

Degree Course in Physiotherapy

INTEGRATED TEACHING: HEALTHCARE MANAGEMENT

CFU: 6

SSD: MED/42, SECS-P/02, MED/43

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MODULE: GENERAL AND APPLIED HYGIENE

CFU: 1

SSD: MED/42

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MODULE: APPLIED ECONOMICS

CFU: 4

SSD: SECS-P/02

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MODULE: FORENSIC MEDICINE

NUMERO DI CFU: 1

SSD: MED/43

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PREREQUISITES

GENERAL AND APPLIED HYGIENE

Although there is no preliminary requirement, basic concepts of microbiology and statistics.

APPLIED ECONOMICS

No prerequisites are needed in order to attend the course. Basic elements of microeconomics and macroeconomics will be provided during classes

FORENSIC MEDICINE

No prior exams passed are necessary to follow the course.

LEARNING OBJECTIVES

GENERAL AND APPLIED HYGIENE

Main objectives include knowledge of the general principles of hygiene and public health, and of health promotion. These objectives, in turn, include knowledge of the specific ways of transmission of infections; the epidemiological chain; the main healthcare associated infections; roles and characteristics of the epidemiological studies; data of the epidemiological studies on healthcare associated infections; the concepts of cleaning, sanitation, disinfection, antisepsis and sterilization; infection control measures in the community and healthcare settings especially in the imaging diagnostic facilities; the concepts of prophylaxis.

These objectives will be achieved through lectures/lessons, and with all the other tools capable of facilitating learning and the problem solving of the main aspects of the prevention and control of infection within applied hygiene.

APPLIED ECONOMICS

The main learning objective is the knowledge of the principal characteristics and determinants of the markets functionings. Particular focus will be devoted to the study of the healthcare sector. Students are expected to learn how an economic analysis can be used to design and implement healthcare services. Finally, students will learn the use of economic analysis and cost-benefit approach to evaluate public policies with particular focus to health technologies and the evaluation of new health professional roles.

FORENSIC MEDICINE

Aim of the course of Legal Medicine is to provide students with knowledge of the essential elements of forensic pathology and of the rules necessary to carry out the health profession. It will be essential to acquire knowledge of the legal obligations established by current legislation and to develop the ability to recognize which acts and events have or may have legal relevance. These objectives will be achieved through frontal lectures and seminars.

LEARNING OUTCOMES

GENERAL AND APPLIED HYGIENE

Knowledge and understanding:

At the end of this course, the student will need to know:

1. the main elements of applied hygiene, public health and health promotion;
2. how to describe the main ways of transmission of infections in the community and healthcare settings;
3. the elements of the epidemiological chain
4. the epidemiological methods applied to hygiene and prevention
5. epidemiology of healthcare associated infection
6. the prevention and control of healthcare associated infections
7. how to describe the principles of cleaning, sanitation, disinfection, antisepsis, decontamination and sterilization
8. the main concepts of prophylaxis.

Applying knowledge and understanding

At the end of this course, the student will be able:

- to use the knowledge gained for further study on the specific field of his/her professional activity.

Communication skills

At the end of this course, the student will be able

- to expressing in an appropriate manner with respect to the scientific terminology related to hygiene.

Making judgements

At the end of this course, the student will need to know

- how to make general assessments of the topics covered.

APPLIED ECONOMICS

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

- Understand the role and the principal tools of the economic analysis
- Describe the main characteristics of welfare systems
- Describe the main elements of the economic analysis of public policies
- Apply the economic analysis approach to the evaluation of healthcare

Applying knowledge and understanding

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

- *Use the economic analysis in order to understand and assess interventions and policies aimed to reduce social costs and improve welfare and well being.*

Communication skills

At the end of the course students are expected to use the economic terms appropriately in order to describe and appraise the results of an economic analysis.

Making judgements

At the end of the course students are expected to make critical appraisal in order to assess the economic sustainability of public policies

FORENSIC MEDICINE

Knowledge and understanding

At the end of this course the student will have to:

- Know the various fields of interest of forensic medicine.
- Describe the characteristics of the various types of injury and identify the possible cause.
- Know the criminal and ethical obligations to which the health professional is subject.
- Know the basis of the regulations in force regarding the professional liability of the health care professional.

