FNS 506 FUNCTIONAL FOODS

39 Hr (13× 3 units)

Course outcome:

- Describe nutraceuticals and their role in treating diseases.
- Write down the regulatory issues of nutraceuticals
- Identify the role of functional foods and its impact on health.
- Understand the benefits of nutraceutical in various diseases.

Unit I: Introduction to nutraceuticals: Definitions, synonymous terms, basis of claims for a compound as a nutraceutical, regulatory issues for nutraceuticals including FSSAI, CODEX/USFDA, labelling issues.

Unit II: Functional foods: Definition, functional components, types of functional foods, prebiotics and probiotics. Synbiotics, bioactive peptides and polyphenols.

Unit III: Role of nutraceuticals/functional foods: Benefits of specific nutraceuticals in cardiovascular diseases, cancer, diabetes, cholesterol management, obesity, immune enhancement, age-related macular degeneration, endurance performance, peri-menopausal syndrome – compounds and their mechanisms of action, contra-indications.

REFERENCES:

- Brigelius-Flohé, J & Joos HG. 2006. Nutritional Genomics: Impact on Health and Disease. Wiley VCH.
- Cupp J & Tracy TS. 2003. Dietary Supplements: Toxicology and Clinical Pharmacology. Humana Press.
- Gibson GR & William CM. 2000. Functional Foods – Concept to Products.
- Goldberg I. (1994). Functional Foods: Designer Foods, Pharma Foods.
- Losso JN. 2007. Anti-angiogenic functional and medicinal Foods. CRC Press
- Neeser JR & German BJ. (2004). Bioprocesses and Biotechnology for Nutraceuticals. Chapman & Hall.
- Robert EC. 2006. Hand book of Nutraceuticals and Functional Foods. 2nd Ed. Wildman.
- Shi J. 2006. Functional Food Ingredients and Nutraceuticals: Processing Technologies. CRC Press.
- Webb GP. 2006. Dietary Supplements and Functional Foods. Blackwell Pub.