

## **Phase I**

- Generic Topics on Medical Humanities to be taught in Phase-I
- Integrated Teaching in Phase I
- Subjects of Phase I--
  - Anatomy
  - Physiology
  - Biochemistry

## Generic Topics on Medical Humanities to be taught in Phase-I

The following five topics will be taught within 1<sup>st</sup> phase under supervision of Phase-I coordination committee in collaboration with medical education unit (MEU). The sessions will be under the guidance of Principal & Vice-principal, coordinated by concerned departments and sessions will be delivered by concerned experts of the topics. Each session will be one and half hour. Attending these session will be mandatory and will be reflected in the formative & summative assessment of Phase-I.

### Topics:

1. Behavioral science
2. Medical Sociology
3. Etiquette in using of Social Medias
4. Self- directed learning including team learning
5. Medical ethics

Topics	Learning objective	List of Contents	Method	Time
<b>Behavioral science</b>	<ul style="list-style-type: none"> <li>• explain the concept of behavior, personality, trait, attitude, norms , value and healthy behaviors</li> <li>• explain the bio psychosocial model of health</li> <li>• state the importance of behavioral science in clinical practice</li> <li>• state the effective way to change behavior</li> <li>• mention means of good behavior with patient</li> </ul>	<ul style="list-style-type: none"> <li>• Concept of behavior, personality, trait, attitude, norms , value and healthy behaviors</li> <li>• Bio psychosocial model of health</li> <li>• Importance of behavioral science in clinical practice</li> <li>• Effective way to change behavior</li> <li>• Means of good behavior with patient</li> </ul>	Interactive Lecture Or Seminar	One and half hour
<b>Medical Sociology</b>	<ul style="list-style-type: none"> <li>• explain the term sociology &amp; medical sociology</li> <li>• explain the importance and use of medical sociology</li> <li>• relate between culture and health</li> <li>• mention effect of sociology on health</li> </ul>	<ul style="list-style-type: none"> <li>• The terminology: sociology &amp; medical sociology</li> <li>• Importance and use of medical sociology</li> <li>• Relation between culture and health</li> <li>• Effect of sociology on health</li> </ul>	Interactive Lecture Or Seminar	One and half hour
<b>Etiquette in using of Social Medias</b>	<ul style="list-style-type: none"> <li>• define etiquette use of Social Medias</li> <li>• explain current data on abuse of Social Medias</li> <li>• describe the importance of Social Medias in medical education</li> <li>• mention the importance of etiquette in using of Social Media</li> <li>• explain the ways of the etiquette in using Social Media</li> </ul>	<ul style="list-style-type: none"> <li>• Definition of etiquette</li> <li>• Current data on abuse of Social Media</li> <li>• Importance of Social Media in medical education</li> <li>• Importance of etiquette in using of Social Medias</li> <li>• Ways of the etiquette in using Social Medias</li> </ul>	Interactive Lecture Or Seminar	One and half hour
<b>Self-directed learning including</b>	<ul style="list-style-type: none"> <li>• explain the terminology: self-directed learning and team learning</li> </ul>	<ul style="list-style-type: none"> <li>• The terminology: self-directed learning and team learning</li> </ul>	Interactive Lecture Or Seminar	One and half hour

<b>team learning</b>	<ul style="list-style-type: none"> <li>• mention the advantages and disadvantages of self-directed and team learning</li> <li>• mention the strategies for effective self-directed and team learning</li> <li>• describe the means of better learning and examination performance in MBBS course</li> </ul>	<ul style="list-style-type: none"> <li>• Advantages and disadvantages of self-directed and team learning</li> <li>• Strategies for effective self-directed and team learning</li> <li>• Means of better learning and examination performance in MBBS course</li> </ul>		
<b>Medical ethics</b>	<p>At the end of the session students will be able to-</p> <ul style="list-style-type: none"> <li>• explain the concept of medical ethics</li> <li>• explain the principles, relevance and important issues of medical ethics</li> <li>• state the Hippocratic oath, the International code of medical ethics, the Declaration of Geneva and Important ethical codes of BMDC for a medical doctor</li> </ul>	<ul style="list-style-type: none"> <li>• Concept of medical ethics, principles, purpose/ importance and issues /example of medical ethics</li> <li>• Hippocratic oath</li> <li>• International code of medical ethics</li> <li>• Declaration of Geneva</li> <li>• Ethical codes of BMDC for medical doctors</li> </ul>	Interactive Lecture Or Seminar	One and half hour

