MODULE LAYOUT

1. GENERAL

SCHOOL	FOOD AND NUTRITIONAL SCIENCES		
DEPARTMENT	FOOD SCIENCE AND HUMAN NUTRITION		
STUDY LEVEL	*Undergraduate*		
MODULE CODE	**3390**	**SEMESTER**	4th
MODULE TITLE	FOOD CHEMISTRY		

INDEPENDENT TEACHING ACTIVITIES	**WEEKLY TEACHING HOURS**	**ECTS**
Lectures and Practicals	5 (3+2)	5

COURSE TYPE	Scientific Area Skills development in laboratory
PREREQUISITES	
LANGUAGE	Greek
IS THE COURSE OFFERED for ERASMUS STUDENTS?	Yes (in English)
COURSE WEB PAGE	https://mediasrv.aua.gr/eclass/courses/ETDA130/ https://mediasrv.aua.gr/eclass/courses/ETDA142/

2. LEARNING OUTCOMES

Learning Outcomes

This module aims to provide students with knowledge of important chemical components of foods, and their impact on food quality during processing and storage.

Students should be able to:

- State the structures and discuss the properties of proteins, lipids, carbohydrates, vitamins. Discuss the effects of processing and storage on these components during processing and storage.
- Discuss the importance of non-enzymatic browning on food production and preservation.
- Describe selected permitted food additives and discuss their impact on food quality and/or safety.
- Discuss the formation of flavor components in food
- Describe the undesirable food constituents (toxicants)

General Competenses

- Make decisions
- Work autonomously
- Future research
- Work in teams
- Be critical and self-critical
- Advance free, creative and causative thinking

3. MODULE CONTENT

1. Water and Ice
2. Carbohydrates
3. Lipids
4. Amino acids, peptides, enzymes and Proteins
5. Vitamins
6. Minerals
7. Food Additives
8. Colorants
9. Flavors
10. Toxicants

4. TEACHING and LEARNING METHODS - Evaluation

TEACHING METHOD	Physical presence (teaching in the auditorium and laboratory, bibliographic work)
USE OF INFORMATICS and COMMUNICATION TECHNOLOGIES	Power point presentations Teaching support through access to the e-class platform and MS Teams Student contact via e-mail
TEACHING ORGANISATION	

Activity	***Φόρτος Εργασίας Εξαμήνου***
Lectures	39 (3*13) hours
Laboratory practicals	26 (2*13) hours
Writing assignments	25 hours
Study and analysis of scientific literature	6 hours
Weekly study hours	26 hours
Final exam	3 hours
Total of Course (25 work hours per credit unit)	***125***

STUDENTS EVALUATION	**I. Theory** Final written exam, which may include multiple choice questions, short-answer questions, Questions to develop a topic, Judgment questions and Exercise solving. Marking Scale: 0-10. Minimum Passing Mark: 5. **II. Laboratory** The examination in the laboratory part of the course is formed by: 1. Oral examination during the practicals to determine the degree of preparation (5%) 2. Written individual reports (25%) 3. Final written exam in the laboratory part of the course which includes short answer questions and problem solving (70%) Marking Scale: 0-10. Minimum Passing Mark: 5. The final course's mark is the average of the marks on Theory and Practicals

5. BIBILIOGRAPHY

-Proposed Literature:

- Food Chemistry, Belitz, H.-D., Grosch, W., Schieberle, P., Springer
- Food Chemistry, by O. Fennema , CRC Press
- Instructor's Manual for Principles of Food Chemistry, John M. deMan Aspen Publishers

-**Related Scientific Journals:**

- Food Chemistry
- Journal of Agricultural and Food Chemistry
- Journal of food composition & analysis
- Journal of the American Oil's Chemist Society