

## ELEMENTS OF HYGIENE AND EPIDEMIOLOGY (PH000110)

### 1. language

Italian.

### 2. course contents

Coordinator: Prof. SPECCHIA MARIA LUCIA

Academic Year: 2022/2023

Year Course: 2

Semester: 1

UFC: 5

Modules and lecturers:

ELEMENTS OF HYGIENE AND EPIDEMIOLOGY (PH000110) - 5 ufc - ssd MED/42

Prof. Maria Lucia Specchia, Prof. Chiara Cadeddu

### 3. bibliography

Ricciardi W, Boccia S (edited by). Igiene, Medicina Preventiva, Sanità Pubblica. Naples: Idelson-Gnocchi, 2021 (3rd edition).

Any lecture notes may be provided by the teachers during or at the end of the teaching activities.

### 4. learning objectives

The aim of the course is to provide the students of the Degree Course in Pharmacy with the fundamentals of General and Applied Hygiene in relation to health organization and planning, and Epidemiology, functional to the development of solid scientific foundations necessary for the exercise of the profession of pharmacist and to operate in the health field, also in the network of the National Health Service at the level of integration of LEAs. The teaching activity is programmed to provide knowledge about the structure and organization of the National Health Service and the areas of intervention of Public Health, as well as knowledge and tools of the Epidemiological Methodology (study designs, association and outcome measures, bias and confounding factors).

#### ***Knowledge and understanding (Dublin 1)***

At the end of the course students must show that they have acquired the complete knowledge of the fundamentals of hygiene in relation to the areas of health organization and planning, and the epidemiological methodology.

#### ***Applying knowledge and understanding (Dublin 2)***

Students must be able to understand and adequately interpret the possible applications of the acquired knowledge regarding hygiene and epidemiology and the translational potentialities of the same in the professional field.

#### ***Making judgments (Dublin 3)***

Students must be able to apply independently the hygiene and epidemiology knowledge and skills acquired, in order to make independent decisions in the professional field.

### ***Communication Skills (Dublin 4)***

Students must be able to communicate effectively and through the correct use of technical language the acquired knowledge and contents, showing the ability to relate with different interlocutors, specialists and non-specialists.

### ***Learning skills (Dublin 5)***

Students must be able to expand their knowledge and skills and to update in complete autonomy, through the critical reading of scientific texts and articles, consultation of accredited websites/databases/online platforms and participation in specialist seminars/conferences/workshops.

## 5. PREREQUISITES

In order to understand the course contents, the knowledge of the basic science biology and mathematics subjects is required.

## 6. teaching methods

The teaching activities include lessons in presence and/or with "blended" mode. The latter is based on distance teaching, but with a share of the lessons held in presence in order to guarantee spaces for interaction and discussion de visu with the students, dedicated to the applications and exercises of epidemiology, as well as to insights/clarifications about the lessons provided remotely and the contents of the exam program.

### ***Knowledge and understanding (Dublin 1)***

Lectures will allow the student to gain the complete knowledge of the fundamentals of hygiene in relation to the areas of health organization and planning and of the principles and tools of epidemiology.

### ***Applying knowledge and understanding (Dublin 2)***

Lectures with simulations of specific practical cases, and epidemiology applications and exercises will allow the student to apply in the professional field the knowledge acquired with regard to health organization and planning and to epidemiology methods and tools.

### ***Making judgements (Dublin 3)***

The topics covered by the lectures and the epidemiology applications and exercises will allow the student to gradually become autonomous in the integration of the knowledge and skills acquired.

### ***Communication skills (Dublin 4)***

The students' involvement and their active participation in the discussion during the lessons and exercises will allow them to develop communication skills towards colleagues, health professionals and patients.

### ***Learning skills (Dublin 5)***

The continuous reference by the teachers during the lessons to the best scientific evidence available in the literature and their constant use will allow the student to continue studying independently, to integrate, expand and update him/her knowledge and skills in a completely autonomous way, through the critical reading of scientific texts and articles, the consultation of accredited websites/databases/online platforms and the participation in specialized seminars/conferences/workshops.

