SCHOOL	FACULTY OF ENVIRONMENT		
ACADEMIC UNIT	FOOD SCIENCE AND TECHNOLOGY		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	**FST603**	**SEMESTER**	6
COURSE TITLE	**CEREALS AND CEREAL PRODUCTS SCIENCE AND TECHNOLOGY**		

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	
	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*	Special Background/ Skills development
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 successful completion of the course the student will be able to:

- Describe the characteristics, properties and composition of cereals
- Outline the technology for the manufacture of bakery products
- Develop methodologies for the production of bakery products
- Perform techniques for the analysis of bakery products
- Carry out quality checks necessary during the process
- Evaluate the quality characteristics of cereals and their products and relate them to the processing conditions

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

COURSE CONTENT

Theoretical Part of the Course

Cereals: General, importance, sampling methods and storage. Grain structure and composition. Dry grinding of cereals. Peeling of cereals. Wet milling of cereals. Various types of cereal foods. Wheat flour preparations. Pastry ingredients. Production of alcohol from cereals. Beer, whiskey. Principles and practices of quality control in raw materials in intermediates and final products. Quality characteristics, standards, evaluation.

Laboratory Part of the Course

1. Sampling, quality examination, processing, flour from various cereals.
2. Quality control of flours, types of flours, determination of moisture and ash in cereals and flours.
3. Sedimentation value test.
4. Determination of acidity and pH in flours.
5. Determination of quality and quantity of gluten.
6. Detection of improvers in flour. Peckar test, use of additives - additives in flour.
7. Evaluation of the fermentation capacity of flours with the effect of improvers and auxiliary bakery materials.
8. Making bread, cakes, cookies.
9. Methods of measuring the starch activity of flours.
10. Pasta quality control, pasta specifications.
11. Rice quality control - specifications

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*	
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.*	Written Evaluation

Activity	*Semester workload*
Lectures	78
Laboratory	26
Total contact hours and training	**104**

ATTACHED BIBLIOGRAPHY

- Suggested bibliography:

1. Μποσδίκος Δ., Τεχνολογία Αρτοποίησης, 2005.

2. Κεφαλάς Π., Τρόφιμα από Σιτηρά, 2009.

3. Παπακώστα Τασοπούλου Δ., Ειδική Γεωργία –Σιτηρά και Ψυχανθή, 2012.

4. Λάζος Ε., Λάζου Α., Επιστήμη & Τεχνολογία Σιτηρών, 2016

Performance Statistics of the last 2years			
Grade (descending order)	**absolute frequency**	**relative frequency %**	**sum of success rates per class**
SCIENCE & TECHNOLOGY OF CEREALS AND THEIR PRODUCTS			
10	1	1%	1%
9	3	3%	4%
8	6	6%	9%
7	32	30%	40%
6	64	60%	100%
	106	100%	