infectious diseases module to enhance the learning.
<u>Labs</u>	Utilize the lab to relate the knowledge to the specimens and models available.
<u>Skill Labs</u>	A skills lab provides the simulators to learn the basic skills and procedures. This helps build the confidence to approach the patients.
<u>Videos</u>	Video familiarize the student with the procedures and protocols to assist patients.
<u>Computer Lab/CDs/DVDs/Internet Resources:</u>	To increase the knowledge students should utilize the available internet resources and CDs/DVDs. This will be an additional advantage to increase learning.
<u>Self Learning</u>	Self Learning is scheduled to search for information to solve cases, read through different resources and discuss among the peers and with the faculty to clarify the concepts.

ASSESSMENT METHODS:

- **Best Choice Questions(BCQs)** also known as MCQs (Multiple Choice Questions)
- **Objective Structured Practical/Clinical Examination OSPE or OSCE**

BCQs:

- A BCQ has a statement or clinical scenario of four options (likely answers).
- **Correct answer carries one mark, and incorrect 'zero mark'. There is NO negative marking.**
- Students mark their responses on specified computer-based sheet designed for LNHMC.

OSCE:

- All students rotate through the same series of stations in the same allocated time.
- At each station, a brief written statement includes the task. Student completes the given task at one given station in a specified time.
- Stations are observed, unobserved, interactive or rest stations.
- In unobserved stations, flowcharts, models, slide identification, lab reports, case scenarios may be used to cover knowledge component of the content.
- Observed station: Performance of skills /procedures is observed by assessor
- Interactive: Examiner/s ask questions related to the task within the time allocated.
- In Rest station, students in the given time not given any specific task but wait to move to the following station.

Internal Evaluation

- Students will be assessed comprehensively through multiple methods.
- 20% marks of internal evaluation will be added in theory of semester exam. That 20% may include class tests, assignment, journals, and the modular exam which will all have specific marks allocation.

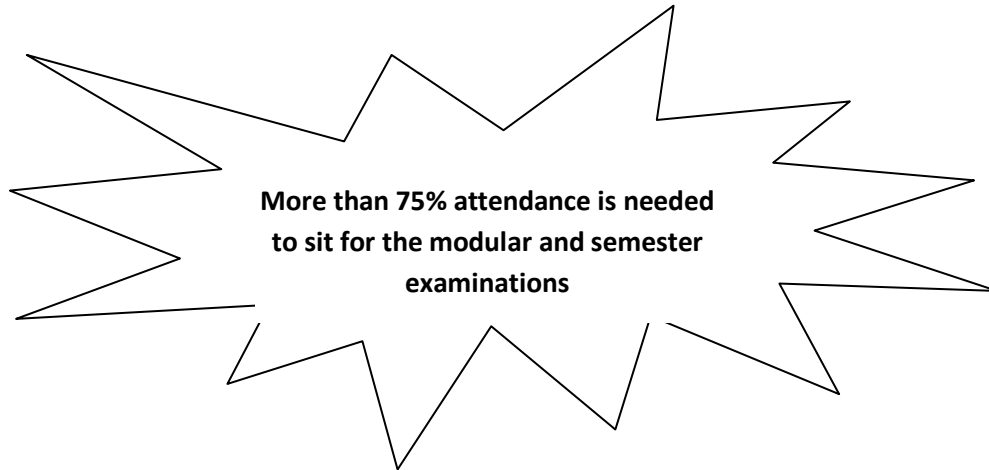
Example: Number of Marks allocated for Semester Theory and Internal Evaluation			
JSMU Examination	Theory Marks	Internal Evaluation (Classtests+Journals + Assignments + Modular Exam)	Total (Theory)
	80%	20%	100%

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

For JSMU Examination Policy, please consult JSMU website!



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.

SCHEDULE:

WEEKS	3 rd Year SEMESTER 5	MONTH
WEEK 1	<u>INFECTIOUS DISEASES MODULE</u>	3 rd Dec 2018
WEEK 2		
WEEK 3		
WEEK 4		2 nd Jan 2019
	MODULAR EXAM	4 th & 5 th Jan 2019*
WEEK 1	<u>HEMATOLOGY MODULE</u>	Jan - Feb 2019*
WEEK 2		
WEEK 3		
WEEK 4		
	MODULAR EXAM	Feb 2019*
WEEK 1	<u>RESPIRATORY MODULE</u>	Feb - Mar 2019*
WEEK 2		
WEEK 3		
WEEK 4		
	MODULAR EXAM	Mar 2019*
WEEK 1	<u>CVS MODULE</u>	Mar 2019*
WEEK 2		
WEEK 3		
WEEK 4		
	MODULAR EXAM	Mar 2019*

*Final dates will be announced later