

## **NTD 301: HUMAN NUTRITION (2 UNITS)**

### **(1) Study of Nutrients, Digestion, Absorption and Products and Roles in Body function.**

- Definition of nutrients.
- Classification of nutrients.
- Other nutrients found in food e.g. fibre, enzymes, emulsifiers, antioxidant, pigments and flavor.
- Role of nutrients.
- Sources of nutrients.
- Processes of digestion, absorption and metabolism of nutrients.
- End products of digestion and their roles in body function.

### **(2) Introduction to nutrients requirements and deficiencies.**

- What is a nutrients requirement?
- Concept of Recommended Dietary Allowance (RDA)
- Dietary Reference Values (DRVs).
- Recommended Daily Intake (RDI).
- Reference Nutrient Intake (RNI).
- Dietary reference Intakes (DRI).
- Nutrient Deficiencies

### **(3) Primary Nutritional Diseases**

#### **a. Starvation**

- Definition of starvation.
- Causes of starvation.
- Clinical manifestation and symptoms of starvation.

- Consequences of starvation.
- Management and treatment of starvation.

**b. Obesity**

- Definition of obesity.
- Causes of obesity.
- Clinical features of obesity.
- Classification of obesity.
- Management and treatment of obesity.

**c. Protein-energy malnutrition**

- Definition of protein-energy malnutrition.
- Causes and epidemiology of protein-energy malnutrition.
- Classification of protein-energy malnutrition e.g. Wellcome classification, Gomez classification
- Clinical features of protein-energy malnutrition.
- Management and treatment of protein-energy malnutrition.

**d. Rickets and Osteomalacia**

- Definition of rickets and osteomalacia.
- Causes of rickets and osteomalacia.
- Clinical manifestation and symptoms of rickets and osteomalacia.
- Prevention, management and treatment of rickets and osteomalacia.

**e. Scurvy, Beriberi and Pellagra**

- Definition of scurvy, beriberi and pellagra.
- Causes of scurvy, beriberi and pellagra.

- Clinical manifestation and symptoms of scurvy, beriberi and pellagra.
- Prevention, management and treatment of scurvy, beriberi and pellagra.

**(4) Assessment of Nutritional Disorders.**

- Anthropometric Assessment
- Biochemical Assessment
- Clinical Assessment/ Physical examination
- Dietary Intake Assessment

**(5) Population Problems: Famine and Endemic Goiter.**

- Definition of famine.
- Types and causes of famine with examples of previous famines.
- Consequences of famine.
- Prevention and management of famine.
- What is endemic goiter (Iodine Deficiency Disorders)?
- Causes, epidemiology, clinical features, management and treatment of endemic goiter.

**(6) Nutrition and Infection.**

- Relationship between infection and malnutrition.
- Effect/consequences of infection and malnutrition on nutritional status of individuals.

**(7) Nutrition situation in Nigeria and Government Nutrition policy.**

- Nutrition situation of Nigerian women and children
- Nutrition and development policies.
- Policies and programmes to improve nutrition.
- Improving household food security.
- Protecting consumers through improved food quality and safety.

**(8) Food additives and Contaminants in Nutrition.**

- What are food additives and food contaminants?
- Types of food additives: intentional and unintentional additives.
- Effect of additives and contaminants on food.
- Functions of food additives.

**(9) Food toxins and toxicants.**

- Sources of toxic components of food e.g. hydrocyanic acid (in cassava), Aflatoxin (in cereals), Trypsin inhibitors (in legumes), solanine (in potatoes), mycotoxins, glycosides, etc.
- Infective agents in foods e.g. bacteria, viruses and parasites

Hazard from pesticides, toxicity of packaging materials.