SCHOOL	FACULTY OF ENVIRONMENT
ACADEMIC UNIT	FOOD SCIENCE AND TECHNOLOGY
LEVEL OF STUDIES	UNDERGRADUATE
COURSE CODE	**FST303** **SEMESTER** **3**
COURSE TITLE	**FOOD ANALYSIS**

INDEPENDENT TEACHING ACTIVITIES *if credits are awarded for separate components of the course, e.g. lectures, laboratory exercise, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits*		WEEKLY TEACHING HOURS	CREDITS
	Lectures	2	
	Laboratory exercise	2	
	Total	4	6
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).			
COURSE TYPE *General background, special background, specialised general knowledge, skills development*	Specialised general knowledge		
PREREQUISITE COURSES:			
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes in Greek		
COURSE WEBSITE (URL)			

LEARNING OUTCOMES

Learning Outcomes

The course earning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.
Consult Appendix A

- *Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area*
- *Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B*
- *Guidelines for writing Learning Outcomes*

Upon the successful completion of the course, the student will be able:

- Describes the composition of food
- formulate the principles of the main methods of food analysis
- Distinguish and select the appropriate analytical methods according to the food and the ingredient to be analysed
- Identify and use scientific equipment relevant to food analysis
- Perform analytical techniques and comply with safety rules in a laboratory setting
- Collect experimental data and make calculations to draw conclusions

-	Interpret the results obtained from the various methods of food analysis

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and information, with the use of the necessary technology	*Project planning and management*
Adapting to new situations	*Respect for difference and multiculturalism*
Decision-making	*Respect for the natural environment*
Working independently	*Showing social, professional and ethical responsibility and sensitivity to gender issues*
Team work	*Criticism and self-criticism*
Working in an international environment	*Production of free, creative and inductive thinking*
Working in an interdisciplinary environment	
Production of new research ideas	*......*
	Others...
	....

- Adapting to new situations
- Decision-making
- Working independently
- Team work
- Criticism and self-criticism
- Production of free, creative and inductive thinking
- Search for, analysis and synthesis of data and information, with the use of the necessary technology

SYLLABUS

Theoretical part of the course:

The importance of food analysis. Food analysis methods and principles of quality control, prerequisites and legislation. Sampling, handling and preparation of laboratory samples for analysis. Macroscopic control and evaluation. Results presentation regarding the composition and quality of food.

Analytical methods to determine moisture content, ash, pH and acidity, protein, carbohydrate, oil and fat, vitamins, additives, inorganic compounds and natural antioxidants. Applications and examples of the latter methods on food analysis. Presentation of officially approved methods complying with current legislative regulations.

Laboratory exercises:
- Determination of moisture content
- Determination of ash content and alkaline ash in food
- Determination of titrable acidity
- Determination of sodium chloride in selected foods
- Determination of total nitrogen content using the Kjeldahl process
- Determination of fat using the Soxhlet method
- Determination of reducing sugars with the DNS method
- Determination of vitamin C through titration
- Determination of gluten in flour
- Determination of Free Amino Nitrogen (FAN) using the ninhydrin colorimetric method

TEACHING and LEARNING METHODS - EVALUATION

DELIVERY *Face-to-face, Distance learning, etc.*	Face-to-face
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY *Use of ICT in teaching, laboratory education, communication with students*	**Use of information technology on data collection and information, in teaching and communication. Communication with students via web, e-mail, e-class and online folder sharing options etc.**

TEACHING METHODS *The manner and methods of teaching are described in detail.* *Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.* *The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS*	Activity	Semester workload
	Lectures	78
	Laboratory exercise	26
	Total contact hours and training	*104*

STUDENT PERFORMANCE EVALUATION *Description of the evaluation procedure* *Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other* *Specifically-defined evaluation criteria are given, and if and where they are accessible to students.*	Evaluation procedure performed in Greek Evaluation procedures: Written evaluation in questions of scaling difficulty - Two examination tests are performed in-between semester - Final examination The final grade is determined by the following formula: 40% of laboratory exercise grade and 60% of theory examination grade.

ATTACHED BIBLIOGRAPHY

- Suggested bibliography:

Andrikopoulos, Food Analysis, 2010 (In Greek)

Arvanitogiannis, I., Varzakas, T., Tzifa, K., Food Quality Control, Laboratory exercises, 2008 (In Greek).

Polychroniadou-Alichanidou A., Food Analysis, Methods and Principles, 1996 (In Greek).

Performance Statistics of the last 2years			
Grade (descending order)	absolute frequency	relative frequency %	sum of success rates per class
FOOD ANALYSIS			
10	1	1%	1%
9	3	3%	4%
8	6	6%	9%
7	32	30%	40%
6	64	60%	100%
	106	100%	