

**“Public Health”****2022/2023**Code: 106119  
Credits ECTS: 6

Degree	School Plan	Type	Course	Semester
1471 Nursing	Nursing Degree	Mandatory	2	1

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[gurrutia@santpau.cat](mailto:gurrutia@santpau.cat)**Use of languages:**

Principal working language:

Catalan

Some groups entirely in English:

No

Some groups entirely in Catalan:

Yes

Some groups entirely in Spanish:

No

**Prerequisites**

It has no official prerequisites.

**Contextualization and objectives**

This subject is part of the module Nursing Sciences, subject Community Nursing and is planned in the third semester of the degree. It is made up of three different modules: one on general concepts of public health, another on epidemiology and finally one on the micro-organisms responsible for communicable diseases.

The main purpose of the subject is to enable students to identify the needs and health problems of the population and the measures aimed at protecting and improving health.

**Learning objectives of the Subject**

1. Analyse the factors that determine human health in today's society.
2. Demonstrate the usefulness of epidemiology for the knowledge, surveillance, protection and restoration of the health of the population.
3. Identify pathogenic micro-organisms, their forms of transmission and the methods of prevention methods in the development of communicable diseases.
4. Describe the structure, functions and characteristics of primary health care.

## Learning competences and outcomes

Competence	Learning outcomes
<b>SPECIFIC</b>	
E04. Demonstrate an understanding of the interactive behaviour of the individual as a function of gender, group or community, within their social and multicultural context.	E04.02. Identify health determinants and problems related to the environment, in order to care for people in situations of health and illness as members of a community.
E06. Base nursing interventions on scientific evidence and available means.	E06.08. Analyse statistical data from population-based studies identifying possible causes of health problems.
E09. Promote healthy lifestyles, self-care, supporting the maintenance of preventive and therapeutic behaviours.	E09.05. Identify the determining risk factors in the health-disease process at the physical, emotional, social and environmental levels.
E10. To protect the health and well-being of individuals, families or groups served, ensuring their safety.	E10.09. To determine the influence of physical, chemical and biological agents on people's health in order to ensure their safety.  E10.10. Recognise ways of safe disposal of different substances and medical devices.
E13. Demonstrate knowledge of the principles of health and social and health financing and make appropriate use of available resources.	E13.04. Describe the different models of health systems.
E16. Demonstrate an understanding of health information systems.	E16.04. Describe the indicators that make it possible to know and monitor the health status of a population and the indicators that evaluate the effectiveness of the health system.  E16.06. Critically analyse the usefulness of different health information systems.
<b>GENERALS / BASICS</b>	
G01. To introduce changes in methods and processes in the field of knowledge in order to provide innovative responses to the needs and demands of society.	G01.01 To analyse a situation and identify points for improvement adapted to the needs and demands of the context of analysis.  G01.03 Acquire and use the necessary tools to develop a critical and reflective attitude.
G04. Act in one's own field of knowledge by assessing sex/gender inequalities.	G04.01. Identify the intersection between gender inequality and other axes of inequality (age, class, origin, racialisation, ethnicity, sexuality and gender identity/expression, functional diversity, etc.).

	<p>G04.03. Analyse sex differences and gender inequalities in aetiology, anatomy, physiology, pathologies, differential diagnosis, therapeutic options, pharmacological response, prognosis and nursing care.</p> <p>G04.05. Identify strategies to prevent gender-based violence</p>
<p>B03 - Students have the ability to gather and interpret relevant data (usually within their area of study) in order to make judgements that include reflection on relevant social, scientific or ethical issues.</p>	

## Contents

### MODULE 1. General Public Health Concepts

- 1.- The concept of health. The health-disease process. Levels of prevention.
- 2.- Health determinants.
- 3.- Environmental health: Risk factors for health in the environment.
- 4.- Public health and community health: Historical evolution, objectives and functions.
- 5.- Demography and health.
- 6.- The health system in Spain: levels of care and functions.
- 7.- Health in Spain and Catalonia: Objectives and priority actions.
- 8.- International bodies in relation to health.
- 9.- Intervention strategies, health policies and preventive measures in public health.
- 10.- Primary health care: reform, organisation and characteristics.
- 11.- Health education: origin and concept.

