Food Industries Equipment and Automatic Control Systems

COURSE OUTLINE

GENERAL

SCHOOL	AGRICULTURAL SCIENCES			
DEPARTMENT	FOOD SCIENCE AND NUTRITION			
EDUCATION LEVEL	Undergraduate			
COURSE CODE	**ME916**	**SEMESTER**	9	
COURSE TITLE	Food Industries Equipment and Automatic Control Systems RESPONSIBLE: I. Giovanoudis			
SELF-ENDED TEACHING ACTIVITIES *in case the credits are awarded in separate parts of the course e.g. Lectures, Laboratory Exercises, etc. If the credits are awarded uniquely for the entire course, enter the weekly teaching hours and total credits*			**WEEKLY TEACHING HOURS**	**CREDIT UNITS (ECTS)**
Lectures			3	4
Laboratory / Application Exercises			1	
COURSE TYPE ***Background, General Knowledge, Scientific Area, Development Skills***	By Selection			
PREREQUISITE COURSES:				
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek			
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No			
COURSE WEBSITE (URL)				

LEARNING OUTCOMES

Learning Outcomes
Upon successful completion of the course, the student: Will be able to recognize and calculate the requirements of establishment and establishment of food industries Will recognize the requirements set by European and national legislation for the processing and packaging of food in Industries, the hygiene specifications of machines in the Food Industry, according to the requirements of self-control systems, according to standards such as ISO 14159: Machine safety & specifications hygiene, DIN EN 1672-2: Hygienic design for food machinery and according to the European Hygienic Engineering Design Group (EHEDG) and National Sanitation Foundation (NSF), IP protection coding system. Will be able to plan the infrastructures and facilities according to the Health plan implementation of the HACCP plan: Hazard Analysis Critical Control Points
General Skills
Adaptation to new situations *Search, analysis and synthesis of data and information* *Autonomous work* *Teamwork* *Work in an international environment* *Work in an interdisciplinary environment* *Generating new research ideas* *Acquiring the appropriate theoretical background to enable further training*

COURSE CONTENT

1st Week
Requirements for Food Industries (Field-services-facilities per activity)
2nd Week
Requirements for Food Industries (Field-services-facilities per activity)
3rd Week
Food Industry Production Systems by activity.
4th Week
Food Industry Production Systems by activity. (educational visit)
5th Week
Food Industry Production Systems by activity. (educational visit)
6th Week
The European legislation for the processing and packaging of food in Industries, hygiene specifications of machinery in the Food Industry, in accordance with the requirements of the self-control systems.
7th Week
ISO standard 14159: Safety of machinery
IP protection coding system
8th Week
Hygiene specifications DIN EN 1672-2 for food industries
Hygienic design for food machinery according to the European Hygienic Engineering Design Group (EHEDG).
Sanitary design for food machinery according to National Sanitation Foundation (NSF).
9th Week
HACCP Health Design: Hazard Analysis Critical Control Points
10th Week
Applicable certification standards for Food Industries
11th Week
Applicable certification standards for Food Industries
12th Week
Examples of hygiene specifications
13th Week
Repetition

TEACHING and LEARNING METHODS - EVALUATION

TEACHING METHOD	Face-to-face lectures in a classroom
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	**Internet, e-mail, Powerpoint**
TEACHING ORGANISATION	

Activity	***Semester's Workload***
Lectures	39
Individual study and preparation for lectures	10
Workshop-practical exercises	13
Individual study and preparation for the workshop-practical exercises	10
Educational visits	7
Preparation for exams	18
Final exam	3
Total (25 workload hours per Credit unit)	***100***

STUDENT EVALUATION	The evaluation of the students is optionally with progress and a final written exam, which will include multiple choice, true-false, short answer, judgment questions, as well as the

	presentation of projects or a combination of the above.

RECOMMENDED BIBLIOGRAPHY

1. *Kanónes orthís ygieinís praktikís gia tis epicheiríseis trofímon, Kalogrídou - Vasileiádou D.*
2. *Schediasmós chimikón viomichanión, Marínos - Kourís D. S., Maroúlis Z. V.*
3. *Eisagogí sto Schediasmó Chimikón Ergostasíon, 2i Ékdosi, Koúkos Ioánnis*
4. *Schediasmós kai oikonomikí meléti enkatastáseon gia michanikoús, Peters Max,Timmerhaus Klaus D., West Ronald E.*
5. *Stoicheía technologías, metapoíisis kai syskevasías trofímon, Arvanitogiánnis Ioánnis S., Bosnéa Louloúda A.*
6. *Michanologikós Exoplismós Viomichanikón Diergasión, Papaïoánnou Ángelos*