SANT PAU Campus Salut Barcelona · Campus d'Aprenentatge Sant Pau	**GRAU INFERMERIA – EUI SANT PAU**	EUI-SANT PAU Centre adscrit a la UAB

Teaching Guide of the subject — Year 2024 - 2025

PUBLIC HEALTH

Code: 106119
ECTS credits: 6

Titulation	*Type*	*Course*	*Semester*
2500891 Nursing	**OB**	**2**	**1**

Contact	***Use of languages***
Responsible: Hernández Martínez-Esparza, Elvira ehernandezma@santpau.cat **Teaching staff:** Hernández Martínez-Esparza, Elvira ehernandezma@santpau.cat Sánchez Reus, Ferran fsanchezr@santpau.cat Urrutia Cuchí, Gerard gurrutia@santpau.cat	• Group 1: **Catalan**

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
SPECIFIC	
E04. Demonstrate that they understand the person's interactive behavior based on gender, group, or community, within their social and multicultural context.	**E04.02.** 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.
E06. Base nursing interventions on scientific evidence and available means.	**E06.08.** Analyze statistical data from population studies to identify possible causes of health problems.
E09. Promote healthy lifestyles, self-care, supporting knowledge of preventive and therapeutic behaviors.	**E09.05.** Identify the determining risk factors in the health-disease process at the physical, emotional, social and environmental levels.
E10. Protect the health and well-being of the people, family or groups served by guaranteeing their safety.	**E10.09.** Determine the influence of physical, chemical and biological agents on people's health to ensure their safety. **E10.10** Recognise the ways in which different medical substances and devices can be disposed of safely.
E13. Demonstrate knowledge of the principles of health and social health financing, and make appropriate use of available resources.	**E13.04.** Describe the different models of health systems.
E16. Demonstrate knowledge 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 analyze the usefulness of the different health information systems.
GENERAL / BASIC	
G01. 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.	**G01.01**. Analyse a situation and identify its points for improvement adapted to the needs and demands of the context of analysis. G01.03. 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 health service planning and in the protection, promotion of health and prevention of diseases.
2. Health information systems: registries, surveys and epidemiological surveillance systems. Most important bodies in the Spanish State 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 coincidence. Partnership measures. Criteria of chance. Causal inference.
5. Basic epidemiological research designs: descriptive observational studies, analytical studies and experimental studies. Basic concepts, design and main advantages and limitations of each type of design.
6. The *Health Plan of Catalonia* and strategic planning in health. Distribution and trend 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 epidemic outbreak in the community. Epidemiological surveillance systems.
10. Aging and health. Epidemiology of aging. Perceived level of health. Health surveys.

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
   Gram-positive cocci of the genus *Staphylococcus*
8. Gram-positive cocci of the genus *Streptococcus*
9. Gram-negative bacilli
10. Gram-negative cocci. Gram-positive bacilli
11. Anaerobic spokesmen. Mycobacteria
12. General characteristics of fungi: morphology, structure and reproduction
    Yeast, filamentous and dimorphic fungi
13. General characteristics of protozoa: morphology, structure and reproduction
    Intestinal and urogenital protozoa, hemotisular:
    General characteristics of helminths: morphology, structure and reproduction. Platelminents; Nematelminents:
14. General characteristics of viruses: morphology, structure and replication. Pathogenesis of viral infections. Prions. Human herpes virus
15. 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
Types: Directed			
Theory (TE) Classroom Internship (PAUL)	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*, *B03*
Types: Supervised			
Scheduled tutorials:	1	0,04	*B03*
Type: Self-employed			
Personal study, bibliographic consultations and documents. Preparation of work.	90	3,60	*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

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 that 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 = Hits – (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 written work** 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

When the student has not presented sufficient evidence to allow the overall grade to be passed in the subject, the grade is recorded as "Not assessed" in the record.

It is a reason for lack of sufficient evidence if the student does not participate in any of the activities of continuous assessment.

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.

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
Written assessments: objective tests.	**90%**	**6**	**0,24**	*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%*			
Submission of Group Written Work	**10%**			*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 parisotology. 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