

Teaching Guide of the subject

Year 2025 - 2026

**PUBLIC HEALTH**

Code: 106119

ECTS credits: 6

<i>Titulation</i>	<i>Type</i>	<i>Course</i>	<i>Semester</i>
<b>2500891 Nursing</b>	<b>OB</b>	<b>2</b>	<b>1</b>

<i>Contact</i>	<i>Use of languages</i>
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**Prerequisites**

There are no official prerequisites.

**Contextualization and objectives**

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

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

## Learning objectives of the subject

1. To analyze the factors that determine human health in today's society.
2. To show the usefulness of epidemiology for the knowledge, surveillance, protection and restoration of the health of the population.
3. Identify pathogenic microorganisms, their forms of transmission and prevention methods in the development of communicable diseases.
4. Describe the structure, functions and characteristics of health system models.

## Competencies and learning outcomes

Competence	Learning Outcomes
<b>SPECIFIC</b>	
<b>E04.</b> Demonstrate that they understand the person's interactive behavior based on gender, group, or community, within their social and multicultural context.	<b>E04.02.</b> Identify the determinants of health and problems related to the environment, to take care of both people in health and disease situations as members of a community.
<b>E06.</b> Base nursing interventions on scientific evidence and available means.	<b>E06.08.</b> Analyze statistical data from population studies to identify possible causes of health problems.
<b>E09.</b> Promote healthy lifestyles, self-care, supporting knowledge of preventive and therapeutic behaviors.	<b>E09.05.</b> Identify the determining risk factors in the health-disease process at the physical, emotional, social and environmental levels.
<b>E10.</b> Protect the health and well-being of the people, family or groups served by guaranteeing their safety.	<b>E10.09.</b> Determine the influence of physical, chemical and biological agents on people's health to ensure their safety. <b>E10.10</b> Recognise the ways in which different medical substances and devices can be disposed of safely.
<b>E13.</b> Demonstrate knowledge of the principles of health and social health financing, and make appropriate use of available resources.	<b>E13.04.</b> Describe the different models of health systems.
<b>E16.</b> Demonstrate knowledge of health information systems.	<b>E16.04.</b> 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. <b>E16.06.</b> Critically analyze the usefulness of the different health information systems.
<b>GENERAL / BASIC</b>	
<b>G01.</b> To introduce changes in the methods and processes of the field of knowledge in order to provide innovative responses to the needs and demands of society.	<b>G01.01.</b> Analyse a situation and identify its points for improvement adapted to the needs and demands of the context of analysis. <b>G01.03.</b> Acquire and use the necessary instruments to develop a critical and reflective attitude.

**G04.** Act within the field of self-knowledge by assessing inequalities based on sex/gender.

**G04.01.** Identify the intersection between gender inequality and other axes of inequality (age, class, origin, racialization, ethnicity, sexuality and gender identity/expression, functional diversity, and others).

**G04.03.** To analyze differences by sex and gender inequalities in etiology, anatomy, physiology, pathologies, differential diagnosis, therapeutic options, pharmacological response, prognosis, and nursing care.

**G04.05.** Identify strategies to prevent gender-based violence.

**B03.** Students must have the ability to gather and interpret relevant data (usually within their area of study) to make judgments that include reflection on salient social, scientific, or ethical issues.

## **Content**

### **MODULE 1. GENERAL CONCEPTS OF PUBLIC HEALTH**

1. The concept of health. Health-disease process. Levels of prevention.
2. Determinants of health and health inequalities.
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 and Catalonia: levels of care and functions.
7. Health in Spain and Catalonia: Objectives and priority actions.
8. International Organizations in relation to health.
9. Intervention strategies, health policies and prevention measures in public health.