### **Integrated Teaching in Phase I**

Teachers of all departments of Phase -1 (Anatomy, Physiology & Biochemistry) must be present during these integrated sessions along with the concerned faculties those are mentioned in the column four in the table below. Teachers will be the speakers/facilitators in each session. The students must actively participate in these sessions and have to submit the summary of each session to the concerned teacher/department as their assignments. This assignment will be a part of practical note book in the summative assessment. Students need to get some 'take home message' from every session. Schedule for integrated teaching session will be set at the phase I committee meeting in collaboration with medical education unit (MEU).

Total 36 hour. Each session will be for 3 hour

**A) Term-I:**

- i. Coronary artery disease
- ii. Chronic obstructive pulmonary disease (COPD)
- iii. Anaemia

**B) Term-II:**

- iv. Diarrhea
- v. Diabetes Mellitus (DM)
- vi. Jaundice
- vii. Electrolyte imbalance
- viii. Proteinuria

**C) Term-III:**

- ix. Thyroid disorder
- x. Cerebro-vascular disease (CVD)
- xi. Deafness
- xii. Errors of refraction

### Term I

Subject	Learning objective	Core content	Disciplines involved
<b>Coronary artery disease</b>	At the end of the session the student will be able to: <ul style="list-style-type: none"> <li>explain the pattern of artery supply of heart</li> <li>describe the coronary circulation and regulation</li> <li>explain the appearance &amp; disappearance of cardiac markers with oxygen supply to heart</li> <li>correlate the knowledge of blood supply of heart obtained in phase I in real life situation</li> </ul>	<ul style="list-style-type: none"> <li><b>Peculiarity</b> of coronary circulation and its regulation</li> <li>Balance between supply of blood and demand</li> <li>Nerve supply of heart and nature of referred pain</li> <li>ECG changes in ischemic disease</li> <li><b>Enumerate appearance and disappearance</b> of cardiac markers following ischemic change of coronary artery</li> </ul>	Department of Anatomy/ Physiology/ Biochemistry/ Internal Medicine/ Cardiology/ <b>Pathology</b>  Time: 3 hours
<b>Chronic obstructive pulmonary disease (COPD)</b>	At the end of the session the student will be able to: <ul style="list-style-type: none"> <li>explain the structure and function of respiratory tract</li> <li>interpret results of spirometry in relation to COPD</li> <li>differentiate obstructive lung disease from restrictive lung disease</li> <li>explain the mechanism of acid-base balance, change of pH and PCO<sub>2</sub> in COPD patient</li> <li>correlate the knowledge of respiratory mechanism in COPD patient obtained in phase I in real life situation</li> </ul>	<ul style="list-style-type: none"> <li>Different type of epithelium &amp; its specific requirement of that location</li> <li>Respiratory membrane and factors affecting transport of gases</li> <li>Spirometry- Pulmonary volume and capacities</li> <li>Acid-base status in COPD</li> <li>Change of pH in COPD patient</li> <li>Mechanism of increased PCO<sub>2</sub> in COPD patient</li> </ul>	Department of Anatomy/ Physiology/ Biochemistry/ Internal medicine/ Respiratory medicine  Time: 3 hours
<b>Anaemia</b>	At the end of the session the student will be able to: <ul style="list-style-type: none"> <li>Define and classify anaemia</li> <li>Explain role of Hb and RBC in anemia</li> <li>Interpret red blood cell indices</li> </ul>	<ul style="list-style-type: none"> <li>Anaemia: Definition, classification</li> <li>RBC: Erythropoiesis</li> <li>Haemoglobin: Synthesis, types, functions</li> <li>Red blood cell indices</li> <li>Biochemical basis of different types of anaemia</li> </ul>	Department of Anatomy/ Physiology/ Biochemistry/ Internal medicine/ Haematology  Time: 3 hours

