



**Integrated Human Biology Module – Year-2 Semester-2 –June 2013**

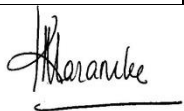
Topics / Concept	Objectives	Time	T/L – activity	Dept.
<b>2009-2/SBM-10/1 Clinical anatomy</b>	<p><b>Students should be able to</b></p> <p>discuss the anatomical/developmental/ genetic basis of common clinical conditions/examination techniques/diagnostic, management, rehabilitation procedures</p> <p>List the key points List the problems list the Learning issues in the case that is explained by the knowledge of anatomy/embryology/genetics/neuroanatomy</p> <ul style="list-style-type: none"> <li>• injury /abnormality</li> <li>• signs and symptoms</li> <li>• clinical examination</li> <li>• procedure</li> </ul> <p>Describe/ the normal</p> <ul style="list-style-type: none"> <li>• anatomy relevant to the case (system/region/structure)</li> <li>• development relevant to the case</li> <li>• genetic mechanisms involved</li> <li>• neuroanatomy involved</li> </ul> <p>Discuss how the abnormality/injury is altering the normal anatomy/development/genetic mechanisms/neuroanatomical process Discuss the anatomical basis of signs and symptoms, examination techniques used, diagnostic techniques used or procedures performed in order to manage the problem/s</p>	6 hrs	Project based learning (14groups )	Anatomy
		1hr	Lecture	Anatomy
<b>2009-2/SBM-10/2 Cross sectional Anatomy</b>	<ol style="list-style-type: none"> <li>1. Understand the importance of learning cross-sectional anatomy.</li> <li>2. Study the different imaging modalities available for cross-sectional imaging.</li> <li>3. Learn to draw the cross sections of the body at standard levels.</li> <li>4. Describe the location of abnormal foci presented on a cross section.</li> </ol>	3hrs	Lecture – 1hrs Presentation- 2 hrs	Radiology
<b>2009-2/SBM-10/3 Sports Medicine Workshop</b>	Common sports injuries Diagnosis and management First aid and basic management concepts in sports	1hr 2hrs	Lecture Workshop	Anatomy
	Exercise prescription for cardiopulmonary fitness	1hr	Clinical lecture	Anatomy

<b>Growth anomalies and developmental anomalies</b>	<ol style="list-style-type: none"> <li>1. List the common developmental anomalies</li> <li>2. Recall the anomalies studied during the relevant modules</li> <li>3. Be able to describe the embryological basis for the occurrence of these anomalies</li> </ol>	2hrs	Lecture	Anatomy
<b>Food and Diet</b>	<ol style="list-style-type: none"> <li>1. Pulses, vegetables and fruits</li> <li>2. Oil, seeds, Nuts and foods of animal origin</li> <li>3. Anti nutrients and food processing</li> </ol>	2hrs 1 hr 2hrs 3hrs	Lecture Lecture Lecture Practical	Biochemistry
<b>2009-2/SBM-10/4</b> Alcoholism	1. Alcohol metabolism and effects of long-term alcohol consumption	8hrs	4hrs–Lecture 4hrs – Student Seminar	Biochemistry
<b>2009-2/SBM-10/6</b> Alcoholism	Alcohol metabolism	2hrs	Lectures	Biochemistry
	Alcoholism – Sociological aspects	1hr	Lecture	Sociology
	<ol style="list-style-type: none"> <li>1) Be able to describe safe levels of alcohol use Be able to describe what is meant by the following terms               <ul style="list-style-type: none"> <li>* Social drinking</li> <li>* Harmful use of alcohol (or alcohol misuse)</li> <li>* Alcohol dependency</li> <li>* Binge drinking</li> <li>* Acute alcohol withdrawal</li> <li>* Delirium tremens</li> </ul> </li> <li>2) Describe the commonly used types of alcohol, and common patterns of alcohol use, in Sri Lanka.</li> <li>3) Discuss different factors that contribute to alcohol misuse and dependency.</li> <li>4) Briefly discuss different strategies which have been shown to be effective in reducing alcohol misuse and dependency (at a national or international level)</li> </ol>	1hr	Lecture	 Psychiatry  Chairperson Curriculum Co-Ordinating Committee Faculty of Medicine University of Peradeniya
<b>2009-2/SBM-10/7</b> 1) Physiological basis of bleeding disorders	<ol style="list-style-type: none"> <li>1. Recall the normal hemostasis process</li> <li>2. Recall the tests of hemostasis and their application in clinical situations</li> <li>3. List the types of bleeding disorders</li> <li>4. State the pathophysiological basis of those disorders</li> <li>5. List common examples for each type of bleeding disorder</li> <li>6. State the laboratory investigations which are helpful in the diagnosis of those disorders</li> </ol>	2hrs	Lecture	Physiology
2) Heart failure	<ol style="list-style-type: none"> <li>1. Define the term heart failure</li> <li>2. Describe the pathophysiological basis of heart failure</li> <li>3. State the common causes of heart failure</li> <li>4. State the types of heart failure</li> <li>5. Describe the physiological basis of clinical features of left and right heart failure</li> </ol>	2hrs	Lecture	

