

Degree in Biomedical Laboratory Techniques

INTEGRATED TEACHING: ECONOMICS AND SOCIAL AND INTERNATIONAL POLITICS

SSD : SECS P/07 - MED/42 - MED/44 - SECS P/02

CFU : 11

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Business Administration

SSD: SECS P/07

CFU: 2

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Forensic Medicine

SSD: MED/43

CFU: 1

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Hygiene and environmental prevention

SSD: MED/42

CFU: 1

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Political Economy

SSD: SECS P/02

Cfu: 4

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Occupational Medicine

SSD INSEGNAMENTO: MED/44

CFU: 1

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History of Medicine

SSD INSEGNAMENTO: MED/02

CFU: 2

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ATTENDANCE MODES

Mandatory with at least 75% of presence during the integrated course.

PREREQUISITES

There are no mandatory prerequisites. Basic knowledge is required in the following subjects: medical physics, cell and general biology, medical genetics, physiology, biochemistry, microbiology, hygiene and environmental prevention. Moreover, basic concepts of health and illness, determinants of health and the main strategies for prevention of infectious and non-communicable diseases are required.

TRAINING OBJECTIVES

Business Administration

Provide students with a set of basic business tools, useful for understanding the managerial dynamics of both public and private structures.

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.

Hygiene and environmental prevention

The educational objectives are the knowledge of the basis of general, descriptive, analytical and investigative epidemiology and the application of epidemiological methods to the study of infectious and non-communicable diseases.

Political Economy

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 policy is designed and implemented with particular regard to the understanding of the relationships between health and economic growth. Market failures will be considered as the main rationale to understand the role of governmental authorities in order to reduce social costs deriving from externalities, moral hazard, adverse selection and, in general, asymmetric information. Finally, students will learn the use of economic analysis and cost-benefit approach to evaluate public policies with particular focus to healthcare and the evaluation of new health professional roles.

Occupational Medicine

Knowledge of the regulatory framework for the health and safety (H&S) protection in the workplace; knowledge of the main occupational risk factors; knowledge of prevention and protection strategies in occupational medicine. The full achievement of the occupational H&S skills and rules suitable for the professional profile of the Biomedical Laboratory Technician is expected.

History of Medicine

At the end of the module, the students must have the salient knowledge of the history of medicine with particular regard to the fundamental stages that have characterized the evolution in the diagnosis, prognosis and therapy of the main pathologies treated.

EXPECTED LEARNING RESULTS

Business Administration

(Knowledge and understanding) Attending the course, the student will:

- Understand what a company is and how it works;
- Know the fundamental concepts of organizational, strategic and financial thinking;
- Understand the dynamics of human resources and information technologies;
- Learn the basic tools for planning and control.

(Applying knowledge and understanding) Attending the course, the student will be able to:

- use what he/she learnt to deepen autonomously aspects useful for his/her profession in the future, if he/shewill deal with healthcare management.

(Communication skills) Attending the course, the student will know:

- how to use the glossary got during the course in an effective manner.

(Making judgements) Attending the course, the student will be able to:

- hold management positions within healthcare firms;
- provide basic interpretations about firms trends and overall financial health.

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.

Hygiene and environmental prevetion

(Knowledge and understanding) At the end of this teaching the student must:

- Know the basics of epidemiology and epidemiological methodology
- Have basic knowledge of demography and health statistics

- Describe the basics of the epidemiology of infectious and non-infectious diseases

(Applying knowledge and understanding) At the end of the course the student will be able to use the knowledge acquired in the context of his working environment. He will have the means to evaluate the information provided by epidemiology in order to have an evidence-based approach to the profession.

(Communication skills) At the end of the teaching the student should be able to use the terminology acquired with competence and appropriateness.

(Making judgements) At the end of the teaching the student should be able to carry out general assessments on the topics covered.

Political Economy

(Knowledge and understanding) At the end of the course students will be able to:

- Understand the role and the principal tools of the economic policy
- Understand and describe the effect of externalities, asymmetric information, moral hazard and adverse selection
- Understand the principal determinants of economic growth with particular focus on the role of health policy
- 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 judgments) At the end of the course students are expected to make critical appraisal in order to assess the economic sustainability of public policies

Occupational Medicine

At the end of the course, the student will be able to translate the acquired knowledge into the future occupational activities.

At the end of the course, the student will achieve the proper use of the specific H&S scientific terminology.

At the end of the course, the student will achieve the ability to perform general assessments related to the topics covered.

History of Medicine

At the end of the module, students must:

- Know and be able to critically discuss the main stages of the evolution of the concept of health and disease.
- Know and be able to discuss the ethical principles that govern the relationship between health care worker and patient.

- Know the historical stages of the evolution of bioethical thought, as well as the main bioethical issues of professional interest.
- Know the main materials and the main sources of historical-medical and bioethical research.
- Knowing how to apply the principles acquired, through the knowledge of the historical stages of medicine, in carrying out one's professional activity.
- Also be able to identify the key concepts concerning the cultural foundations on Bioethics issues

COURSE SYLLABUS

Business Administration

- An Overview of Health Care Management
- Leadership
- Management and Motivation
- Organizational Behavior and Management Thinking
- Strategic Planning
- Healthcare Marketing
- Quality Improvement Basics
- Information Technology
- Financing Health Care and Health Insurance
- Managing Costs and Revenues
- Managing Health Care Professionals
- The Strategic Management of Human Resources
- Teamwork
- Addressing Health Disparities: Cultural Proficiency
- Ethics and Law
- Fraud and Abuse
- Special Topics and Emerging Issues in Health Care Management
- Health Care Management Case Studies and Guidelines

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.