### Term II

Subject	Learning objective	Core content	Other discipline involved
<b>Diarrhea</b>	At the end of the session the student will be able to: <ul style="list-style-type: none"> <li>explain pattern and function of enteric nerve supply</li> <li>explain movement of GIT with autonomic effect on it</li> <li>correlate the consequences of diarrhea</li> </ul>	<ul style="list-style-type: none"> <li>Enteric nervous system</li> <li>Gastro-enteric gland distribution</li> <li>Movements of GIT</li> <li>Volume disorder occurs in diarrhea</li> <li>Dehydration in children in diarrhea</li> <li>Consequence of dehydration</li> </ul>	Department of Anatomy/ Physiology/ Biochemistry/ Internal medicine/ Gastro-enterology /

			Paediatrics/ <b>Microbiology/</b> <b>Pharmacology</b> Time: 3 hours
<b>Diabetes Mellitus (DM)</b>	At the end of the session the student will be able to: <ul style="list-style-type: none"> <li>• mention the structure and functional relation of Islet of Langerhans</li> <li>• describe structure, mechanism of action, regulation of secretion of insulin</li> <li>• explain pathophysiologic effect of insulin deficiency</li> <li>• explain the metabolism of glucose and changes in DM</li> <li>• develop skill in laboratory diagnosis of DM</li> </ul>	<ul style="list-style-type: none"> <li>• Structure and function of Islet of Langerhans</li> <li>• Islets of Langerhans of pancreas-hormones, functions, mechanism of action, regulation of secretion</li> <li>• Pathophysiology of insulin deficiency</li> <li>• WHO criteria of laboratory diagnosis of DM</li> <li>• Interpretation of OGTT</li> <li>• Metabolic derangement in DM</li> </ul>	Department of Anatomy/ Physiology/ Biochemistry/ Internal medicine/ Endocrinology / Time: 3 hours
<b>Jaundice</b>	At the end of the session the student will be able to: <ul style="list-style-type: none"> <li>• mention structural and functional orientation of hepatocytes</li> <li>• state the steps of bilirubin metabolism</li> <li>• differentiate conjugated &amp; unconjugated bilirubin</li> <li>• define &amp; classify jaundice based on biochemical findings</li> <li>• correlate the knowledge of hepato-biliary system and metabolism obtained in phase I in real life situation</li> </ul>	<ul style="list-style-type: none"> <li>• Role of specific orientation of hepatocyte</li> <li>• Relation of intrahepatic biliary tree and hepatocyte</li> <li>• Steps of bilirubin metabolism</li> <li>• Conjugated &amp; unconjugated bilirubin</li> <li>• Jaundice based on biochemical findings</li> </ul>	Department of Anatomy/ Physiology/ Biochemistry/ Internal medicine/ Haematology Time: 3 hours
<b>Electrolyte imbalance</b>	At the end of the session the student will be able to: <ul style="list-style-type: none"> <li>• explain homeostatic functions of kidney for the regulation of electrolytes</li> <li>• correlate normal electrolyte level, its deviation &amp; consequences of deviation</li> </ul>	<ul style="list-style-type: none"> <li>• Homeostatic function of kidney</li> <li>• Regulation of electrolytes by hormones acting on kidney</li> <li>• Laboratory result of electrolyte profile</li> <li>• Consequences of different types of electrolytes imbalance</li> </ul>	Department of Physiology/ Biochemistry/ Internal medicine/ Nephrology / Anesthesiology Time: 3 hours
<b>Proteinuria</b>	At the end of the session the student will be able to: <ul style="list-style-type: none"> <li>• describe glomerular membrane, GFR, effective filtration pressure</li> <li>• correlate the structure and function of filtration membrane Explain consequences of proteinuria.</li> <li>• explain consequences of proteinuria.</li> </ul>	<ul style="list-style-type: none"> <li>• GFR: definition, determinants and control</li> <li>• Normal reabsorption process in kidney</li> <li>• Proteinuria: Detection, pathophysiology of developing proteinuria, important causes.</li> </ul>	Department of Anatomy/ Physiology/ Biochemistry/ Internal medicine/ Nephrology / Paediatrics Time: 3 hours

