



Course Code	Course Title	ECTS Credits
NUTR 340	Phyto-chemicals, Functional Foods and Supplements	6
Department	Semester	Prerequisites
Life & Health Science	Spring	FDSC-250, NUTR-255
Type of Course	Field	Language of Instruction
Required	Nutrition	English
Level of Course	Year of Study	Lecturers
1 st Cycle	3 rd	Emilia Vasilopoulou
Mode of Delivery	Work Placement	Co-requisites
Face-to-face	N/A	None

Objectives of the Course:

The main Objectives of the Course are to:

- Identify the physiological basis for phytochemical and functional food diversity.
- Describe the various groups of phytochemicals, dietary supplements and functional foods.
- Appreciate the importance of food phytochemicals, supplements and functional foods in human nutrition in both health and disease.
- Develop critical thinking regarding the benefits and questionable effects of phytochemicals, dietary supplements and functional foods.
- Understand the regulatory aspects regarding the use of phytochemicals, dietary supplements and functional foods.
- Discuss the free radical theory of disease and the effect of antioxidants.
- Appreciate the impact of food processing on phytochemicals, dietary supplements and functional foods.

Learning Outcomes:

After completion of the course students are expected to:

- Identify the physiological basis for phytochemical and functional food diversity.
- Describe the various groups of phytochemicals, dietary supplements and functional foods.
- Explain the impact of food phytochemicals, dietary supplements and functional foods in human nutrition in both health and disease.
- Critically evaluate the benefits and questionable effects of phytochemicals, dietary supplements and functional foods.
- Be familiar and be able to explain the regulatory aspects regarding the use of phytochemicals, dietary supplements and functional foods.
- Discuss the free radical theory of disease and the effect of antioxidants
- Discuss and appreciate the impact of food processing on phytochemicals, dietary supplements and functional foods.

Learning Activities and Teaching Methods:

Lectures, class discussion, case-studies, group work, presentation

Assessment Methods:

Final Examination	40%
2 short multiple-choice tests	20% each
10 minute class presentation	15%
Class participation and attendance	5%

Required Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Webb GP	Dietary Supplements and Functional foods (paperback)	Blackwell Publishing	2011	1405119098

Johnson I, Williamson G	Phytochemicals and functional foods (hardcover)	CRC	2003	0849317541
Fragakis AS	The Health Professionals Guide to Popular Dietary Supplements	ADA	2007	0880913630

Recommended Reading:

- International Bibliographic Information on Dietary Supplements (IBIDS)
<http://ods.od.nih.gov/databases/ibids.htm>
- Medline Plus Dietary Supplements www.nlm.nih.gov/medlineplus [Accessed Feb 2011]

Course Contents:

<ol style="list-style-type: none"> 1. Overview of supplements, functional foods and phytochemicals. 2. Food supplements – effectiveness and safety 3. Food supplements – legal regulations 4. Probiotics and prebiotics 5. Food supplements: vitamins (Vitamins B1, B2, B3, B6, B12, folic acid, Vitamin C, D, E, K) 6. Food supplements: minerals (calcium, magnesium, iron, selenium, zinc, potassium, iodine) 7. Food supplements: herbal (e.g. ginseng, gingo biloba, garlic, St John's wort etc) 8. Major phytochemical groups and food sources 9. Phytochemicals in disease prevention (CHD, cancer, immune response) 10. Phytochemicals as antioxidants and the free radical theory
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Learning Activities and Teaching Methods:

Lectures; Cooperative learning activities, Discussions; Review of literature.

Assessment Methods:

Class Presentation, Tests and Mid-term Exam; Final Exam