### 7. other information

Students interested in deepening specific topics or aspects of the Course and students who intend to apply for the Bachelor's Thesis in Hygiene can apply for the internship at the Section of Hygiene of the Department of Life Sciences and Health Public.

Students reception hours:

Prof. C. Cadeddu: Tuesday, from 10:00 to 12:00 (by appointment via email at chiara.cadeddu@unicatt.it).

Prof. M.L. Specchia: Friday, from 9:00 to 11:00 (by appointment via e-mail at marialucia.specchia@unicatt.it).

### 8. methods for verifying learning and for evaluation

The final student evaluation includes an interview to verify the correct learning of the topics covered by the course. The final mark will be expressed out of thirty and in order to achieve the maximum score the student will have to answer accurately all the questions that will be asked. To assign the final mark, the commission will evaluate the following aspects.

#### ***Knowledge and understanding (Dublin 1)***

The interview will allow to verify the student's knowledge of the fundamentals of hygiene in relation to the areas of health organization and planning and of the principles and tools of epidemiology.

#### ***Applying knowledge and understanding (Dublin 2)***

The simulation during the interview of specific cases and practical applications will allow to verify the student's ability to understand and interpret the possible use of the principles and concepts addressed by the course.

#### ***Making judgements (Dublin 3)***

The simulation, during the interview, of specific cases and practical applications will allow to verify the student's ability to make independent judgments.

#### ***Communication skills (Dublin 4)***

The interview will also allow to verify the student's development of communication skills, particularly in terms of clarity and logical consistency in the presentation, and the ability to relate with the interlocutor.

#### ***Learning skills (Dublin 5)***

Lastly, during the interview it will be possible to verify the student's knowledge of the tools (such as the consultation of scientific literature and accredited websites/databases/online platforms and the participation in specialized seminars/conferences/workshops) that will allow him/her to continue studying and to update in a completely autonomous way.

Honors can be attributed, on the unanimous opinion of the examination commission, to students

who have achieved a final grade of 30/30.

## 9. program

Definition of Hygiene, Preventive Medicine and Public Health. Primary, secondary and tertiary prevention. Complexity in Healthcare and transition from the acute to the chronic paradigm.

Health Management. Health planning: meaning and phases. Principles and methods of health planning and programming and relations between health economics and planning. Programming of community interventions on target populations.

Overview of the main health system models and the health organization at international level (EU and other regions). Health organization at national level: principles, evolution and funding of the National Health Service, roles and responsibilities of the State, Regions, Municipalities in health programming and organization with reference to the current legislation. List and definition of the different health professions and professionals. Hospital organization and primary care structures (with reference to public and private health) in relation to specific care needs (elderly, disabled, drug addicts, mental patients, etc.) according to the regulations and the mission of the related territorial reference structures. Characteristics of the various forms of home care (integrated home care, protected residences and other facilities) and ways to access them, in particular for the elderly patient. Primary-secondary care integration and use of the district services network. Organization of general medicine and free-choice pediatrics. Social and health integration and participation of individuals, families and communities in the protection of health. Health and social role of the General Practitioner, in the management of frailty people (frailty or poor elderly, abandoned, isolated elderly, etc.). Multiprofessionality and interdisciplinarity in chronic disease management. Role of the Pharmacist in the National Health Service network.

Health quality: continuous evaluation and improvement of public and private health services quality (accreditation, quality assurance and certification, service charters, etc.) with general references also to international experiences. Clinical Governance.

Introduction to Epidemiology (Definition and purpose of Epidemiology, Epidemiology and public health). Occurrence measures (Main aspects: proportions and ratios, prevalence, incidence). Association measures (absolute, relative, attributable and impact measures). Studies' causal and design principles: case-control studies (aims, design and conduct, limits and strengths), cohort studies (aims, design and conduct, limits and strengths). Systematic review and meta-analysis. Confounding factors and effect modifiers (main concepts, analysis of confounding factors and effect modifiers).