

## **FOOD FUNDAMENTALS**

### **SYLLABUS**

#### **UNIT: 1**

**(15 HR)**

Food basics. Cereals and legumes as food. Oilseeds and horticultural crops as plant sources of food. Basics of meat and meat products. Basics of fish and egg products. Basics of milk and milk products. Introduction to health food, comfort food and nutraceuticals. Ayurvedic medicinal foods, honey and organic food, Genetically modified food. Water in food. Structure and physicochemical properties of carbohydrates. Applications of carbohydrates and effect of processing on carbohydrates. Proteins: structure, classification and properties. Enzymes and their utilization in food industry., Structure classification and applications of lipids. Properties of lipids and deteriorative changes in lipids.

#### **UNIT: 2**

**(15 HR)**

Fat soluble vitamins. Water soluble vitamins. Minerals in food. Preservatives and antioxidants used in food. Colouring agents, flavouring agents & sweeteners used in food. Sample collection and preparation for food analysis. Sampling plan, standards and sampling techniques for food analysis. Physical quality analysis of food. Chemical quality analysis of food. Chromatographic techniques used in food analysis. Spectroscopic and hyphenated techniques used in food analysis. Basics of sensory evaluation of a food product. Sensory tests used in sensory evaluation of food. Minimal processing of food, Thermal processing of food.

**TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE  
COLLEGE FOR WOMEN (TTWRDCW) SURYAPET**

**Total Teaching Hours: 30hourse**

**Total Marks: 30**

**COURSE OBJECTIVES:**

- Understanding the basic principles of food science and nutrition.
- Recognizing the fundamental components of various food groups and their roles in human health and nutrition.
- Exploring the principles of food safety and sanitation to ensure the production of safe and high-quality food products.
- Examining the cultural and societal impact of food, including food customs, habits, and food security issues.
- Developing basic culinary skills and techniques for food preparation and cooking.
- Applying principles of sensory evaluation to assess the quality and characteristics of different food products.

**COURSE OUTCOMES:**

- Demonstrate an understanding of the basic principles of food science and nutrition.
- Identify and describe the essential components of various food groups and their nutritional significance.
- Apply principles of food safety and sanitation to ensure the production of safe food products.
- Analyze the cultural, social, and economic factors that influence food choices and eating habits.
- Utilize basic culinary skills and techniques to prepare and cook a variety of foods.
- Evaluate the sensory characteristics and quality of different food products using sensory evaluation techniques.
- Demonstrate an understanding of food labeling, food regulations, and food sustainability practices.
- Collaborate effectively in group settings to plan and execute food-related projects or activities.

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