

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 <i>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</i>		WEEKLY TEACHING HOURS	CREDIT UNITS (ECTS)
Lectures		3	4
Laboratory / Application Exercises		1	
COURSE TYPE <i>Background, General Knowledge, Scientific Area, Development Skills</i>	By Selection		
PREREQUISITE COURSES:	No		
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 delving into new design data. Will recognize the specialized modern 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 and the modern industrial practice. 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
<i>Adaptation to new situations</i> <i>Search, analysis and synthesis of data and information</i> <i>Autonomous work</i> <i>Teamwork</i> <i>Work in an international environment</i> <i>Work in an interdisciplinary environment</i> <i>Generating new research ideas and in-depth application and specialization in the use of new technologies and methods.</i> <i>Acquiring the appropriate theoretical background to enable further training</i>

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.
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RECOMMENDED BIBLIOGRAPHY

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