### **MODULE 2. EPIDEMIOLOGY**

1. Epidemiology: concept and historical evolution. Role of epidemiology in the planning of health services and in the protection, promotion of health and in the prevention of diseases.
2. Health information systems: registers, surveys and epidemiological surveillance systems. The most important organizations in Spain and resources available on the web.
3. Scientific method and epidemiological method. Descriptive epidemiology. Frequency measurements: ratios, proportions and rates. Prevalence and incidence. Mortality rates and other rates of special health interest. Rate comparisons and adjustments.
4. Analytical epidemiology. Concept of association and chance. Association measures. Criteria of chance. Causal inference.

5. Basic designs of epidemiological research: descriptive observational studies, analytical observational studies, quasi-experimental studies and experimental studies. Basic concepts, design and main advantages and limitations of each type of design.
6. Concept of disorder, disease and abnormality. Diagnostic tests: sensitivity, specificity and predictive values. Screening tests.
7. The Health Plan of Catalonia and strategic planning in health. Distribution and trend of the different diseases according to age groups.

## MODULE 3. MICROBIOLOGY

### Part 1 – General Microbiology

1. Definition and concepts: classification of infectious agents. Host-parasite relationship:
2. Pathogenesis of infections: transmission, adhesion and colonization; penetration, multiplication and invasion; Ability to injure
3. Defense mechanisms: natural barriers; non-specific defense; Specific immunity

### Part 2 – Infection Control and Diagnosis

4. Control of microorganisms: sterilization, disinfection and antisepsis; antibiotics and chemotherapy; preventive vaccinations; Notification Systems
5. Nosocomial infection: definition, reservoirs and transmission; control of nosocomial infection.
6. Microbiological diagnosis of infectious diseases: clinical samples; Diagnostic techniques

### Part 3 – Main Infection-Causing Agents

7. General characteristics of bacteria
8. Gram-positive cocci of the genus *Staphylococcus*
9. Gram-positive cocci of the genus *Streptococcus*
10. Gram-negative bacilli
11. Gram-negative cocci. Gram-positive bacilli
12. Anaerobic spores. Mycobacteria
13. General characteristics of fungi: morphology, structure and reproduction  
Yeast, filamentous and dimorphic fungi
14. General characteristics of protozoa: morphology, structure and reproduction  
Intestinal and urogenital protozoa, hemotissular:  
General characteristics of helminths: morphology, structure and reproduction.  
Platelmints; Nematelmints:
15. General characteristics of viruses: morphology, structure and replication. Pathogenesis of viral infections. Prions. Human herpes virus
16. Hepatitis virus; Respiratory viruses; Human immunodeficiency virus

## **Methodology**

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

### **Directed activity:**

There is only one group of theory. The theoretical development is combined with practical activities in the classroom, readings and links to websites for the expansion of knowledge.

### **Supervised activity:**

Students carry out a compulsory work in small groups (5-6 students) that consists of the preparation and presentation of a topic previously assigned by the teaching staff at the beginning of the subject.

The work must follow the EUI's submission standards. It will be delivered in electronic format on the day that has been specified as the delivery date on the first day of class; and students must make an oral presentation of the same.

## **Training activities**

Activity	Hours	ECTS	Learning Outcomes
<b>Types: Directed</b>			
Theory (TE) Classroom Internship (PAUL)	45	1,80	<i>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, B03</i>
<b>Types: Supervised</b>			
Scheduled tutorials:	1	0,04	<i>B03</i>
<b>Type: Self-employed</b>			
Personal study, bibliographic consultations and documents. Preparation of work.	90	3,60	<i>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, B03</i>

***The teaching staff will spend approximately 15 minutes after the end of the subject to allow the students can answer the assessment surveys on the teaching performance and the subject.***

## **Evaluation**

To pass the subject, students have only one call per academic year.

Academic progression and completion of the subject is assessed by:

### ***Continuous evaluation***

A continuous and formative evaluation will be carried out throughout the semester through three objective tests with a weighting of 30% each and a mandatory group work those weights 10%. The objective tests are carried out at the end of each of the modules that make up the subject and in order to be able to make an average, a grade equal to or greater than 5 out of 10 must be obtained 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 of the subject is given by the weighted average of the marks obtained in the aforementioned tests and the group work.

