

Course Code	Course Name	L-T-P	Credits
PSY1232	Nutrition and Lifespan	5-1-0	6

### **Module 1: Nutrition through Lifespan (12 Hours lecture+ 3 hours tutorials)**

Lifespan Development; age and culture appropriate development and growth, health, productivity and quality of life. Nutrition: Core Concepts-food combinations, diets and lifestyles, absorption and metabolism, nutrients –carbohydrates, proteins, minerals, vitamins and lipids/fat; Deficiencies and illness. Vegetarian, Non-vegetarian and Vegan diets. Physical Health; Nutrients; digestive systems, biome and absorption, immunity systems and inflammation, circulatory systems and purification (heart and kidneys), skeletal system (bone health and nutrition). Cognitive and Mental Health: Nutrients, Optimum functioning of the Brain and endocrine system.

**Suggested Activities:** Assignment 1 (Individual): Present the conceptual overview of core concepts of nutrition –in terms of the physiological systems, nutrient combinations and impact on physical and cognitive health in terms of definitions and a mind map. **AND/OR** Assignment 2 (Group Presentation): Create a glossary of the terms and concepts of nutrition, create a visual semantic/ mind maps and present it.

### **Module 2: Nutrition, Malnutrition and Macro-contexts (15 Hours lecture+ 3 hours tutorials)**

Hunger, Deprivation and poverty; impact on growth and development. Under-nutrition, Over-nutrition, body metabolism, weight, height, stunting, wasting and Obesity. Nutrition, Diet and Lifestyles: Role of culture and agro-climatic context; Ayurvedic conceptualizations of Gunas and Doshas through diet, personality and lifestyles: Ritucharya and Ayurvedic Diet. Nutrition, Ill-health and optimum health: Applications: Lifestyle and metabolism disorders, Mental health: Anxiety, depression, food and neuro-protective effects. Debates and conclusive evidence.

**Suggested Activities:** Assignment 3: Create mind-maps of five diet and cultural variations in India and connect with the macro -structural contexts such as poverty, geography,

agro-climatic contexts, tribal or other community status. **AND/OR** Assignment 4: Trace the travel of 5 food constituents that you eat from source to the table, identifying the processes that change the nutritive value.

### **Module 3: Nutrition: Conception, pregnancy, birth and lactation (15 Hours lecture +4 hours tutorials)**

Lifespan growth and Development at conception and pregnancy, Diet and nutrition during pregnancy, local and cultural myths about food groups, deficiencies in the mother and demands from the growing fetus; over –nutrition; Growth and Development for neonates, breast feeding, nutrition requirement for the lactating mother. Gender and nutritional deficits in the mother, boy preference and nutrition of the girl infants. Low birth weight, Brain development, Cognitive and motor developmental delays due to nutritional deficiencies. Local and Indigenous resources, (including Ayurvedic and folk /tribal) for nutrition and care for the lactating mother and infant. Applications: Early childhood development, infant development in indigenous and folk/tribal conte

#### **Suggested Activities:**

Assignment 5 (Group Presentation): Identify key states in India showing the malnutrition challenges, with key factors that possibly cause this. **AND/OR**

Assignment 6 (Individual): Analyse the role of all the food and nutrient groups in growth and development of the infant.

### **Module 4: Nutrition: Toddlerhood, Childhood, Adolescence (15 Hours lecture and 4 hours tutorials)**

Sensitive periods and nutrition; A growing infant and toddler; weight gain, motor milestones, Breast feeding, nutrition for the lactating mother; weaning from breast milk and introducing food groups. Cultural and local resources of food. Poverty, deprivation, malnutrition and impact on child development. Developmental delays in motor, language and cognition, early childhood interventions for better assessments and identification. Brain and Cognitive Development; key food and diet requirements; Deficiencies and impact on growth and development in toddlerhood and child-hood: jaundice, blindness, PCM, PICA, Rickets. Adolescence: Food, diets and contemporary lifestyle; junk and processed foods; puberty and nutritional requirement; anemia among adolescents, obesity; body im-age and eating disorders. Sports and exercise behavior, nutrition metabolism and endocrine health. Mental Health and nutrition during adolescence.

#### **Suggested Activities:**

(Assignment 7-Individual): Identify key nutritional deficiencies that affect early child-hood development/Childhood/Adolescence. List the consequences and preventive actions. **AND/OR**

(Assignment 8 –Group): Review evidence on exercise behavior and nutritional requirements during adolescence. Create a nutrition plan each for three adolescents known to you (including you)

## **Module 5: Nutrition: Youth, adulthood and Old Age (15 Hours lecture and 4 hours tutorials)**

Youth and nutrition requirements; impact of poverty and deprivation; early marriage and pregnancy among young girls; Adulthood, middle age; pregnancies and nutrition requirement among women, specific deficiencies in adulthood; metabolic disorders; sedentary lifestyles and life-style disorders; excess of salt and processed food and sugar in nutrition. Nutrition and illness among adults. Old age; Nutritional requirements and deficiencies in old; decline in health parameters, maintaining cognitive health in old age.

### **Readings:**

1. Buttriss, Judith,L.; Welch, Ailsa, A.; Kearney, John,M.; Lanham, Susan, A.(2017) Public Health Nutrition, (2<sup>nd</sup> Ed.). London: Wiley-Blackwell
2. Lanham, Susan,A.; MacDonal, Ian,A.;Rche, Helen,M.(2011) Nutrition and Metabolism, (2<sup>nd</sup> Ed). London: Wiley-Blackwell
3. Papalia, D. E., Olds, S.W. & Feldman, R.D. (2006). Human Development (9th Ed.). New Delhi: McGraw Hill.
4. Berk, L. E. (2010). Child Development (9th Ed.). New Delhi: Prentice Hall.
5. Feldman, R.S.& Babu.N. (2011). Discovering the Lifespan. New Delhi: Pearson.
6. Papalia, D. E., Olds, S.W. & Feldman, R.D. (2006). Human Development (9th Ed.). New Delhi: McGraw Hill.
7. Saraswathi, T.S. (2003). Cross-cultural perspectives in Human Development: Theory, Research and Applications. New Delhi: Sage Publications
8. Zimmerman, Maureen (2012) An Introduction to Nutrition. Online publication date:2012, Creative Commons.