



## COURSE DATA

### Data Subject

<b>Code</b>	34091
<b>Name</b>	Public Health
<b>Cycle</b>	Grade
<b>ECTS Credits</b>	9.0
<b>Academic year</b>	2023 - 2024

### Study (s)

Degree	Center	Acad. year	Period
1201 - Degree in Pharmacy	Faculty of Pharmacy and Food Sciences	4	Annual
1211 - Double Degree in Pharmacy and Human Nutrition and Dietetics	Faculty of Pharmacy and Food Sciences	5	Annual

### Subject-matter

Degree	Subject-matter	Character
1201 - Degree in Pharmacy	25 - Public health	Obligatory
1211 - Double Degree in Pharmacy and Human Nutrition and Dietetics	1 - Asignaturas obligatorias del PDG Farmacia-Nutrición Humana y Dietética	Obligatory

### Coordination

Name	Department
MORALES SUAREZ-VARELA, MARIA MANUELA	265 - Prev. Medicine, Public Health, Food Sc., Toxic. and For. Med.

## SUMMARY

Public Health in the Degree in Pharmacy is a subject whose mission is to provide the future graduate with sufficient knowledge to develop their activity in the field of health promotion and disease prevention in the population at an individual and collective level. . Students will be introduced to the epidemiological method, knowledge of the environment and its relationship with health, epidemiology and prevention techniques for chronic and communicable diseases and knowledge of the international, European and Spanish health system, as well as as in the techniques used for education for the health of the population. The subject also works to implement the Sustainable Development Goals (SDG) in teaching within the framework established by the UV.



## PREVIOUS KNOWLEDGE

### Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

### Other requirements

Having studied basic subjects (statistics, chemistry, biochemistry and physiology) is recommended, as well as the microbiology, immunology and parasitology course subjects. Having acquired basic knowledge of pharmacology and pharmaceutical knowledge is also recommended.

## COMPETENCES (RD 1393/2007) // LEARNING OUTCOMES (RD 822/2021)

### 1201 - Degree in Pharmacy

- Learn about the basic concepts of health and Public Health
- Acquire knowledge of the epidemiological and scientific method, pharmacoepidemiology, pharmacovigilance, clinical trials and studies of scientific evidence.
- Strategies for health promotion and disease prevention.
- Understand and assess the determinants of health.
- Knowing about the relationship between environment and health.
- Acquire the knowledge on the epidemiology and prevention of communicable and non-communicable diseases.
- To know the techniques and applications in the field of environmental health, sanitation and hygiene are primarily in the pharmaceutical industry.
- To Acquire knowledge about baking and the prevention of occupational hazards.
- Knowing the methods and means of health education.
- Knowledge about health programming.
- To Acquire knowledge about health care organization: Health Systems, International Public Health.

## LEARNING OUTCOMES (RD 1393/2007) // NO CONTENT (RD 822/2021)

Learning outcomes should lead to:

1. Know the basic concepts of health and Public Health.
2. Know and assess the determinants of health. Know the sex / gender differences in health indicators, incidence, prevalence and causality.



3. Acquire knowledge about the epidemiological and scientific method, pharmacoepidemiology, pharmacovigilance, clinical trials and scientific evidence studies.
4. Know the methods and means of health education.
5. Know the relationship between environment and health, such as the effects of climate change.
6. Know the techniques and applications in the field of environmental health, sanitation and sanitary and industrial hygiene, mainly in the pharmaceutical industry and its link with the objectives of sustainable development.
7. Strategies for promoting health and preventing disease as a whole and valuing the gender perspective and social inequalities
8. Acquire knowledge about epidemiology and prevention of communicable and non-communicable diseases.
9. Knowledge of health programming.
10. Acquire knowledge about planning and prevention of occupational hazards.
11. Health organization: Health Systems. International Public Health. Systems of health. International health and global health.

## **DESCRIPTION OF CONTENTS**

### **1. THE COURSE SUBJECT CONCEPT. THE EPIDEMIOLOGICAL METHOD**

Historical evolution and current situation of Public Health Fundamental sections that comprise it. Health and disease as an ecological phenomenon.

Epidemiology. The epidemiological method. Uses of epidemiology.

Descriptive epidemiology. Sources of health information. Health Information System (S.I.S.).

Demography. Basic components. Sources of demographic information. Population calculations. Population movements. Studies of the Spanish population.

Health statistics. methods. Averages and variations. Trends and correlations. Statistical samples, their types. Graphic representation.

Community health measures. Health indicators.

Analytical epidemiology. Types of analytical studies (case-control studies).

Cohort studies.

Experimental epidemiology. Clinical trials. Trials in the community. Causality in epidemiology.

Biases in epidemiology. Evaluation of diagnostic tests.

Health organization: health systems. International health and global health. Identification and monitoring of health inequalities. Relationship of the content with SDG 3 and 10.



## 2. THE NATURAL ENVIRONMENT AND HEALTH

Ecology and human health. Environmental impact evaluation.