**The results of the evaluation tests will be retroacted through the classroom and tutorials where appropriate.**

**The work evaluation rubric is available in the virtual classroom.**

## **Qualification**

- 0 to 4.9: Fail
- 5.0 to 6.9: Pass
- 7.0 to 8.9: Remarkable
- 9.0 to 10: Excellent.

## **Unique assessment**

1. In this subject, you must attend the classroom on the day/days that are scheduled for group work.
2. The date of the single test will coincide with the date of the last continuous assessment test that appears in the daily schedule and in the calendar of training and evaluation activities.
3. The single assessment will consist of:
  - Test 1 which will consist of an **objective test** of module I and weights **30%**.
  - Test 2, which will consist **of an objective test** of module II and weights **30%**.
  - Test 3, which will consist **of an objective test** of module III and weights **30%**.
  - Test 4 which will consist of **a group debate** and weights **10%**.

### **Recovery activity**

1. A unique date is set for the remedial activity for all students, whether or not they are eligible for a single assessment.
2. A remedial activity is proposed to students who have been previously evaluated for a set of activities whose minimum weight is equivalent to 2/3 of the total grade of the subject and who have obtained a final grade of less than 5 and higher than 3.5.
3. This test will consist of an evaluation activity of the unpassed test(s).
4. The remedial tests will be determined by the teaching staff.
5. The teacher may exclude from the recovery process those activities that, by their nature, he/she considers not to be recoverable.
6. In the event that the student passes the retake test corresponding to the failed part, the maximum grade of the same will be a 5.
7. The retake grade will replace the grade originally obtained and the final weighted grade will be recalculated.
8. Once the subject has been passed, it may not be subject to a new evaluation.

### **Not assessable**

It is considered that the subject will not be assessable at the time that one of these circumstances is met:

1. Not having submitted any continuous assessment activity provided for in the teaching guide.
2. Not have attended any of the practical or compulsory sessions, when these are necessary to assess specific competences and this is indicated in the teaching guide.
3. Not having taken the final test (exam, written or oral test, job defence, etc.), if this represents an essential percentage of the qualification.
4. Not having completed the minimum required participation in training activities (e.g. seminars, presentations, forums, etc.), when these are part of the assessment.
5. Not having submitted the final work or compulsory project, if this constitutes central evidence of the learning of the subject.

### **Exam Review**

Once the final grade has been published, the student can request the revision of the exam within the period determined by the "exam review". Requests for review on dates outside the established limit will not be accepted.

### Procedure in case of copying/plagiarism

1. Copying **or plagiarism** in any type of assessment activity is a crime, and will be penalised with a 0 as the grade of the subject, losing the possibility of recovering it, whether it is an individual or group work (in this case, all members of the group will have a 0).
2. If during the completion of an individual project in class, the teacher considers that a student is trying to copy or is discovered some type of document or device not authorised by the teaching staff, it will be graded with a 0, with no retake option, and therefore, the subject will be suspended.
3. A work, activity or exam is considered to be "copied" when it reproduces all or a significant part of the work of oneself or another classmate.
4. A work or activity will be considered "plagiarized" when a part of a text by an author is presented as one's own without citing the sources, regardless of whether the original sources are on paper or in digital format.

### The use of Artificial Intelligence (AI) technologies

The use of Artificial Intelligence (AI) technologies is regulated according to the type of work to be performed:

1. In the event that the work aims at personal reflection and meaningful learning by the student, **the use of AI technologies is prohibited** in any of its phases of realization. Any work that includes AI-generated fragments (e.g., summaries, translations, text writing or image creation) is considered academic dishonesty and may lead to a partial or total penalty in the grade of the activity, as well as greater sanctions in cases of severity.
2. In other jobs, **the restricted use of AI technologies is allowed** only in those support tasks, such as bibliographic or information search, text correction, translations and other specific situations that are indicated. In these cases, the student will have to clearly identify which parts have been generated with this technology, specify the tools used and include a critical reflection on how these have influenced the process and the final result of the activity. The non-transparency of the use of AI in this assessable activity will be considered a lack of academic honesty and may lead to a partial or total penalty in the grade of the activity, as well as greater sanctions in cases of severity.

