SEMESTER 2nd

MINOR COURSE

HSC222N: 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.*

YHEORY (4 CREDITS)

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; Acadamic Pratibha.
- Vrinda S. Aahar 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.