### MODULE 2. Epidemiology

- 1.- Epidemiology: concept and historical development. Role of epidemiology in the planning health services and in the protection, promotion of health and prevention of diseases. disease prevention.
- 2.- Health information systems: registers, surveys and epidemiological surveillance systems. epidemiological surveillance systems. The most important organisations in Spain and resources available on the web.
- 3.-Scientific method and epidemiological method. Descriptive epidemiology. Frequency measures: ratios, proportions and rates. Prevalence and incidence. Mortality rates and other rates of special health interest. Comparisons and adjustment of rates.
- 4.- Analytical epidemiology. Concept of association and causality. Measures of association. Causality criteria. Causal inference.

- 5.- Basic epidemiological research designs: descriptive observational studies, analytical studies and experimental studies. Basic concepts, design and main advantages and disadvantages and limitations of each type of design.
- 6.- The Catalan Health Plan and strategic health planning. Distribution and trends of the different diseases according to age groups.
- 7.- General epidemiology of chronic diseases. Main risk factors and levels of prevention.
- 8.- Concept of disorder, disease and abnormality. Diagnostic tests: sensitivity, specificity and predictive values. Screening tests.
- 9.- General epidemiology and prevention of communicable diseases. Epidemiological chain. General prevention and control measures. Investigation of an outbreak epidemic outbreak in the community. Epidemiological surveillance systems.
- 10.- Ageing and health. Epidemiology of ageing. Perceived level of health. The health surveys.

### **MODULE 3. Microbiology**

- 1.- General: Definition and concepts. Microbiological diagnosis of infectious disease. Infectious diseases.
- 2.- Pathogenesis of infections: Host-parasite relationship. Transmission mechanisms. Pathogenicity mechanisms. Defence mechanisms.
- 3.- Infection control: Barrier measures. Sterilisation, disinfection and antisepsis. Antibiotics and chemotherapeutics. Preventive vaccinations.
- 4.- Role of Microbiology in Public Health: Epidemiological surveillance of infections. Obligatory Notifiable Diseases.
- 5.- Virology: structure, morphology, replication and classification of viruses. Main viruses of health interest and most relevant health problems caused by viruses.
- 6.- Bacteriology: structure, morphology, replication and classification of bacteria. Main Bacteriology: Structure, morphology, reproduction and classification of bacteria.
- 7.- Mycology: structure, morphology, reproduction and classification of fungi. Main fungi of health interest and most relevant health problems caused by fungi.
- 8.- Parasitology: structure, morphology, reproduction and classification of protozoa and helminths. Main protozoa and helminths of health interest and the most relevant health problems caused by protozoa and helminths.

## Methodology

The methodological approach of the subject is based on the idea that the protagonist of the teaching-learning process is the student. Therefore, the student must carry out an active and as autonomous learning process as possible with the help and advice of the teacher.

### Directed activity:

There is a single theory group. Theoretical development is combined with practical activities in the classroom, readings and links to websites to expand knowledge.

### Supervised activity:

Students carry out compulsory work in small groups (5-6 students) consisting of the preparation and presentation of a topic previously assigned by the lecturer at the beginning of the course.

The work must follow the EUI's rules for the presentation of work. It will be delivered in electronic format on the day specified as the delivery date on the first day of class; and students must make an oral presentation of it.

## Training Activities

Activity	Hours	ECTS	Learning Outcomes
<b>Type: Directed</b>			
Theoretical classes and classroom activities	45	1.80	E04.02, E06.08, E09.05, E10.09, E10.10, E13.04, E16.04, E16.06, G01.01, G01.03, G04.01, G04.03, G04.05
<b>Type: Supervised</b>			
Work:	2.5	0.10	E06.08, 310.09, E10.10, B03
Tutorials:	5.0	0.20	
<b>Type: Autonomous</b>			
	90	3.60	E06.08, E09.05, E16.06, G01.03, B03

## Assessment

In order to pass the subject, students have only one sitting per academic year. The academic progression and the passing of the subject is assessed by means of the following:

### Continuous assessment

Continuous and formative assessment is carried out throughout the semester by means of three objective tests with a weighting of 30% each and a compulsory group work that weighs 10%.