Applying knowledge and understanding

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

- To use the acquired knowledge for the autonomous deepening of aspects related to the specific field to which the student will devote himself within the professional activity;

Communication skills

At the end of the course, the student should know :

- Use specific scientific and legal terminology in an appropriate manner.

Making judgements

At the end of the course, the student should know:

- carry out general assessments of the topics covered.

COURSE SYLLABUS

GENERAL AND APPLIED HYGIENE

Introduction: concepts of health, hygiene and public health.

General applied hygiene and epidemiological tools: health of different populations and its determinants, in the community and healthcare settings. Descriptive epidemiology in general applied hygiene: prevalence and incidence studies, the concept of risk/hazard, and cause-effect relationship.

Hygiene applied to the epidemiology of infectious diseases: general concepts, epidemiological models of infectious diseases. Concepts of epidemic and endemic. Sources of infection, entry and elimination routes of microorganisms, epidemiological chain and transmission of infections.

Principles of prevention and prophylaxis: primary, secondary and tertiary prevention.

Prevention of infectious diseases: concepts of environmental hygiene, disinfection, antisepsis, sterilization, biological risk in the healthcare settings and ways of prevention.

APPLIED ECONOMICS

- Pareto-efficiency and market failures: asymmetric information, externalities, moral hazard and adverse selection
- The economic analysis of healthcare
- Cost effectiveness, cost utility and cost benefit analyses

FORENSIC MEDICINE

Fields of interest of legal medicine, methodology. **FORENSIC PATHOLOGY** : Principles of Thanatology, injuries from firearms, injuries from cutting weapons, injuries from blunt force, Asphyxiology. **DEONTOLOGY**: Referto, Professional secrecy, L.219/2017 and informed consent, code of ethics. **PROFESSIONAL LIABILITY**: Civil and criminal liability, Guidelines and Law 24/2017.

COURSE STRUCTURE

GENERAL AND APPLIED HYGIENE

The course is structured in 10 hours of lessons, according with the academic schedule.

FORENSIC MEDICINE

The course is structured in 10 hours of frontal teaching, divided into lessons of 2 or 4 hours according to the academic calendar. Frontal teaching includes theoretical lessons and additional seminars on the topics covered.

COURSE GRADE DETERMINATION INTEGRATED COURSE

GENERAL AND APPLIED HYGIENE

A written examination (30 questions with multiple choice answers; one point for each correct answer) will be followed by an oral examination in order to verify the student preparation. The final score of the written examination will be the sum of each point for the correct answers. To access the oral exam at least a minimum of 18 points is required

During the oral examination, the examining committee will assess the student's ability to apply his/her knowledge, and will evaluate his/her competencies to solve problems related to general applied hygiene and infection prevention.

The following elements will be assessed: making judgements, communication skills and learning skills, according with Dublin requirements.

APPLIED ECONOMICS

A written exam will test the knowledge of students. The exam will include ten questions coherent with the syllabus and exercises about an economic analysis related to the introduction on a new health program or technology. The maximum grade is 30/30 and the final exam will be considered passed having the student achieved a minimum score of 18/30. In the written exam will be also evaluated: the ability to make judgements, communication and learning skills, coherent with the Dublin indexes.

FORENSIC MEDICINE

The exam of the course will take place through an oral interview.

OPTIONAL ACTIVITIES

GENERAL AND APPLIED HYGIENE

Optional activities will include seminars.

APPLIED ECONOMICS

Alongside lectures students will be given the chance of participating to a project work regarding the critical reading and appraisal of a scientific article reporting results of an economic analysis.

READING MATERIAL

GENERAL AND APPLIED HYGIENE

1. Materiale fornito dal docente.
2. Bonita, Ruth, Beaglehole, Robert, Kjellström, Tord & World Health Organization. (2006). Basic epidemiology, 2nd ed. World Health Organization. <https://apps.who.int/iris/handle/10665/43541>

APPLIED ECONOMICS

Wondeling, Gruen, Black. Introduction to health economics. Understanding Public Health. 1st edition.

Didactic Material Provided by the professor.

FORENSIC MEDICINE

Titolo: "Manuale di Medicina Legale"

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