

## Summer Institute of Advanced Epidemiology and Preventive Medicine Summer 2014

### **Food Security and Public Health - Course Syllabus**

Course number: 0158.1153

**2 Academic Credits**

July 6<sup>th</sup> - July 10<sup>th</sup> 2014, 14:00-18:30

Room 215, Sackler Medical Faculty Building, Tel Aviv University

#### **Course Instructors**

**Dr. Dorit Nitzan**  
World Health Organization  
Tel Aviv University

**Dr. Ezra Barzilay**  
US Centers for Disease Control

#### **Guest Lecturers**

**Prof. Daniel Cohen**, Tel Aviv University  
**Prof. Yona Amitai**, Bar-Ilan University

#### **Course Assistants:**

Ms. Gali Cohen- [co.gali@gmail.com](mailto:co.gali@gmail.com)  
Ms. Keren Hod- [hodkeren@gmail.com](mailto:hodkeren@gmail.com)

#### **I. Course Description:**

This course will provide an overview of Food Security as a public health issue. The course will relate to the globalization of food systems in developing countries and its impact on food and nutrition security. Topics also include scaling up nutrition and health activities, emerging foodborne disease in the 21 century, and surveillance of foodborne diseases. The course will further provide tools for understanding and assessment of food safety challenges in a globalized world, chemical risks to food safety, antimicrobial resistance from a food safety perspective, and food safety risk communication.

#### **II. Course location and schedule:**

All classes will take place at the [Sackler Medical Faculty building](#) - room 215.

<u>Day</u>	<u>Time</u>	<u>Lecturer</u>	<u>Topic</u>
Sun 6.7	14:00-15:30	Dorit Nitzan	Course Introduction Food and Nutrition Security, Safety and Public Health
	16:00-17:30	Dorit Nitzan	Globalization of food systems in developing countries: impact on food and nutrition security <ul style="list-style-type: none"> <li>• Understanding the influence of globalization and urbanization on food systems (food supply, marketing and distribution) in developing countries</li> <li>• Discuss the effects of these changes on the market, food consumption patterns and on nutrition and health outcomes.</li> <li>• Highlight the cause and effect</li> </ul>
	17:45-18:30	Dorit Nitzan	Scaling up Nutrition and Health activities <ul style="list-style-type: none"> <li>• Discuss the “double burden” of nutrition-related diseases and highlight the push-and-pull factors</li> <li>• Different approaches to counteract obesity</li> </ul>
Mon 7.7	14:00-15:30	Dorit Nitzan	An appetizer to Nutrition Epidemiology
	16:00-17:30	Dorit Nitzan	Food safety challenges in a globalized world (addressing briefly globalization, trade implications, food safety systems and need for intersectoral cooperation and whole-food chain approaches, Codex, IHR/Infosan, complicating factors (climate change, AMR); Food safety risk communication.
	17:45-18:30	Dorit Nitzan	Food safety risk communication; Addressing food safety information/communication to the public and target groups, general issues, communication in times of food safety emergencies/crises
Tue 8.7	14:00-15:30	Yona Amitai	Chemical risks to food safety
	16:00-17:30	Ezra Barzilay	Foodborne diseases in the 21 Century. An overview of dynamics of infectious foodborne illness, including industrialization, globalization, natural disasters, antimicrobial resistance pressures, population mobility, aging, and dietary changes, with implications for surveillance of foodborne diseases.
	17:45-18:30	Ezra Barzilay	Salmonella as a model of a perennially emerging foodborne pathogen;

Wed 9.7	14:00-15:30	Ezra Barzilay	Specialized surveillance systems: (1) FoodNet, a sentinel foodborne disease surveillance system designed to calculate the burden of diseases and incorporating applied research; (2) PulseNet: an international molecular epidemiology foodborne disease surveillance system.
	16:00-17:30	Dani Cohen	Surveillance of foodborne diseases. Examples: Israel and the Middle East Consortium for Infectious Diseases Surveillance (MECIDS)
	17:45-18:30	Ezra Barzilay	E. coli O157:H7 as a model of an emerging foodborne pathogen
Thu 10.7	14:00-15:30	Ezra Barzilay	Antimicrobial resistance from a food safety perspective. The public health consequence of antibiotic use in food animals, main pathogens concerned, need for surveillance of resistance and antibiotic usage, need for regulation and enforcement of antibiotic use in food animals; examples of the impact of modification of antimicrobial use on antimicrobial resistance trends.
	16:00-17:30	Ezra Barzilay	Foodborne disease outbreak investigation methods: special adaptations of standard field epidemiology techniques.
	17:45-18:30	Ezra Barzilay	Scientific literature: Discussion of two published papers on foodborne disease surveillance and outbreak investigation; Course wrap up
Fri 11.7	<b>Final exam</b>		

**III. Course required prerequisites:**

None

**IV. Final exam**

Course participants, who wish to receive academic credits for the course, must pass the final exam with a grade of at least 60 (D-).

Participants who will chose not take the exam or will receive grade below 60 (F) - will receive a participation diploma only.

**The final exam will take place on Friday, July 11<sup>th</sup>, at 09:00-11:00, room 215.  
An additional date for the exam will be scheduled if required.**