

**COURSE DATA****Data Subject**

|                      |               |
|----------------------|---------------|
| <b>Code</b>          | 33968         |
| <b>Name</b>          | Public Health |
| <b>Cycle</b>         | Grade         |
| <b>ECTS Credits</b>  | 9.0           |
| <b>Academic year</b> | 2022 - 2023   |

**Study (s)**

| <b>Degree</b>                                  | <b>Center</b>                         | <b>Acad. Period<br/>year</b> |
|------------------------------------------------|---------------------------------------|------------------------------|
| 1205 - Degree in Human Nutrition and Dietetics | Faculty of Pharmacy and Food Sciences | 3 Annual                     |

**Subject-matter**

| <b>Degree</b>                                  | <b>Subject-matter</b> | <b>Character</b> |
|------------------------------------------------|-----------------------|------------------|
| 1205 - Degree in Human Nutrition and Dietetics | 27 - Public health    | Obligatory       |

**Coordination**

| <b>Name</b>                     | <b>Department</b>                                                  |
|---------------------------------|--------------------------------------------------------------------|
| ORTEGA AZORIN, CAROLINA         | 265 - Prev. Medicine, Public Health, Food Sc.,Toxic. and For. Med. |
| ZURRIAGA LLORENS, ÓSCAR ERNESTO | 265 - Prev. Medicine, Public Health, Food Sc.,Toxic. and For. Med. |

**SUMMARY**

To acquire the basic concepts on the health and determinants of the health, levels of prevention and actions of protection and promotion of the health its link to the Sustainable Development Goals (SDGs). To know the epidemiology and its application in them nutritional studies. To understand the influence of the supply and nutrition on the health. To identify the key aspects of the promotion of the health and of the education for the health, fundamentally related to the field of the feeding and nutrition, as well as to know the principal programs of health in the different stages of the life. To know the epidemiology of the principal contagious and non transmissible diseases, its prevention and control, principally, in relation to the food. To know the relation between the environment and the health. To know the sanitary system, planification and magement.



## PREVIOUS KNOWLEDGE

### Relationship to other subjects of the same degree

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

### Other requirements

Knowledge of the subjects given during the first two years of degree, fundamentally Statistics, Microbiology and Nutrition, Chemical Analysis, Parasitology, as well as the basic matters of Physics, Chemistry and, Biochemistry

### 1205 - Degree in Human Nutrition and Dietetics

- Recognise the essential elements of the profession of the dietitian-nutritionist including ethical principles, legal responsibilities and the practice of the profession, apply the principle of social justice to professional practice, and work with respect to people, their habits, beliefs and cultures, from a gender perspective.
- Practise the profession with respect for other health professionals and acquire skills to work in teams.
- Communicate effectively, both orally and in writing, with people, with health or industry professionals and with the media, knowing how to use information and communication technologies, especially those related to nutrition and lifestyles.
- Recognise the need to maintain and update professional competence, with particular emphasis on independent and lifelong learning of new facts, products and techniques in the field of nutrition and food, and on motivation for quality.
- Know, judge and know how to use and apply the sources of information related to nutrition, food, lifestyles and health.
- Know about national and international health organisations and the different healthcare systems and identify the role of the dietitian-nutritionist.
- Know and intervene in the design, implementation and validation of nutritional epidemiological studies, and participate in the planning, analysis and evaluation of food and nutrition intervention programmes in different areas.
- Participate in activities for the promotion of health and the prevention of disorders and diseases related to nutrition and lifestyles, and provide food and nutrition education to the population.
- Collaborate in the planning and development of policies on food, nutrition and food safety based on the needs of the population and health protection.
- Participate in the management, organisation and provision of food services.
- Acquire basic training for the research activity, be able to formulate hypotheses, collect and interpret information for problem solving using the scientific method, and understand the importance and the limitations of scientific thought in the field of health and nutrition.