3) Physiology of Shock	<ol style="list-style-type: none"> <li>1. Define shock and state the types of shock with special reference to circulatory shock</li> <li>2. Describe the physiological changes in each type</li> <li>3. Explain the physiological changes and compensatory mechanisms in varying degrees of blood loss</li> <li>4. Explain the features, causes and progression of shock</li> <li>5. Describe the neuronal, metabolic and hormonal responses to shock</li> </ol>	2hrs	Lecture	 Chairperson Curriculum Co-ordinating Committee Faculty of Medicine University of Peradeniya
4) Cardiac murmurs	<ol style="list-style-type: none"> <li>1. Recall how normal heart sounds are produced</li> <li>2. Explain how the abnormal heart sounds are produced and their timing in relation to the cardiac cycle</li> <li>3. Explain the changes in haemodynamics in valvular disease</li> </ol>	1hr	Lecture	
3) ECG Abnormalities and their physiological basis	<ol style="list-style-type: none"> <li>1. Recall the normal ECG wave forms and the variations in normal health</li> <li>2. Recognize the basic rhythm abnormalities and conduction defects of the heart</li> <li>3. State the basis of changes in the ECG in ionic disturbances and conduction defects</li> </ol>	2hrs	Lecture	Whole batch
		2hrs	Practical	
4) Physiological basis of acid base disorders	<ol style="list-style-type: none"> <li>1. Explain the term acidosis and alkalosis and the compensation and correction of these derangements</li> <li>2. Recall defense mechanisms against changes in hydrogen ions in the body: buffers, respiratory regulation, renal regulation</li> <li>3. Recall the term acid base buffer system and the function of the buffers such as bicarbonates, phosphate and ammonia</li> <li>4. Recall how the respiratory system handles an acid base abnormality</li> <li>5. Recall the renal regulation of acid base balance using the knowledge on hydrogen</li> <li>6. Learn the term anion gap and base excess</li> <li>7. Recognize abnormalities in arterial blood gas analysis reports</li> </ol>	2hrs	Lecture	
4) Disorders of the Nervous system	<ol style="list-style-type: none"> <li>1. Based on the neurological signs observed, workout the site of lesion of the sensory motor pathway</li> <li>2. Explain the physiological basis of cerebellar signs.</li> </ol>			

