

SEMESTER 2nd
MAJOR COURSE

HSC222J: HOME SCIENCE {FOOD SCIENCE AND NUTRITION (HSCFSCN)}

(CREDITS: THEORY-4, PRACTICAL-2)

LEARNING OUTCOMES:

1. Gain insight into the basics of Food Science and Nutrition,
2. Have a basic concept of cooking and preservation,
3. Understand the concept of an adequate diet and the importance of meal planning,
4. Be familiar with the basic principles of planning diets for individuals.

UNIT I INTRODUCTION TO FOOD SCIENCE

- Food groups (Cereals, Pulses, Fruits and vegetables, Milk & milk products, Eggs, Meat, poultry and fish, Fats and Oils); Selection, nutritional contribution and changes during cooking
- Food and its functions (Physiological, psychological and social); Food in relation to health
- Factors affecting food intake and food habits
- Nutrients and their Classification

UNIT II INTRODUCTION TO NUTRITION

- Functions, dietary sources, classification and clinical manifestations of deficiency/ excess of the nutrients:
- Carbohydrates, lipids and protein
- Fat soluble vitamins-A, D, E and K//Water soluble vitamins – thiamin, riboflavin, niacin, pyridoxine, folate, vitamin B12 and vitamin C
- Minerals – calcium, iron and iodine.

UNIT III INTRODUCTION TO COOKING & PRESERVATION

- Concept of cooking, objectives of cooking, cooking methods and Preliminary preparation,
- Household techniques of preservation
- Introduction to preservation, Importance, Common preservatives used
- Advantages, disadvantages and the effect of various methods of cooking on nutrients

UNIT IV MENU PLANNING

- Recommended Dietary Allowances during various stages of life, recommended dietary allowances
- Concept of Nutrition, Health, Balanced diet
- Steps in Planning Balanced Diets or Menu Using Food Guide Pyramid and Exchange Lists
- Nutrition and health guidelines

PRACTICAL: 2 CREDITS

1. Formulate a recipe using various food groups
2. Preparation of various preserves
3. Planning Balanced Diets or Menu Using Food Guide Pyramid and Exchange Lists for various age groups.

RECOMMENDED READINGS

- Mudambi, SR and Rajagopal, MV. Fundamentals of Foods, Nutrition and Diet Therapy; Fifth Ed; 2012; New Age International Publishers
- Mudambi, SR, Rao SM and Rajagopal, MV. Food Science; Second Ed; 2006; New Age International Publishers
- Srilakshmi B. Nutrition Science; 2012; New Age International (P) Ltd.
- Srilakshmi B. Food Science; Fourth Ed; 2010; New Age International (P) Ltd.
- Swaminathan M. Handbook of Foods and Nutrition; Fifth Ed; 1986; BAPPCO.
- Bamji MS, Rao NP, and Reddy V. Text Book of Human Nutrition; 2009; Oxford & IBH Publishing Co. Pvt Ltd.
- Wardlaw GM, Hampl JS. Perspectives in Nutrition; Seventh Ed; 2007; McGraw Hill.
- Lakra P, Singh MD. Textbook of Nutrition and Health; First Ed; 2008; Academic Excellence.
- Manay MS, Shadaksharaswamy. Food-Facts and Principles; 2004; New Age International (P) Ltd.
- Potter NN, Hotchkiss JH. Food Science; Fifth Ed; 2006; CBS Publishers and Distributors.
- Sethi P and Lakra P Aahaar Vigyaan, Poshan Evam Suruksha, Elite Publishing House, 2015
- Jain P et al. Poshan va swasthya ke mool siddhant (Hindi); First Ed; 2007; Academic Pratibha.
- Vrinda S. Aahaar Vigyan (Hindi); 2003; Shyam Prakashan
- Suri S. and Malhotra A. Food Science, Nutrition & Food Safety Pearson India Ltd. 2014.
- Raina U, Kashyap S, Narula V, Thomas S, Suvira, Vir S, Chopra S. Basic Food Preparation – A Complete Manual. Orient Longman, 2005
- Khanna K, Gupta S, Seth R, Mahana R, Rekhi T. The Art and Science of Cooking. Phoenix Publishing House Private Limited, Delhi 1998.