



NUTRITION FOR HEALTH AND FITNESS

Credits : 4

Course Code : MFSN20402 (GE-1)

II Year/ IV Semester
No. of Lecture hours: 60

OBJECTIVES:

- To familiarize students with different aspects of nutrition and its importance in maintaining healthy life

OUTCOME:

- Students will gain knowledge about different aspects of nutrition and its importance in maintaining healthy life.

UNIT:1

(12 Hrs)

- Carbohydrates – Classification, functions, sources, Digestion and absorption, Regulation of blood glucose concentration, dietary fibre, resistant starch, Glycaemic Index.
- Proteins – Classification, food sources, functions, Digestion, absorption and transport, nutritional requirements.

UNIT:2

(12 Hrs)

- Fats – Types, Functions, sources and its metabolism, nutritional requirements, diseases. excessive fat intake.
- Water and Electrolyte Balance.
- Vitamins and Minerals – Types, sources, functions, requirements, deficiency, toxicity and preventive measures.

UNIT:3

(12 Hrs)

- Food components other than essential nutrients – Functional foods, Bioactive substances from protein foods, Non glycerides in edible oils
- Probiotics and Prebiotics,
- Polyphenols,
- Phytoestrogens,
- other dietary factors with antinutritional effects like: Protease inhibitors, Saponins, Amylase inhibitors, Lectins or Haemagglutinins, Phytates and their health benefits.

UNIT:4

(12 Hrs)

- Nutrition during different stages of life cycle.
- Sports Nutrition – Concept Techniques of measuring body composition, work capacity, physical fitness, Nutritional demands of sports and dietary recommendations, ergogenic aids.
- Holistic approach to the management of fitness and health – Energy input and output Diet and exercise. Effect of specific nutrients on work performance and physical fitness.

UNIT:5

(12 Hrs)

- Nutrition, exercise, physical fitness and health inter – relationship.
- Review of different energy systems for endurance and power activity – fuels and nutrients to support physical activity



- shifts in carbohydrate and fat metabolism
- Mobilization of fat stores during exercise.

RECOMMENDED READINGS:

- Williams, S.R. B.S. Worthington Roberts (1988). Nutrition throughout the life cycle. Times mirror, mostly college publishing St. Louis.
- Whitney. E.R. and S.R Kolfes (2002) Understanding Nutrition 9th ed. Wadsworth Thomson Learning, Australia.
- Thompson, L.U. (1993) Potential Health Benefits and problems associated with antinutrients in foods. Food Research International. 26; 134 – 149.
- Gibson, G.R. and M.B. Roberfroil (1999) ColoricMirobio, Nutrition and health, Kluwer Academic Publishers, Dordecht.

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