

BSc in Physiotherapy

INTEGRADED COURSE TITLE: HEALTHCARE MANAGEMENT

NUMBER OF ECTS CREDITS: 6

SSD: MEDS-24/B, ECON-02/A, MEDS-25/A

MODULE CONVENOR: PROF. FEDERICO DE ANDREIS

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MODULE: GENERAL AND APPLIED HYGIENE

NUMBER OF ECTS CREDITS: 1

SSD: MEDS-24/B

PROFESSOR: [LEONARDO VILLANI](#)

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MODULE: APPLIED ECONOMICS

NUMBER OF ECTS CREDITS: 4

SSD: ECON-02/A

PROFESSOR: [FEDERICO DE ANDREIS](#)

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MODULE: FORENSIC MEDICINE

NUMBER OF ECTS CREDITS: 1

SSD: MEDS-25/A

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PREREQUISITES

Although there is no preliminary requirement. Basic concepts of microbiology and statistics are required while basic elements of microeconomics and macroeconomics will be provided during classes.

LEARNING OBJECTIVES

At the end of the course, students will acquire integrated knowledge and competencies in the fields of hygiene and public health, applied economics applied to healthcare systems, and forensic medicine, with particular reference to prevention, health promotion, and the management of healthcare services.

With regard to the area of General and Applied Hygiene, the educational objective is to provide the general principles of hygiene and applied epidemiology, with specific attention to the concept of health, the determinants of population health, and the levels of prevention. Students will acquire knowledge of epidemiological models of infectious diseases, modes of transmission of infections, the epidemiological chain, the main healthcare-associated infections, the phenomenon of antimicrobial resistance, and the fundamentals of vaccinology, while developing analytical and problem-solving skills in the contexts of infection prevention and control.

With regard to the area of Applied Economics, the course aims to provide basic knowledge of the dynamics governing the functioning of markets, with particular reference to the healthcare sector. Students will acquire conceptual tools to understand the demand and supply of healthcare services, the main market failures, the relationships be-

tween economy, development, and health, and the functioning of welfare and healthcare systems from a comparative perspective. Particular attention will be devoted to economic evaluation methodologies for health policies and programmes, such as cost-effectiveness and cost-benefit analysis, as well as to issues related to risk management and healthcare economic policies.

With reference to Forensic Medicine, the objective is to provide basic knowledge in the field of forensic pathology and legal medicine, with particular attention to the civil, criminal, and deontological aspects of the healthcare profession. Students will acquire fundamental notions of thanatology, forensic traumatology, and asphyxiology, as well as competencies related to professional duties, informed consent, professional confidentiality, and professional liability, developing an appropriate awareness of the ethical and legal framework within which healthcare professionals operate.

The achievement of the learning objectives will be ensured through lectures, seminars, and other teaching activities aimed at fostering critical learning and the application of acquired knowledge to real and professional contexts.

LEARNING OUTCOMES

Knowledge and Understanding

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

- understand the general principles of General and Applied Hygiene, epidemiology, and public health, with reference to the concept of health, the determinants of population health, and the levels of prevention;
- understand and describe epidemiological models of infectious diseases, modes of transmission of infections, the epidemiological chain, and the concepts of epidemic and endemicity;
- identify the main healthcare-associated infections and the mechanisms underlying their spread;
- understand the phenomenon of antimicrobial resistance and the strategies for infection prevention and control in community and healthcare settings;
- understand the fundamentals of vaccinology and the role of vaccination in primary prevention;
- understand the dynamics governing the functioning of markets, with particular reference to the healthcare services sector;
- understand the concepts of healthcare demand and supply, the main market failures, and the relationships between economy, development, and health;
- understand the functioning of welfare systems and healthcare systems from a comparative perspective;
- understand the main economic evaluation methodologies for health policies and programmes, in particular cost-effectiveness and cost-benefit analysis, as well as risk management concepts in healthcare systems;
- identify the main fields of application of forensic medicine and legal medicine;
- understand the basic principles of forensic pathology, with reference to thanatology, forensic traumatology, and asphyxiology;
- understand the professional, deontological, and legal obligations of healthcare professionals, including informed consent, professional confidentiality, and professional liability;
- understand the ethical and regulatory framework within which healthcare professionals operate, with reference to the civil and criminal aspects of professional practice.