- Know the basic concepts of health and public health.
- Know the methods and means of health education.
- Know the relationship between environment and health.
- Acquire knowledge on epidemiology and prevention of communicable and non-communicable diseases.
- Know and assess the determinants of health.
- Adquirir los conocimientos sobre el método epidemiológico y su aplicación al campo de la nutrición.
- Be familiar with strategies for promoting health and preventing disease, primarily in the field of nutrition.
- Conocimientos sobre planificación y programación sanitaria.
- Know the organisation of healthcare: health systems and international public health.

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At the end of the course the pupil must be capable of:

- To apply the concepts of the Public Health in general and in related disciplines, especially, in the area of the degree of Human Nutrition
- To know the organizational and normative environment of the Public Health in Spain comparing the characteristics with other sanitary systems.
- To analyze critically the information in the epidemiological nutritional studies
- To realize calculations to obtain measures of frequency of disease - health, measure of association and of impact. To be able to interpret the obtained results.
- To detect and to correct the principal random and systematic errors in the epidemiological nutritional studies, as well as to value its influence for the results and its practical application.
- To interpret the results of metanalysis and of the different measures which are in use in the evaluation of diagnostic tests.
- To distinguish the different pollutants of the environment and to interpret the measurements realized by the different equipments to take decisions brings over of the convenience of preventive measures or of control. Evaluation of the impact of the pollutants in the health.
- To collaborate in the prevention and control of contagious diseases across the knowledge of his mechanism of transmission and strategies of prevention and control for general and particular level for those more relevant diseases.
- To collaborate in the prevention and control of the chronic diseases and accidents acting as sanitary educator on the ways of life and the environmental factors, as well as of sanitary assistance.
- To analyze opportunities and challenges raised by new or changeable situations in relation to the Public Health
- In general, one tries to promote the capacity of analysis and synthesis in the resolution of problems and capture of decisions in the field of Human Nutrition



## DESCRIPTION OF CONTENTS

### 1. General Concepts in Public Health

Concept of Health, Public Health, Determinants of the Health, Principal determinants of the way of life and of the physical and social environment. Food and Health. Mediterranean diet Sanitary Demography, Information systems, Epidemiological Vigilance. The World Health Organization. Levels of Prevention. Education for the health. Qualitative technologies. Prevention and Promotion of the Health, and the relationship with the Sustainable Development Goals of the 2030 Agenda.

### 2. General Concepts in Public Health

Concepts and uses of the Epidemiology. Applications to the Human Nutrition. Causality. Measures of frequency. Types of epidemiological studies, measures of association and impact, biases, metanálisis. Nutritional epidemiology. Valuation of diagnostic tests. Poblacional screening tests. Examples of the principal studies published in Human and Dietetic Nutrition.

### 3. Environment and health

Environment and health and aspects related to the Sustainable Development Goals. Environmental epidemiology. Effects on the health. Environmental health and food. Climatology and health. Climate change and repercussions on the environment and health. Pollution of soils. Waste management.

### 4. Infectious diseases

Epidemiology, prevention and control. Immunization and vaccines. Sterilization, disinfection and pesticides. Classification of infectious diseases. The most relevant contagious diseases

### 5. Chronic Diseases

General epidemiology of the chronic diseases and strategies of prevention and control related to the food. Nutrition and cardiovascular disease. Nutrition and cancer. Nutrition and diabetes, obesity and metabolic syndrome. Genomic epidemiology studies in chronic diseases

### 6. Sanitary System and Services of Health

Sanitary Spanish system. Other sanitary systems. Primary care and Specialized Attention. Services of Health. Paper of the Graduate in Human and Dietetic Nutrition in the Sanitary system. Health economics. Management and Sanitary Planning. Community nutrition.

**WORKLOAD**

| ACTIVITY                                     | Hours         | % To be attended |
|----------------------------------------------|---------------|------------------|
| Theory classes                               | 75,00         | 100              |
| Seminars                                     | 10,00         | 100              |
| Tutorials                                    | 2,00          | 100              |
| Development of group work                    | 20,00         | 0                |
| Development of individual work               | 20,00         | 0                |
| Study and independent work                   | 80,00         | 0                |
| Readings supplementary material              | 10,00         | 0                |
| Preparation of practical classes and problem | 5,00          | 0                |
| <b>TOTAL</b>                                 | <b>222,00</b> |                  |

**TEACHING METHODOLOGY**

The theoretical contents will be given across lessons composed in a dialogue with the students promoting the participation of the student across questions.

