



**MANGALORE UNIVERSITY**

**DEPARTMENT OF BIOSCIENCES**

**MSc Food Science & Nutrition**

**FNS 453 – LIFE SPAN NUTRITION**

**39 Hr (13× 3 units)**

**Course outcome:**

- Describe the methods and principles involved in menu planning using food group system and food exchange list.
- Write down the nutritional requirement and challenges of different age groups through life cycle.
- Write down the role nutrition played during pregnancy and lactation.
- Describe the physiological changes which take place through life cycle

**Unit I:** Principles of meal planning: Balanced diet, Food groups. Food exchange list. Factors effecting meal planning and food related behaviour. Dietary guidelines for Indians and food pyramid. Nutrient requirements. Concept of Dietary Reference Intakes. Overview of methods for assessment of nutrient needs. Nutrition for adulthood and old age. Young adults: Nutritional requirements, nutritional problems common to this age. Adult: Nutrient requirements for adult man and woman, nutritional status of Indian adult population, RDA, nutritional guidelines, nutritional concerns, diet and lifestyle related diseases and their prevention. Elderly: Physiological changes in elderly, RDA, Nutritional requirements, special needs, nutritional problems health concerns in old age and their management, factors contributing to longevity.

**Unit II:** Nutrition during pregnancy and lactation. Pregnancy: Physiological adjustments, nutritional requirements, nutritional status of Indian Pregnant women, optimal weight gain and its components, effect of malnutrition on outcome of pregnancy, complications of pregnancy. Lactation: Physiology of lactation, factors affecting lactation, nutritional requirements, effect of lactation on maternal malnutrition and fertility.

**Unit III:** Nutrition during childhood: Infancy: Growth and development, growth reference/ standards, RDA, nutritional guidelines, feeding pattern, compositional differences between human milk and milk substitute and their suitability for infant feeding. Weaning practices, weaning and supplementary foods. Nutritional concerns and healthy food choices. Preschool children: Growth and development, nutritional requirements, special care in feeding preschoolers, nutritional problems specific to this age. School age and adolescent children: Growth and development, nutritional requirements, factors affecting their eating habits, nutritional problems specific to this age.

## REFERENCES

□ Textbook of Nutrition and Dietetics. Khanna K, Gupta S, Seth R, Passi SJ, Mahna R, Puri

S (2013) Phoenix Publishing House Pvt. Ltd.

□ Perspectives in Nutrition, 6th edition. Wardlaw GM, Hampi JS, DiSilvestro RA (2004).

McGraw Hill. Dietary Guidelines for Indians, ICMR (2011), NIN, Hyderabad.

□ Dietary Allowances for Indians . ICMR (2010), NIN-Hyderabad.

□ Nutrition: A Lifecycle Approach, Chadha R., Mathur P eds.(2015). Orient, New Delhi.

□ Diet Planning through the Life Cycle: Part 1 Normal Nutrition, Seth V and Singh K (2006).A Practical Manual. Elite Publishing House Pvt. Ltd. New Delhi.

Nutritive Value of Indian Foods. Gopalan C, Rama Sastri BV, Balasubramanian SC (1989) National Institute of Nutrition, ICMR, Hyderabad.