Applying knowledge and understanding

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

- autonomously and critically apply the knowledge acquired in hygiene and public health, applied economics applied to healthcare systems, and forensic medicine to the in-depth analysis of issues relevant to their professional field;
- apply the principles of epidemiology and applied hygiene to the analysis of population health problems, with particular attention to infection prevention and control in community and healthcare settings;
- use economic analysis tools to interpret population health needs and to assess the effectiveness and efficiency of interventions aimed at improving wellbeing and the quality of healthcare services;
- apply economic evaluation methodologies (cost-effectiveness and cost-benefit analysis) to the planning and evaluation of healthcare services and programmes;
- integrate medico-legal knowledge into professional practice, operating in compliance with the relevant ethical, deontological, and legal framework.

Communication skills

At the end of the course, students will be able to correctly interpret the results of economic analyses applied to the healthcare sector and to communicate clearly and appropriately using the specific scientific terminology of hygiene and public health, health economics, and the medico-legal field, adapting their language to different professional contexts and audiences.

Making judgements

At the end of the course, students will have developed the ability to formulate independent and well-reasoned judgements on the topics covered, integrating knowledge from hygiene, applied economics, and forensic medicine. In particular, they will be able to make informed assessments of the economic sustainability and impact of public policies and programmes, with specific reference to the planning and management of healthcare services, even in situations involving incomplete or complex information.

Learning Skills

At the end of the course, students will have acquired adequate autonomous learning skills, useful for continuous updating and further development of knowledge and competencies in the disciplines included in the integrated course. These skills include the effective use of qualified scientific sources, consultation of relevant literature, and the adoption of critical and systematic study methods that support lifelong professional development.

COURSE SYLLABUS

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. Prevention;

Hygiene applied to the epidemiology of infectious diseases: general concepts, epidemiological models of infectious diseases. Concepts of epidemic and endemic.

Antimicrobial resistance; vaccinations.

The course provides an overview of the role of hygiene and public health, with particular reference to the concept of health, hygiene, and public health, levels and tools of prevention, with particular reference to rehabilitation. It also covers the concepts of population health and its determinants in the community and healthcare settings, with a particular focus on risk factors, the burden of chronic diseases, and demographic and epidemiological transition. A focus is dedicated to the relationship between environment and health in the context of Planetary Health. Finally, the module addresses the epidemiology of infectious diseases, providing general concepts with particular emphasis on healthcare-associated infections, antimicrobial resistance, and vaccinology.

Syllabus Applied Economics

The module provides a structured overview of applied economics, with particular reference to the functioning of markets and healthcare systems. Fundamental concepts such as demand and supply, consumer preferences, and conditions of economic efficiency will be analysed, with specific attention to the main market failures relevant to the healthcare sector, including information asymmetries and externalities.

A specific focus will be devoted to the relationship between economy, development, and health, through a comparative analysis of welfare systems and healthcare systems at the international level. The module will also explore the main economic evaluation methodologies for health policies and programmes, in particular cost-effectiveness analysis and cost-benefit analysis, as tools to support public decision-making processes. Finally, the course will address the evolution of economic policies in the healthcare sector and issues related to risk management in healthcare systems, providing students with conceptual and applied tools to interpret and assess healthcare interventions and policies in real and complex contexts.

Syllabus 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:** mandatory health reports, Professional secrecy, L.219/2017 and informed consent, code of ethics.
- **PROFESSIONAL LIABILITY:** Civil and criminal liability, Guidelines and Law 24/2017.

COURSE STRUCTURE

The course is structured into 60 hours of classroom teaching, divided into lessons scheduled according to the academic calendar. Attendance is mandatory for at least 75% of the total hours across all modules of the integrated course.

COURSE GRADE DETERMINATION

Student learning will be assessed through a written examination consisting of questions covering all three subjects, in a number proportional to the CFU assigned to each individual module.

OPTIONAL ACTIVITIES

In addition to traditional teaching activities, students will be offered the opportunity to participate in a project work activity consisting of the critical reading and analysis of an academic economics article, as well as the opportunity to attend seminars.

READING MATERIAL

GENERAL AND APPLIED HYGIENE

1. Materials provided by the professor
2. Guest, C., Ricciardi, W., Kawachi, I., & Lang, I. (Eds.). (2013). *Oxford handbook of public health practice*. OUP Oxford

APPLIED ECONOMICS

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

Additional materials (PowerPoint slides) provided in class.

FORENSIC MEDICINE

Titolo: "Manuale di Medicina Legale"

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