	<ol style="list-style-type: none"> <li>3. Explain the neuroanatomical and neurochemical basis of Parkinson's disease.</li> <li>4. Identify the cortical regions affected in, <ol style="list-style-type: none"> <li>I. Aphasias</li> <li>II. Perceptual disorders</li> <li>III. Memory disorders</li> </ol> </li> </ol>	2hrs	Lecture	 Chairperson Curriculum Co-ordinating Committee Faculty of Medicine University of Peradeniya
6) Physiological adaptations to extremes of environment	Describe the mechanisms of adaptation of the body to extremes of environment	2hrs	Lecture	
7) Physiological basis of ventilator dysfunction	<ol style="list-style-type: none"> <li>1. Recall lung and chest wall compliance, mechanism of inspiration and expiration, airway resistance, lung volumes, capacities and flow rates</li> <li>2. Ventilatory defects- <ol style="list-style-type: none"> <li>1. Define restrictive and obstructive ventilatory disorders</li> <li>2. List the causes of above ventilatory disorders</li> <li>3. Explain the physiological basis of changes that occur in ventilatory disorders</li> <li>4. Explain the changes in lung function parameters in ventilatory disorders</li> </ol> </li> </ol>	2 hrs	Lecture	
8) Applied physiology of dehydration	Explain the physiological regulatory mechanisms which operate during dehydration	2hrs	Lectures	
9) Physiological basis of renal disorders	<ol style="list-style-type: none"> <li>1. Recall the anatomical and physiological determinants of glomerular filtration rate and renal blood flow.</li> <li>2. Recall the function of the renal tubules, i.e reabsorption, secretion and urine concentration.</li> <li>3. Recall the renal actions and regulation of the rennin-angiotensin system, prostaglandins and atrial natriuretic peptide.</li> <li>4. Recall the role of the kidney in acid-base and potassium balance, and the consequences of hyperkalaemia.</li> <li>5. Describe the categories of renal failure (pre-renal, renal, and post-renal) and the immediate consequences of acute renal failure.</li> </ol>	3hrs	Lecture	
10) Physiological basis of subfertility	<ol style="list-style-type: none"> <li>1. Define subfertility</li> <li>2. Explain the normal requirements for conception</li> <li>3. List the aetiological factors of subfertility and explain how they affect conception</li> </ol>	2hrs	Lecture	

<b>2009-2/SBM-10/08</b> <b>What is ill health ; Global &amp; local situation - Trends &amp; dynamics</b>	1. Explain what ill health is. 2. Describe the current burden of disease, disease patterns in relation to global and Sri Lankan situation	1hr	Lecture	Com.med
<b>2009-2/SBM-10/9</b> <b>Biopsychosocial aspects - Lifestyle, personality, environment etc.</b>	1. Explain what is meant by the term 'Biopsychosocial'. 2. List the psychological and social factors that may affect health & illness. 3. Describe how the psychological and social factors can affect health & illness. 4. Explain briefly what is meant by the term 'stress'. 5. Describe how stress can impair homeostasis.	3hrs	Lecture	Psychiatry
<b>b. Physical and chemical factors</b>	1. state the main physical and chemical factors that cause ill health 2. explain briefly, how these factors lead to ill health	1hr	Lecture	Medicine
<b>c. Nutritional, endocrine &amp; metabolic</b>	1. State the interrelationship between nutrition & ill health 2. state the main endocrine and metabolic factors that cause ill health 3. explain briefly, how these factors lead to ill health	2hr	Lecture	Medicine
<b>d. DNA &amp; the cancer cell</b>	1. List the factors that could cause damage to DNA. 2. Describe the repair mechanisms available for damaged DNA. 3. Recall that DNA repair mechanisms lead to oncogenesis. 4. List the other factors that cause transformation of normal cells into cancer cells. 5. state how normal cells differ from cancer cells in energy metabolism, DNA synthesis & cell division	2hrs	Lectures	Bioch
<b>2009-2/SBM-10/10</b> <b>Principles of management of illnesses</b>	1. state the principles of management of ill-health 2. appreciate that management requires multidisciplinary and holistic approaches 3. list the different modalities of management of a patient	1hrs	Lecture	Medicine



Chairperson  
Curriculum Co-ordinating Committee  
Faculty of Medicine  
University of Peradeniya