FOOD MICROBIOLOGY AND HYGIENE

COURSE OUTLINE

Responsible: Georgios Fragkiadakis

1. GENERAL			
SCHOOL	School of Health Sciences		
ACADEMIC UNIT	Department of Nutrition and Dietetics Sciences		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	0809.4.005.0	**SEMESTER**	Winter/Spring
COURSE TITLE	Food Microbiology and Hygiene		

INDEPENDENT TEACHING ACTIVITIES if credits are awarded for separate components of the course	**WEEKLY TEACHING HOURS**	**CREDITS**
	0	5
Total	**0**	**5**

COURSE TYPE general background, special background, specialised general knowledge, skills development	Ειδίκευσης
PREREQUISITE COURSES	None
LANGUAGE OF INSTRUCTION and EXAMINATIONS	English
OFFERED TO ERASMUS STUDENTS	Yes (in English) — Both Winter and Spring Semesters
COURSE WEBSITE (URL)	https://eclass.hmu.gr/courses/YD237/

2. LEARNING OUTCOMES

Learning outcomes

The aim of the course is to teach students the sources of food contamination, the types of foodborne hazards and how to deal with them in food establishments. The training of dietitians in hygiene issues is a necessary prerequisite for working in areas where they directly or indirectly come into contact with food intended for consumption. The course includes a laboratory with mandatory attendance for the final documentation of the training, in accordance with the requirements of EFET or relevant food safety certification bodies. It is expected that upon completion of the course, students will be able to:

Students acquire basic knowledge of microbiology and food hygiene, with a main focus on the relationships of microorganisms with food and humans.

They supervise the design and implementation of food safety and hygiene guidelines and food services.

They correctly interpret the findings of recent scientific research on the problems of microbiology and food hygiene.

They summarize and evaluate the literature on contemporary research activity in food hygiene and microbiology.

General Competences

The course contributes to the development of general skills such as:

- to identify food-borne hazards and plan/implement the corresponding preventive measures

- to understand food safety management systems, with emphasis on the level of application in hospitals and mass catering
- to design production flow charts and analyze them to identify hazard points and intervention points for food protection
- to identify critical control points and manage HACCP plans

3. SYLLABUS

The most important microorganisms in microbiology and food hygiene (fungi, yeasts, bacteria) - their morphological, cultural, physiological and biochemical characteristics, reproduction, relationship with food and public health). - Nutrition of microbes, their food types and the effect of physicochemical factors on the growth and activities of microbes (temperature, pH, radiation, pressure). - The growth of unicellular microorganisms and its parameters (number of divisions, generation time, growth rate, age of bacteria, growth curve and phases). - The natural sources of food contamination (microbial flora of plants, animals, soil, water, air), principles of food preservation (heat, cold, etc.). - Microbiology, hygiene and the control of water, milk, meat. - Diseases transmitted by foods contaminated with pathogenic microorganisms (foodborne infections and food poisoning - preventive measures). - Protozoa important in microbiology and food hygiene. - Metazoa important in microbiology and food hygiene. - Viruses important in microbiology and food hygiene.

4. TEACHING and LEARNING METHODS - EVALUATION

DELIVERY Face-to-face, Distance learning, etc.	Face to face, Distance learning, etc
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY Use of ICT in teaching, laboratory education, communication with students	USE OF TECHNOLOGY Use of ICT in laboratory education INFORMATION AND COMMUNICATION Use of ICT in communication with students through the Use of ICT in Teaching, in the electronic platform e-class Laboratory Education, in Communication with students
TEACHING METHODS The manner and methods of teaching are described in detail.	**Activity** / **Semester workload** ESSAYS / 12 **Course total** / **12**
STUDENT PERFORMANCE EVALUATION Description of the evaluation procedure	Written midterm exam (progress, 50%) with Language of Assessment, Assessment methods, Formative or Summative, Short answer questions and Multiple Choice exercises, Short extended answer questions, Essay Development Questions, Written final exam (50%) with Problem Solving, Written Assignment, Report / Report, Oral Exam, short answer questions and extended answer exercises Public Presentation

5. ATTACHED BIBLIOGRAPHY

Food Microbiology

By Martin R. Adams; Peter J. McClure; Maurice O. Moss

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