Environmental health. its current importance.

Water as a hygienic factor. Physicochemical and biological criteria for potability of drinking water. Water supplies.

Problems of water for public consumption in the Valencian Autonomous Community.

Sewage water. The problem of wastewater in the Valencian Autonomous Community.

Solid urban waste. The problems of solid waste in the Valencian Autonomous Community.

Industrial waste. Production and management. Industrial waste treatment facilities.

Pollution of the atmosphere. Its importance in Public Health.

Climate and air pollution. Macroecological effects of air pollution.

Surveillance networks in air pollution.

Pollution of continental and marine waters.

Urbanism and health.

Authorization, control and surveillance of qualified activities. Administrative organization in environment.

The availability of water and its sustainable management and sanitation. Social responsibility and linkage with SDGs 1, 3, 6, 8, 9, 11, 12, 13, 14, 15 and 17 of environmental policies. Role of the pharmacist in this context.

## 3. FOOD AND HEALTH

Food and public health. Food and nutrition surveys.

Food safety. Sanitary control in its production and distribution. Role of sustainable agriculture. Food security and improved nutrition. National and international food strategies linked to sustainable development.

Relationship of the content with SDG 2 and 3.

## 4. PHARMACOVIGILANCE AND DRUG DEPENDENCY

Pharmacovigilance.

Drug addiction. Health and social aspects. Preventive guidelines.

Relationship with SDGs 3, 5 and 10.

## 5. HEALTH CARE EDUCATION

Education for health. The pharmacist as a health educator. Role of the pharmacist in consultation and intersectoral roundtables to address health problems in the community.

Relationship of the content with SDG 3, 4, 11 and 17.



## 6. PREVENTING TRANSMISSIBLE DISEASES

Epidemiology of communicable diseases. Its control and surveillance.

Airborne diseases. Tuberculosis as a health problem.

Diseases transmitted by contact. Tetanus.

Epidemiology and prevention of sexually transmitted infections.

Waterborne and foodborne diseases.

Vaccination programs: epidemiological and preventive aspects.

Epidemiology of Human Acquired Immunodeficiency Syndrome.

Epidemiology of zoonoses and vector-borne diseases.

Sanitation and disinfection, disinsection and deratization.

Healthcare-associated infections.

Identification of health risks and guarantee of a healthy life at all ages. Relationship of the content with SDGs 3, 4, 6, 10 and 12.

## 7. PREVENTION OF NON-COMMUNICABLE DISEASES

Epidemiology and prevention of cardiovascular diseases.

Epidemiology of chronic lung disease.

Cancer epidemiology and prevention.

Epidemiology and prevention of trauma.

Epidemiology and prevention of osteoarticular diseases.

Epidemiology and prevention of chronic kidney disease.

Epidemiology and prevention of alcohol-related problems.

Public health and tobacco.

Epidemiology and prevention of diseases of the nervous system and mental illnesses.

Prevention of endocrine and metabolic diseases: diabetes, nutritional deficits and obesity.

Prevention of caries and periodontal disease.

Occupational health. Forms of intervention.

Identification of health risks and guarantee of a healthy life at all ages. Forms of intervention. Intervention with a gender perspective. Relationship of the content with SDGs 1, 2, 3, 4, 5, 10 and 13.

## 8. PLANNING AND MANAGING HEALTH SERVICES

Main healthcare models. Integrated healthcare. Health care levels. Health planning.

Health organization in Spain and in the Valencian Autonomous Community. Hospital organization.

The health organization in catastrophic or emergency situations.

International Sanitary Organization. World Health Organization (WHO) and other related organizations.

Global health.

Strategies to reduce inequality within and between countries. Relationship of the content with SDG 3, 4, 10, 16 and 17.

**WORKLOAD**

ACTIVITY	Hours	% To be attended
Theory classes	60,00	100
Seminars	10,00	100
Computer classroom practice	10,00	100
Tutorials	4,00	100
Preparing lectures	125,00	0
Preparation of practical classes and problem	10,00	0
<b>TOTAL</b>	<b>219,00</b>	

**TEACHING METHODOLOGY**

Teaching is based on the individual study of the topics developed in the theoretical classes reinforced by computer practices, aimed mainly at the knowledge of computer tools and programs that allow the creation of databases and their subsequent epidemiological analysis, and classroom practices in those that introduce the student to the study of the environment and its relationship with health, teaching them how to establish health surveillance systems, how situations are evaluated and data are interpreted.