### Term III

Subject	Learning objective	Core content	Other discipline involved
<b>Thyroid disorder</b>	At the end of the session the student will be able to: <ul style="list-style-type: none"> <li>• mention structure of thyroid gland</li> <li>• describe biosynthesis, storage, release, transport, mechanism of action, function and regulation of secretion of thyroid hormone</li> <li>• explain the importance iodine in thyroid hormone synthesis</li> <li>• interpret the thyroid function test</li> </ul>	<ul style="list-style-type: none"> <li>• Structure of thyroid gland</li> <li>• Thyroid hormone biosynthesis, storage, release, transport, mechanism of action, function and regulation of secretion of thyroid hormone</li> <li>• Thyroid disorders: hypo and hyperthyroidism, cretinism, myxoedema and goitre</li> <li>• Importance of iodine in thyroid hormone synthesis</li> <li>• Thyroid function tests with their interpretation</li> </ul>	Department of Anatomy/ Physiology/ Biochemistry/ Internal medicine/ Endocrinology  Time: 3 hours
<b>Cerebro-vascular disease (CVD)</b>	At the end of the session the student will be able to: <ul style="list-style-type: none"> <li>• explain the blood supply of CNS</li> <li>• explain the pattern and functioning of blood brain barrier</li> <li>• explain effect of UMN &amp; LMN lesion</li> <li>• interpret deep &amp; superficial reflexes</li> <li>• correlate the knowledge of blood supply of CNS obtained in phase I in real life situation</li> </ul>	<ul style="list-style-type: none"> <li>• Peculiarity of artery supply of CNS</li> <li>• Blood brain barrier</li> <li>• Ascending and descending tracts: name and functions.</li> <li>• UMN &amp; LMN: definition, effect of lesion</li> <li>• Role of dyslipidemia in developing CVD.</li> </ul>	Department of Anatomy/ Physiology/ Biochemistry/ Internal medicine/ Neurology  Time: 3 hours
<b>Deafness</b>	At the end of the session the student will be able to: <ul style="list-style-type: none"> <li>• explain the role of different organs of hearing</li> <li>• explain sound wave transmission, excitation of auditory receptors, auditory pathway</li> <li>• interpret the result of Rinne test &amp; Weber test.</li> </ul>	<ul style="list-style-type: none"> <li>• Role of different parts/organs in hearing</li> <li>• Hearing: receptor, mechanism of sound wave transmission, auditory pathway.</li> </ul>	Department of Anatomy/ Physiology/ Biochemistry/ Otolaryngology  Time: 3 hours
<b>Errors of refraction</b>	At the end of the session the student will be able to: <ul style="list-style-type: none"> <li>• Summarise the structure of eye ball, refractive media, refractive index, diaptor, refractive power of cornea &amp; lens,</li> <li>• types, causes of errors of refraction and their correction</li> </ul>	<ul style="list-style-type: none"> <li>• Structure of eye ball</li> <li>• Vision: image formation in the eye, visual pathway, common errors of refraction.</li> </ul>	Department of Anatomy/ Physiology/ Biochemistry/ Ophthalmology  Time: 3 hours