



Course Code	Course Title	ECTS Credits
NUTR-360	Experimental Food and lab	6
Department	Semester	Pre-requisites
Life and Health Sciences	Spring	FDSC-260
Type of Course	Field	Language of Instruction
Core requirement	Nutrition	English
Level of Course	Year of Study	Lecturer
1 st Cycle	Third	Emilia Vasilopoulou
Mode of Delivery	Work of Placement	Co requisites
Face-to face	N/A	None

Objectives of the Course:

This course introduces the student to the main types of food processing with emphasis on preservation of nutritive quality and on preservation from spoilage and poisoning by bacterial and toxic substances. The student is also introduced to quality control, assurance of product standards, and sanitation requirements for safe-food production. The course format will be lectures and lab 3h/week, assigned literature and visits to food processing industry and practising in cooking principles .

Learning Outcomes:

At the end of the course the student will be able to:

1. Understand the difference between food intoxication and food infection with microorganisms (spore forming and non-spore forming) and how they affect the type of food process used.

2. Be able to describe the various methods of food processing and how they act to preserve food.
3. Be able to identify and explain how to produce safe food.
4. Be able to describe the different processes, packaging and additives applied.
5. Know the solid and liquid wastes produced by food processing and describe methods of their treatment.
6. Demonstrate Basic Cookery Principles and Theories

Course Contents:

1. Microbiology of water
2. Food preparation/separation and meat technology
3. Sanitizers, Cleaners
4. Pest management
5. Food-borne Diseases
6. Heat Preservation and Processing
7. Cold Preservation and Processing
8. Food dehydration and concentration
9. Food irradiation and microwave heating
10. Waste water treatment
11. Food Preservation by fermentation
12. Food packaging; quality control and regulations
13. Chemical additives used in food preservatives

Teaching Methods:

Lectures, and Assignments and lab

Required Textbooks:

1. **Principles of Food Sanitation (Food Science Texts Series) (Hardcover)** by Norman G. Marriott, Robert B. Gravani **Publisher:** Springer; 5 edition (January 5, 2006) **ISBN:** 0387250255
2. **Foundations of Food Preparation (6th Edition) (Hardcover)** by Jeanne Freeland-Graves, Gladys C. Peckham **Publisher:** Prentice Hall; 6 edition (November 14, 1995) **ISBN:** 0023396415

RECOMMENDED TEXTBOOKS:

1. **HACCP & Sanitation in Restaurants and Food Service Operations: A Practical Guide Based on the USDA Food Code With Companion CD-ROM (Hardcover)** by

- Lora Arduser, Douglas Robert Brown **Publisher:** Atlantic Publishing Company (FL); Bk&CD-Rom edition (July 2005) **ISBN:** 0910627355
2. **Essentials of Food Safety and Sanitation (4th Edition) (Paperback)** by David McSwane, Richard Linton, FMI FMI, Nancy R. Rue**Publisher:** Prentice Hall; 4 edition (July 19, 2004) **ISBN:** 0131196596
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3. **Physical Properties of Foods and Food Processing Systems (Paperback)** by M. J. Lewis**Publisher:** Woodhead Publishing; New Ed edition (January 1, 1990) **ISBN:** 1855732726
 4. **Food Processing Operations and Scale-up (Food Science and Technology) (Hardcover)** by Kenneth J. Valentas, J. Peter Clark, Leon Levin **Publisher:** CRC; 1 edition (November 19, 1990) **ISBN:** 0824782798
 5. **Modern Food Microbiology (Food Science Texts Series) (Hardcover)** by James M. Jay, Martin J. Loessner, David A. Golden**Publisher:** Springer; 7 edition (May 10, 2006) **ISBN:** 0387231803
 6. **Dictionary of Food Ingredients, Fourth Edition (Hardcover)** by Robert S. Igoe, Y. H. Hui**Publisher:** Springer; 4th edition (May 11, 2006) **ISBN:** 0834219522
 7. **Principles and Practice for the Safe Processing of Foods (Paperback)** by David Shapton **Publisher:** CRC; New Ed edition (July 27, 1998) **ISBN:** 1855733625
 8. **Food Processing Handbook (Hardcover)** by James G. Brennan **Publisher:** John Wiley & Sons (January 16, 2006) **ISBN:** 3527307192
 9. **Physical Principles of Food Preservation, Second Edition, (Food Science and Technology) (Hardcover)** by Marcus Karel, Daryl B. Lund **Publisher:** CRC; 2 edition (June 20, 2003) **ISBN:** 0824740637
 10. **Aseptic Processing of Foods Containing Solid Particulates (Hardcover)** by Sudhir K. Sastry, Bill D. Cornelius **Publisher:** Wiley-Interscience (March 22, 2002) **ISBN:** 0471363596
 11. **Physical Properties of Foods (Food Science Texts Series) (Hardcover)** by Serpil Sahin, Servet Gulum Sumnu **Publisher:** Springer; 1 edition (May 24, 2006) **ISBN:** 038730780X
 12. **Food Texture (Food Science and Technology) (Hardcover)** by Moskowitz **Publisher:** CRC (April 7, 1987) **ISBN:** 0824775856
 13. **Food Processing Technology: Principles and Practice (Woodhead Publishing in Food Science and Technology) (Paperback)** by Peter J. Fellows **Publisher:** Woodhead Publishing.; 2nd edition (June 2000) **ISBN:** 1855735334