The student will also have tutorials to delve into the most outstanding and current aspects of this subject and to solve doubts in a personalized way, specifically:

- Theoretical class: these are face-to-face classes aimed at the presentation by the teacher of the most important concepts and contents of each topic in order for the student to acquire knowledge related to the subject, according to the syllabus. Student participation will be enhanced.
- Tutorials: students will attend it in small groups. In them, the teacher will evaluate the learning process of the students in a globalized way, likewise, the tutorials will serve to solve all the doubts that may have arisen throughout the classes and will guide the students on the most useful working methods for the resolution of the problems that may arise in the study of this matter. The teacher will be able to raise specific questions and themes according to the needs of the students for their development.
- Seminar: the seminars will be used to promote individual and group work, as well as the improvement of oral presentation, by carrying out theoretical or practical work that complements the training that is acquired in the classes. Complementary activities of different types will also be carried out (case studies, preparation of scientific bibliographic searches, discussion of current issues related to the subject and related to sustainable development.
- Practical computer lab classes: They will be held in the computer room. These are practices related to solving practical cases through the use of computer systems. They are intended to consolidate theoretical knowledge, through the practical application of the same. The teacher will present the objectives, report on the handling of the material, supervise the performance of the work and help in the interpretation of the results.



The contents programmed in the computing practices:

- Critical reading of scientific articles using Public Health information bases.
- Evaluation of epidemiological designs in different Public Health issues using scientific search engines, assessing their design and gender approach, social perspective, economic inequalities ... in order to extrapolate the results to different populations / communities. Within the evaluation, their incorporation of the SDGs will also be assessed.
- Study of practical cases of epidemiology problems (descriptive and analytical): exploratory data analysis, graphic and numerical description of a variable, bivariate relationships, inferential analysis in a population, studies of proportions and tests used.
- Evaluation of diagnostic tests (sensitivity, specificity and predictive values)

## EVALUATION

The assessment corresponding to the work carried out in the seminars will contribute 5% to the final mark, with attendance being compulsory. Both the content of the work and its presentation will be assessed.

Participation in practical classes, attendance of which is compulsory, will be assessed with a maximum of 5% of the final mark. The possibility of a practical report will be considered.

The assessment corresponding to the work carried out in the tutorials and participation in them will contribute 5% to the final mark, with attendance being compulsory. All of this will be assessed together with the final theoretical exam.

The continuous assessment activities, which in this subject are practices, tutorials and seminars, are of **MANDATORY ATTENDANCE** and, therefore, **NOT RECOVERABLE**, in accordance with the provisions of article 6.5 of the Regulation of Evaluation and Qualification of the UV for Bachelor and Master degrees. In the event that, for justified reasons, it is not possible to attend any of these activities, it must be communicated sufficiently in advance. In this way, the person in charge of the subject may assign the student a session in another group.

Repeating students will have their marks for practicals retained but not for tutorials or seminars.

Attendance and participation in theory classes will be taken into account for 5% of the final mark.

The acquisition of knowledge will be assessed by means of a written test of the theoretical and practical contents. In order to pass the 1st partial exam, it is necessary to obtain a grade of 5.0 or higher in the written test. The score obtained together with the theoretical exam of the 2nd partial exam, which must meet the same requirements, will be weighted at 80% of the final grade. It will be necessary to obtain 50% of the maximum score of this written test to add the evaluations corresponding to the seminar, practical classes and tutorials.



Students who have passed the 1st part-time exam and do not pass the 2nd part-time exam in the 1st session may only sit the 2nd part-time exam or the final exam in the 2nd session.

In the event that the student has completed the activities of the course and does not sit the final exam, he/she will be recorded:

As "NOT PRESENTED" (NP) in the FIRST call.

But as "PRESENTED" in the SECOND sitting, with the corresponding grade.

Copying or plagiarism of any assignment that forms part of the assessment will result in the impossibility of passing the subject, and the student will then be subject to the appropriate disciplinary procedures. Please note that, in accordance with article 13. d) of the University Student Statute (RD 1791/2010, 30 December), it is the duty of a student to refrain from using or cooperating in fraudulent procedures in assessment tests, in the work carried out or in official university documents.

In the case of fraudulent practices, the procedure will be as determined by the "Protocol of action against fraudulent practices at the University of Valencia" (ACGUV 123/2020):  
<https://www.uv.es/sgeneral/Protocols/C83sp.pdf>

## REFERENCES

### Basic

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- Fletcher RH, Fletcher SW, Wagner EH. Epidemiología Clínica. 2ª ed. Madrid: Elsevier-Masson, 2007.
- Hernández-Aguado I, Gil de Miguel A, Delgado-Rodríguez M, Bolumar-Montrull F. Manual de Epidemiología y Salud Pública para licenciaturas y diplomaturas en Ciencias de la salud. Madrid: Médica Panamericana, 2005.
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- Jenicek M, Clerooux R. Epidemiología. Principios- Técnicas Aplicaciones. Barcelona: Salvat S.A.
- Pineault R, Daveluy C. La planificación sanitaria. Conceptos, métodos y estrategias. Barcelona: Elsevier-Masson.

### Additional

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- DiNardi SR. The Occupational Environment Its Evaluation and Control. Fairfax, VA: American Industrial Hygiene Association.





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- O.P.S. El control de las enfermedades transmisibles en el hombre. Washington: Organización Panamericana de la Salud.
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