In any case, in the description of each work, the teacher in charge will clearly indicate **whether the prohibited or restricted use of AI applies**.



### **Aspects of assessment related to values and attitudes**

1. The teacher may reduce the grade of the subject by between 1 and 2 points when the student repeatedly does not respect the indications of behavior in the classroom and/or disturbs the normal functioning of the classroom.
2. "No disrespect for colleagues or teachers will be tolerated. Homophobic, sexist or racist attitudes will not be tolerated either. Any student in whom any of the attitudes described above are detected will be classified as failing the subject."

### **Formal aspects of written work**

In all activities (individual and group) linguistic correctness, writing and formal aspects of presentation will be considered.

### **Other considerations**

1. All the evaluation tests will be published in the daily program and in the calendar of the training and evaluation activities.
2. The date of the unique test will coincide with the date of the last continuous assessment test.
3. Students who repeat the subject may request at the beginning of the academic year to take only a final synthesis assessment (Article 117, page 46 of the Academic Regulations of the Universitat Autònoma de Barcelona (Approved by agreement of the Governing Council of 7 July 2022, and amended by agreement of the Governing Council of 1 February 2023)).

*Students in the second or higher enrolment who have taken all the assessment tests the previous year may choose to take assessment with a single synthesis assessment activity. This activity will consist of an exam at the end of the subject coinciding with the written exam of the subject. Students in the second or higher enrolment who wish to opt for the synthesis exam must notify the teaching staff responsible for the subject in writing two weeks before the published date.*

## Evaluation activities

Activity	Weight	Hours	ECTS	Learning Outcomes
<b>Written assessments: objective tests.</b>	<b>90%</b>	<b>6</b>	<b>0,24</b>	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, B03
Module I	30%			
Module II	30%			
Module III	30%			
<b>Group Debate</b>	<b>10%</b>	<b>2</b>	<b>0.08</b>	E04.02, E06.08, E09.05, E10.09, E10.10, E16.04, E16.06, G01.01, G01.03, G04.01, G04.03, G04.05, B03

## Bibliography

### Books:

- Martín Zurro, A. et al. *Primary Care. Concepts organization and clinical practice*. 7th ed. Barcelona: Doyma; **2014**.
- Martín Zurro, A Jodar Solà, G. *Family care and community health*. 2nd ed. Barcelona: Elsevier; **2018**.
- Piedrola Gil. *Preventive medicine and public health*. 12th ed. Barcelona: Elsevier Masson; **2016**.
- Hernández-Aguado, I. et al. *Manual of epidemiology and public health: for degrees in health sciences*. 2nd ed., Madrid: Médica Panamericana; **2018. (Digital)**
- Martinez Gonzalez, MA. *Public Health Concepts and Preventive Strategies*. 2nd ed., Barcelona: Elsevier; **2018. (Paper and digital)**
- Murray, PR. Et al. *Medical Microbiology*. 9th ed. Elsevier; 2021
- Prats, G. *Clinical microbiology and medical parasitology*. Madrid: Ed. Médica Panamericana SA; 2023.

### Online resources:

- Generalitat of Catalonia. GENCAT. Available in: <http://web.gencat.cat/ca/inici/>
- Spanish Society of Public Health and Health Administration (SESPAS). Available in: <http://www.sespas.es/>
- National Institute of Statistics (INE). Available in: <http://www.ine.es/>
- Public Health Agency (ASPB). Available in: <http://www.aspb.cat/>
- Observatory of the Health System of Catalonia (OSSC). Available in: <http://observatorisalut.gencat.cat/ca/>

- World Health Organization, WHO. Available in: <http://www.who.int/>
- Centers for Disease Control and Prevention: CDC.). Available in: <https://www.cdc.gov/spanish/index.html>

### **Teaching platforms**

- Moodle
- Kahoot