

# **COURSE MODULE**

## **NUTRITION HONOURS**

### **CBCS SYLLABUS** *(Burdwan University)*

*W.E.F. 2017 - 2018*

**1<sup>ST</sup> YEAR****SEMESTER - I**

<b>SEMESTER - I</b>		
<b>CORE COURSE - 1</b>		<b>NUTRITIONAL PHYSIOLOGY I</b>
<b>Topic</b>	<b>Content</b>	<b>No. of Lectures (approx)</b>
<b>Body composition</b>	Generalized structural makeup of human body.	<b>6L</b>
	Structure and functions of animal cell with special reference to Plasma membrane (Fluid Mosaic Model), Mitochondria, Ribosome, Endoplasmic reticulum.	<b>8L</b>
	Nucleus (nuclear membrane, nuclear chromatin and nucleolus)	<b>6L</b>
<b>Circulatory and Cardiovascular system</b>	Blood and its composition, Blood groups, Mechanism of blood coagulation.	<b>6L</b>
	Structure and functions of heart.	<b>6L</b>
	Cardiac cycle, cardiac output, blood pressure and its regulation.	<b>6L</b>
<b>Digestive system</b>	Structure and functions of G.I. tract.	<b>6L</b>
	Process of digestion and absorption of food.	<b>6L</b>
	Structure and functions of liver, gallbladder and pancreas.	<b>6L</b>
<b>Respiratory system</b>	Structure of Lungs and gaseous exchange (oxygen and carbon dioxide transport), Brief idea on Acclimatization.	<b>8L</b>
<b>Musculoskeletal System:</b>	Formation and functions of muscles, bones and teeth (Brief idea).	<b>6L</b>
<b>CORE COURSE-2</b>		<b>NUTRITIONAL ASPECT OF FOOD ITEMS</b>
<b>Concept and definition of terms:</b>	Food, Food Groups, Food Pyramid, Functions of food.	<b>4L</b>
	Nutrient and Nutritive value, Concept of Balanced Diet	<b>2L</b>
<b>Cereals, Pulses and legumes:</b>	Nutritional aspects of wheat, rice and oat.	<b>8L</b>
	Types of pulses and legumes, uses, and nutritional aspects.	<b>4L</b>
<b>Milk and milk Products:</b>	Nutritive value and composition of milk, Concept of milk processing and Pasteurization	<b>8L</b>

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	Types of processed milk, milk products (butter, curd, paneer and cheese).	
<b>Egg, Fish and meat:</b>	Nutritional aspects and uses.	<b>2L</b>
	Nutritional aspects of edible fish and meat, concept of red and white meat.	<b>6L</b>
<b>Vegetables and fruits:</b>	Uses and nutritional aspect of commonly available vegetables.	<b>6L</b>
	Fresh fruits and dry fruits– raw and processed product.	<b>4L</b>
<b>Salts, Fats and oils:</b>	Uses and nutritional aspects of various salts.	<b>6L</b>
	Types, sources, use and nutritional aspects of fats and oils.	<b>6L</b>
<b>Beverages:</b>	Common types (tea, coffee and wines) and their uses, nutritional aspect.	<b>8L</b>
<b>Methods of cooking:</b>	Dry, moist, frying and microwave cooking.	<b>4L</b>
	Effect of various methods of cooking on foods, nutrient losses in cooking.	<b>2L</b>

<b>SEMESTER - II</b>			
<b>CORE COURSE - 3</b>		<b>::</b>	<b>NUTRITIONAL PHYSIOLOGY II</b>
<b>Topic</b>	<b>Content</b>	<b>No. of Lectures (approx)</b>	
<b>Excretory system:</b>	Structure and function of skin.	<b>6L</b>	
	Regulation of temperature of the body.	<b>4L</b>	
	Structure and functions of kidney in special reference to nephron.	<b>6L</b>	
	Physiology of urine formation	<b>4L</b>	
<b>Reproductive system:</b>	Structure and functions of gonads, concept on menstrual cycle.	<b>8L</b>	
	Brief idea of pregnancy, parturition, lactation and menopause.	<b>4L</b>	
	Brief concept on spermatogenesis and Oogenesis process.	<b>8L</b>	
<b>Nervous System:</b>	Concept on sympathetic and parasympathetic nervous system.	<b>8L</b>	
	Brief anatomy and functions of cerebrum, cerebellum, hypothalamus and neuron.	<b>8L</b>	
	Concept on synapse and synaptic transmission.	<b>4L</b>	
<b>Endocrine system:</b>	Structure and functions of pituitary, thyroid and adrenal gland.	<b>6L</b>	
	Structure and functions of pancreas.	<b>4L</b>	
<b>CORE COURSE - 4</b>			
<b>::</b>		<b>PHYSIOLOGICAL ASPECT OF NUTRITION</b>	
<b>Concept and definition of terms:</b>	Growth, Development, Nutrition, Malnutrition and Health, Scope of Nutrition.	<b>4L</b>	
<b>Role of Vitamins:</b>	Fat soluble vitamin-Physiological role, dietary sources and deficiency disorders.	<b>8L</b>	
	Water soluble vitamin-Physiological role, dietary sources and deficiency disorders.	<b>8L</b>	
<b>Role of Minerals (Ca, Fe, Na, K, I, Zn, Mn, Mg, Co):</b>	Physiological role, dietary sources and deficiency disorders.	<b>12L</b>	

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<b>Principles of meal planning:</b>	Food exchange list, Factors affecting meal planning and food related behavior.	<b>8L</b>
	Dietary guidelines for Indians.	<b>6L</b>
<b>Minimum nutritional requirement and RDA:</b>	Formulation of RDA, dietary guidelines with reference to man and woman.	<b>10L</b>
<b>Energy in human nutrition:</b>	Energy and its unit, Energy assessment and balance, Factors of energy requirement, BMR and its regulation, SDA of food.	<b>14L</b>