The objective tests are carried out at the end of each of the modules that make up the subject and in order to obtain a grade equal to or higher than 5 out of 10 in each of them.

In multiple-choice tests, negative answers are subtracted according to the following formula:  
 $x = \text{hits} - (\text{errors}/n-1)$  where  $n$  is the number of answer options.

The final grade for the course is given by the weighted sum of the marks obtained in the aforementioned tests and the group work.

**Qualification:**

- 0 to 4, 9: Fail
- 5, 0 to 6, 9: Basic Pass
- 7, 0 to 8, 9: Remarkable
- 9, 0 to 10: Excellent

**Recovery Activity**

A recovery activity is proposed to students who have been previously assessed by a set of activities, the minimum weight of which is equivalent to 2/3 of the total grade of the subject and who have obtained a final grade lower than 5 and higher than 3.5.

This test will consist of an evaluative activity of the test(s) not passed.

The make-up tests will be determined by the teacher.

The teacher may exclude from the recovery process those activities that, due to their nature, he/she considers that they cannot be recovered.

In the event that the student passes the make-up test corresponding to the failed part, the maximum mark for this will be a 5.

The recovery mark will replace the mark originally obtained and the final weighted mark will be recalculated.

Once the subject has been passed, it cannot be re-evaluated.

**Non-evaluable:**

When the student has not presented sufficient evidence to enable the overall grade for passing the subject to be given, the grade of "not assessable" will be recorded in the transcript of records.

It is a reason for lack of sufficient evidence if the student has not participated in any activity of the continuous assessment.

**Review of the written test:**

Once the final mark has been published, the student may request to make a revision within the period established for "revision". Requests for review outside the established period will not be accepted.

**Assessment Activities**

Activity	Weight	Hours	ECTS	Learning Outcomes
<b>Written tests:</b>	<b>90%:</b>	<b>5,63</b>	<b>0.23</b>	E04.02, E06.08, E09.05, E10.09, E10.10, E13.04, E16.04, E16.06, G01.01, G04.01, G04.03, G04.05
Module I	30%			
Module II	30%			
Module III	30%			
<b>Works:</b>	<b>10%</b>	<b>1,87</b>	<b>0.07</b>	E04.02, E06.08, E09.05, E10.09, E10.10, E16.06, G01.03, G04.05, B03

**BIBLIOGRAPHY****ATENCIÓN FAMILIAR Y SALUD COMUNITARIA. 2a Edición**

*Author:* Martín Zurro, A; Jodar Solà, G. (editores)

*Edition:* Barcelona: Elsevier; 2018

*ISBN:* 978-84-9113-227-1

**MANUAL DE EPIDEMIOLOGÍA Y SALUD PÚBLICA PARA GRADOS EN CIENCIAS DE LA SALUD. 2ª Ed.**

*Author:* Hernández I.

*Edition:* PANAMERICANA2011

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**MEDICINA PREVENTIVA Y SALUD PÚBLICA (12ª Ed.)**

*Author:* Piedrola, G; del Rey, J; Domínguez, M; y otros

*Edition:* Ed. Elsevier Masson; 2015

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**MICROBIOLOGÍA MÉDICA (9ª Ed.)**

*Author:* Murray, PR; Rosenthal, KS; Pfaller, MA.

*Edition:* Ed. Elsevier; 2021

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**MICROBIOLOGÍA CLÍNICA Y PARASITOLOGÍA MÉDICA**

*Author:* Prats, G.

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**Web links:**

- Generalitat de Catalunya. GENCAT. Available in: <http://web.gencat.cat/ca/inici/>
- Sociedad Española de Salud Pública y Administración Sanitaria (SESPAS). Available in: <http://www.sespas.es/>
- Instituto Nacional de Estadística (INE). Available in <http://www.ine.es/>
- Agència de Salut Pública (ASPB). Available in: <http://www.aspb.cat/>
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