Hygiene and environmental prevention

Definition and purpose of epidemiology; notes on demography and health statistics; epidemiological methodology: rates, mortality and morbidity measures, prevalence and incidence, association measures; descriptive, analytical and investigative epidemiology, transversal, retrospective and prospective

investigations; experimental and general epidemiology of infectious diseases and non-infectious diseases; global health and health determinants.

Political Economy

- Markets, preferences, utility, demand and supply
- Pareto-efficiency and market failures: asymmetric information, externalities, moral hazard and adverse selection
- Agency
- Relationships between economic growth and health
- Welfare systems
- Demand and supply of healthcare
- The economic analysis of healthcare
- Cost effectiveness, cost utility and cost benefit analyses

Occupational Medicine

The protection of health and safety in the workplace: scientific and regulatory aspects: history and evolution of occupational medicine and of protection measures in the workplace; traditional, current and emerging risk factors; the regulatory framework. The health and safety protection system: the institutional system of prevention and public occupational health services; profiles, roles and functions of the actors of the company's system of protection; risk assessment; measures of collective and individual protection; occupational health surveillance; health promotion. Biomechanical and ergonomic risks: regulatory framework, characteristics, prevention and protection strategies. Organizational and psycho-social risks: regulatory framework, characteristics, prevention and protection strategies. Risks from exposure to physical agents: regulatory framework, characteristics, prevention and protection strategies. Risks from exposure to hazardous substances: regulatory framework, characteristics, prevention and protection strategies. Risks from exposure to biological agents: regulatory framework, characteristics, prevention and protection strategies.

History of Medicine

- History of medicine: prehistoric medicine, ancient Egypt, the classical world (Greece and Rome), the Middle Ages, the modern age, the contemporary age.
- History of the concept of health and disease
- Main historical and ethical aspects of the relationship between health professionals and patients
- Historical origins of bioethics
- Birth and structuring of professional ethics
- Books, objects, biological sources as tools of historical research applied

COURSE STRUCTURE

The course is structured in 110 hours of frontal teaching. The lectures will include theoretical lessons, seminars of case studies and sessions to evaluate the learning mechanism through test.

COURSE GRADE DETERMINATION

Business Administration

The exam papers will be structured as follows: multiple choice questions, open ended questions and 1 or 2 brief numerical exercises. 30% assignment and practical cases. In the evaluation, knowledge and comprehension skills have a weight of 50%, applied knowledge and understanding skills of 20% and independent judgment of 30%.

Forensic Medicine

The exam of the course will take place through an oral interview. In the evaluation, knowledge and comprehension skills have a weight of 50%, applied knowledge and understanding skills of 20% and independent judgment of 30%

Hygiene and environmental prevention

The evaluation of the achievement of the educational objectives will be performed with a written exam, followed by an oral exam. The written test will consist of 15 questions with multiple choice answers. For each correct answer 2 points will be awarded and the final grade will be given by the sum of the scores of the individual questions. To access the oral exam, the student must have obtained a mark in the written test of at least 14 points. During the oral exam the Commission will evaluate the student's ability to apply the acquired knowledge, the communication skills developed and the basic judgment autonomy on the topics treated according to what is indicated in the Dublin descriptors. In the evaluation, knowledge and comprehension skills have a weight of 50%, applied knowledge and understanding skills of 20% and independent judgment of 30%

Political Economy

A written exam will test the knowledge of students. The exam will include two open questions coherent with the syllabus plus an exercise 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. In the evaluation, knowledge and comprehension skills have a weight of 50%, applied knowledge and understanding skills of 20% and independent judgment of 30%

Occupational Medicine

The Course grade determination will be assessed through a written test followed by an oral examination. The access to the oral examination requires the achievement of a minimum of 18 points in the written test. During the oral exam, the examining commission will assess the student's ability to apply knowledge and

will ensure that the skills are adequate to support and solve occupational H&S issues. The following will also be assessed: making judgments, communication skills and learning skills according to the Dublin descriptors. In the evaluation, knowledge and comprehension skills have a weight of 50%, applied knowledge and understanding skills of 20% and independent judgment of 30%

History of Medicine

The exam will be oral and the evaluation criteria considered will be: acquired knowledge, independent judgment, communication skills and learning ability.

OPTIONAL ACTIVITIES

In addition to teaching activities, students will be given the opportunity to participate in Seminars, Research Internships, Department Internships, Monographic Courses and some additional papers will be provided by the professors. The subjects of the activities are not exam subjects.

RECOMMENDED TEXTS AND BIBLIOGRAPHY

Business Administration

Sharon Bell Buchbinder, Nancy H Shanks (2017), Introduction to health care management, Jones & Bartlett Learning, Burlington, Massachusetts.

Forensic Medicine

FeoLa, Natale Mario Di Luca–Tommaso. "Medicina legale." (2017).

Igiene e Prevenzione Ambientale

Bonita, Ruth, Beaglehole, Robert, Kjellström, Tord & World Health Organization. (2006). Basic epidemiology, 2nd ed. World Health Organization. <https://apps.who.int/iris/handle/10665/4354>

Political Economy

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

Occupational Medicine

Tomei F et al. "Manuale di Medicina del Lavoro". Padova, Italy: Piccin, 2018.

History of Medicine

William Bynum. The History of Medicine. Oxford