University of Nicosia, Cyprus

Course Code	**Course Title**	**ECTS Credits**
FDSC-250	Food Chemistry and Lab	6
Department	**Semester**	**Prerequisites**
Life and Health Sciences	Spring	Chem 102
Type of Course	**Field**	**Language of Instruction**
Required	Food Science, Nutrition	English
Level of Course	**Year of Study**	**Lecturer**
1st cycle	2nd	Zoi Konsoula
Mode of Delivery	**Work Placement**	**Co-requisites**
face-to-face	N/A	None

Objectives of the Course:

This course will cover the basic chemical food categories, the interactions between them and their effect on the quality and shelf-life of foods. The main Objectives of the Course are to:

- Understand the basic food ingredient categories – fats & lipids, carbohydrates, proteins, water, additives
- Learn methods of analysis and determination of food components
- Understand possible interactions between ingredients
- Learn about the impact of processing techniques on their nutritional value and physical characteristics
- Understand changes during formulation, storage
- Understand the major chemical reactions that limit shelf life of foods

Learning Outcomes:

After completion of the course students are expected to be able to:

1. Know the major food components and their structures
2. Understand the functional properties of these components and the part they play in the food

3. Understand the methods a food product can be altered during storage and be able to advice on how to improve the shelf-life
4. Know of the possible mechanisms a food product can contaminated
5. Know the impact some these components play on the human health
6. How to carry out different food chemistry analysis

Course Contents:

1. Introduction to Food Chemistry
2. Water
3. Carbohydrates
4. Lipids
5. Proteins
6. Vitamins
7. Food Additives, E-numbers
8. Chemical Food Contaminants
9. Undesirable Reactions in Foods
10. Introduction to Food Sensory Analysis

Learning Activities and Teaching Methods:

Lectures; Discussions; Lab Exercises

The format will be lectures 3h/week and 2h/w hands on laboratory excercises.

Assessment Methods:

Lab Reports, Tests and Mid-term Exam; Final Exam

Required Textbooks/Reading:

Authors	**Title**	**Publisher**	**Year**	**ISBN**
John M. de Man.	Principles of Food Chemistry 3rd ed.		1999	**ISBN:** 083421234X
Dennis D. Miller	Food Chemistry: A laboratory Manual		1998	0471175439