

HYGIENE AND EPIDEMIOLOGY

Code number: NP 18-16

Course ID 600013736

Cycle:

Undergraduate

Semester: 2^{rst}

Course type

	Background/General knowledge
X	Scientific area (pharmacy)

Credit Units (ECTS): 4

Lectures (hours/week): 2

Tutorial (hours/week):

Laboratory work (hours/week): 3

Course coordinator:

Theodoros Dardavesis, Professor: Natural Disaster, Travel Medicine

Tutor (s):

Michail Chourdakis, Assoc. Professor: Nutrition, Diet

Anna – Bettina Haidich, Assoc. Professor: Epidemiology (& studies), Statistics

Ilias Tiroidimos, Assis. Professor: Water Hygiene, Hospital infections

Aims and contents of the course:

1. Nutrition

Calories intake and Energy Balance

Body Composition and Health (overweight, obese, body-mass index)

Carbohydrates

Dietary Fats (lipids)

Proteins

Vitamins

Minerals

2. Principles of Dietary Assessment

Using Nutrition Knowledge to Evaluate Nutrition Claims and Advice

3. Food Hygiene

The significance of Food Hygiene

Foodborne illness: risk groups, the causes of food poisoning, food hazards

Foodborne Infections versus Intoxications, a.k.a. poisoning

Food delivery, food storage, food preparation

Bacteria, Pathogenic Bacteria, common types

4. Epidemic Explosion

Epidemics from a common source

Epidemic Infectious diseases: investigations and control

5. Food Safety

Chemical pollutants and Toxins

Food additives

Environmental and Agricultural Chemicals

Prions

Hazard Analysis and Critical Control Point System

6. Emerging Environmental microorganisms and Infections

Bacterial agents

Protozoans

Viruses

7. Water Hygiene

Importance of water

Microbiological Quality

Physical and Chemical Quality: pH, inorganic compounds

Microbiological Examination of water quality: sampling, membrane filtration

Disinfection and water chlorination

Bottled water, swimming pools and recreational waters

8. Domestic and Industrial wastes and Pollutants

9. Air Pollution

The Atmosphere: chemical composition, pressure, sun radiation, humidity/temperature

Sources of air-pollution: Mobile sources, Air toxics sources, gaseous pollutants, acidic deposition

Effect of air pollution on human health

Preventing Air Pollution

Climatic changes and public health

10. Global Environmental Issues

Human population growth and urbanization

Global warming- the Greenhouse effect

Ozone shield depletion

Tropical deforestation

Drought and desertification

Sustainable Development

11. Indoor Air pollution and hygiene

Risk factors: ventilation, humidity/temperature

Sources and concentrations of indoor air-pollution: carbon monoxide, nitrogen oxides, microorganisms, formaldehyde

Pesticides-insecticides

12. Natural Disasters

The Nature of Disaster: General characteristics and Public Health effects

Surveillance and Epidemiology

Managing the Environmental Health Aspects of Disasters: Water, human excreta and shelter

Communicable Diseases and Disease Control

13. Travel Medicine

Potential problems associated with travel

Pre-travel Consultation

Insect protection

Principles of immunization

Health problems associated with air and sea transport

14. Travellers' Diarrhea

Epidemiology

Aetiology and Prevention

Clinical Presentation and Management

15. Travel Medicine: Hepatitis A and B

16. Industrial Hygiene

Industrial Noise

Ionizing Radiation
Gases, vapors and Solvents
Ergonomics
Evaluation of Hazards
Control of Hazards: ventilation, respiratory protection
17. Current topics of Occupational Hygiene
The Occupational Medical History
Musculoskeletal Injuries
Ergonomics & the Prevention of Occupational Injuries
Occupational Stress and Safety
The “Burnout syndrome”
Building-Associated Illness
Control of workplace health hazards and prevention of health problems
18. Hospital Epidemiology and Infection Control
Causes and Determinants of hospital-acquired infection
 Transmission Routes of infective agents
 Survival of Microbes Outside the Host
Organization of an Infection Control Programme
 Role of Hospital Administration in Infection Control Programmes
 Hospital Infection Control Committee
 Infection Control Team
Surveillance of Hospital Acquired Infections
 Methods of Surveillance
 Investigation of an Outbreak
 Intensive Care Units
 Operation Rooms
Cleaning, Disinfection and Sterilization
 Cleaning/Decontamination/Disinfection of Environment
 Cleaning and Reprocessing of Medical Equipment
 Sterilizing Practices

Skills:

After successful exams the students of the School of Pharmacy will get knowledge in areas of traditional Hygiene and on hygienic and environmental factors impacting human health, thus providing them with the skills required to deal with public health problems, in areas pertaining to food hygiene and nutrition and to environmental hygiene, including health hazards associated with contaminated water, food, air, vectors of disease, exposure to toxic chemicals and safety in the workplace. All these will help the students in their profession.

Educational activities: Lectures and laboratories, discussion with the students in every lecture. The timetable of lectures and laboratories is given at the beginning of the semester.

Evaluation process and methods: Examination is written and performed at the end of the semester.

The examination at the end of the semester is performed at dates, time and place arranged by the department.

Use of TIC / Electronic distribution of the lectures

Lectures, notes, statements etc are presented in: www.e-learning.auth.gr/Hygiene
Pharmaceutical School

Scientific Book: Hygiene, M.Arvanitidou – Vayona, University Studio Press, Thessaloniki. 2