

Course: Food technology and foodservice systems

Objectives: The student will be able to describe some new technologies that may affect the production and processing of food. Additionally will be able to explain the effects of food processing, food and drink fortification and cooking on the nutritional value of food and drinks.

This laboratory will discuss concepts from physical and chemical science everyday cooking. At the end of the course students will be able to explain how range of cooking techniques and recipes work in terms of the physical and chemical transformation of food. Science discussions on gelation, and how the unique properties of proteins and modernist thickeners make it possible. Laboratory also will discuss concepts of food additives, flavor and spherification.

Description:

1. Characteristics and rational use of raw materials and additives in food technology.
2. Modern trends in production and preservation food.
3. Food sanitation in hygiene.
4. Effect of cooking & heat processing on the nutritive value of foods.
5. Specific food additives and their functions.
6. Processed supplementary foods.
7. Molecular gastronomy – science in gastronomy.
8. Types and characteristics of foodservice systems.

Literature:

1. H. McGee, On Food and Cooking. The science and lore of the kitchen, New York 2004
2. Y. H. Hui, Frank Sherka, Handbook of Food Science, Technology, and Engineering, CRC Press Taylor & Francis Group 2009
3. H. This, Building a meal. From Molecular Gastronomy to Culinary Constructivism, New York 2009
4. N. Myhrvold, Ch. Young, M. Bilet, Modernist cuisine. The art and science of cooking, Bellevue 2011

Teaching: case studies/conversations/practice
120 hours

Examination: combined exam – test & oral

ECTS: 4

Person responsible: Marek Kardas, PhD, Assistant Professor
Department of Food Technology and Quality Evaluation
School of Public Health
Medical University of Silesia, Katowice, Poland