These theoretical meetings will have the complement of the tutorships, virtual tutorships and seminars (6 hores).

During the development of the classes, the contents of the subject will be linked with the Sustainable Development Goals of the 2030 Agenda, with its presentation, as well as with examples of its applications. With all this, its importance will be addressed, at the same time that students acquire knowledge and skills to understand the relevance of these SDGs and their relationship with the subject taught.

Throughout the coordinated seminars on this subject, the relationship between the subject matter of the work developed with the Agenda of the Sustainable Development Goals will again be motivated, valuing the consideration of the inclusion of the approach of the gender and social perspective, as well as inequalities and other approaches considered in said agenda.

In the seminar lessons, methodology based on learning by resolution of problems will be used. The work will be promoted in group that will allow the development of capacities of communication and oral coherent and logical expression.

Coordinated seminars will take place on topics provided by the teacher and related to the course and must follow the guidelines on coordinated seminars available at the web page of the Degree. In the case of Double Degree (Pharmacy and HND) the seminars will not be coordinated. The development of the seminar will be monitored through tutorials, to be agreed upon between the teacher and the students.



## EVALUATION

- 1. Exam:** Written test to assess knowledge and understanding of the theoretical minimum content established for the subject. This test will be the 75% of the final qualification of the subject.
- 2. Partial exam:** During the course a partial exam will be taken at the end of the first semester. In the case of having passed with a 5/10, the subject of the partial will be eliminated and this mark will be saved during the first and second calls.
- 3. Both marks for the first partial and for the final exam (second partial)** must be passed (5/10) in order to calculate an average. The final qualification of the students that are examined of all the contents, will be the achieved in the final exam.
- 4. Seminars:** The work carried out in the seminar sessions, which includes the ability to resolve problems as well as the ability to make detailed and organized reports, will be up to 20% in the final qualification. These seminars will be coordinated with other subjects and also specific to the subject. Students are reminded of the obligation to attend seminars. Written work, presentation, defense, and proposed activities will be taken into account for their assessment according to the guidelines on coordinated seminars available at the web page of the Degree. The level of understanding of the contents as well as the skills for its presentation and discussion will be assessed.
- 5. The qualifications of both seminars and tutorials** will be added when the complete subject has been passed
- 6. Tutorials:** Evaluation of the work done during tutorials and other teaching activities of the course. Taking into account the attitude of the student and the answer to the questions presented, the contribution of this activity will count up to 5% of the final evaluation of the subject.

The student enrol in the subject must attend the tutorials and seminars to pass the course, although in the case of repeat students, they will keep the marks of tutorials and seminars that they had obtained in the previous course.

## REFERENCES

### Basic

- Serra-Majem L, Aranceta J. *Nutrición y Salud Pública. Métodos, bases científicas y aplicaciones*. 2ª ed. Barcelona: Elsevier-Masson, 2006.
- Piédrola Gil y cols. *Medicina Preventiva y Salud Pública*. 12ª Edición. Madrid: Elsevier Masson. 2016
- Hernández-Aguado I. y Lumbreras Lacarra B. *Manual de Epidemiología y Salud Pública para grados en Ciencias de la Salud (3ª Edición)*. Médica Panamericana, 2018.
- Gustavo Malagón-Londoño, Jairo Reynales-Londoño. *Salud Pública. Conceptos, Aplicaciones y Desafíos (3ª Edición)*. Medica Panamericana, 2020.



**Additional**

- Martínez-González MA, Sánchez-Villegas A, Faulín Fajardo J. Bioestadística amigable. Díaz de Santos: Madrid, 2006
- Fletcher RH, Fletcher SW, Wagner EH. Epidemiología Clínica. 2ª ed. Elsevier Masson:Madrid:2007

