COURSE DATA

DATA SUBJECT

Code: 34102
Name: Pharmacoepidemiology
Cycle: Undergraduate Studies
ECTS Credits: 4.5
Academic year: 2026-27

STUDY (S)

Degree	Center	Acad. year	Period
1201 - Degree in Pharmacy	Facultat de Farmàcia i Ciències de l'alimentació	5	First quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
1201 - Degree in Pharmacy	Pharmacoepidemiology	ELECTIVES

COORDINATION

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SUMMARY

Pharmacoepidemiology is an optional subject offered to complete the training of future graduates in Pharmacy in the medicines field. It applies tools and the epidemiological method to investigate and study their correct usage, and to evaluate risks, interactions and contraindications, and their relationship with the economy by means of cost-effectiveness analyses, to correctly select medications.

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. Having acquired basic knowledge about pharmacology and pharmaceutical technology is also recommended.

COMPETENCES / LEARNING OUTCOMES

1201 - Degree in Pharmacy

Acquire knowledge of pharmacoeconomics mainly applied to cost-effectiveness analyses in medicines.

Acquire knowledge to conduct studies on the use of medicines and pharmacovigilance.

Act with autonomy in learning, making informed decisions in different contexts, issuing judgements based on experimentation and analysis, and transferring knowledge to new situations.

Collaborate effectively in work teams, assuming responsibilities and leadership roles and contributing to collective improvement and development.

Contribute to the design, development and implementation of solutions that respond to social demands, taking into account the Sustainable Development Goals as a reference.

Demonstrate critical and self-critical thinking in the field of the degree programme, considering aspects such as professional ethics, moral values and the social implications of the different activities carried out.

Know and assess the use of pharmacoepidemiology techniques and design pharmacoepidemiological studies.

Know and understand, within the field of the degree programme, gender inequalities in society; integrate different needs and preferences based on sex and gender into the design of solutions and problem solving.

Know essential medicines and acquire knowledge of techniques for providing information and education about medicines.

Know how to communicate effectively, both orally and in writing, adapting to the characteristics of the situation and the audience.

Know the applications of pharmacoepidemiology in the field of clinical trials and in the study of adverse drug reactions.

Know the reasons and techniques for selecting medicines.

Propose creative and innovative solutions to complex situations or problems within the field of knowledge, to respond to diverse professional and social needs.

Reinforce the acquisition of the general competences of the curriculum.

Understand the concept of pharmacoepidemiology and the study of epidemiological logic in the assessment of medicines.

DESCRIPTION OF CONTENTS

Medicines: benefits in relation to risks: Pharmacoepidemiology. Concept. History. Methods of studies into

1. STUDIES INTO USES OF MEDICINES

uses of medicines. Measurement units. Quality measurement parameters. Consumption database. Morbidity and mortality data applied to study undesirable effects caused by drugs and medicines. The spontaneous notification system of adverse reactions and WHOs Pharmacovigilance Programme. Postcommercial vigilance methods. Monitoring prescription-linked events. Studies into medical prescription habits. Studying prescription fulfilment. Vigilance addressing specific problems.

2. DESIGNING PHARMACOEPIDEMIOLOGICAL STUDIES

Types of studies into Pharmacoepidemiology. Drugs pharmacovigilance or monitoring studies. A case-control design in pharmacovigilance. Selecting cases and controls. Information about exposures. The cohort design when analysing the undesirable effects of medicines. Detecting adverse reactions. Intensive vigilance in hospitalised patients. Between the clinical assay and Epidemiology: overlaps. Between the clinical assay and Epidemiology: limits and research. Study types in Pharmacoeconomy. Assessing medicines economically: costs. Assessing medicines economically: Pharmacoeconomy. Assessing medicines economically: cost-effectiveness analysis. Selecting medicines at a national level. Selecting medicines at the international level. Essential medicines in primary healthcare. Information and education on medicines

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Tutorials	5,00
Theory	30,00
Computer classroom practice	10,00
Total hours	**45,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	0,00
Independent study and work	0,00
Preparation of lessons	67,50
Preparation for assessment activities	0,00
Resolution of case studies	0,00
Total hours	**67,50**

TEACHING METHODOLOGY

Teaching is based on the individual study of themes undertaken during theoretical classes, which are reinforced by computer science practical sessions to mainly address knowledge of computer tools and

programmes to create databases and their subsequent epidemiological analysis.

Students will also have tutorships to be able to obtain more in-depth information about the most relevant and up-to-date aspects in this subject and to solve any doubts they may have in a personalized fashion.

EVALUATION

Theoretical evaluation: the acquisition of knowledge will be evaluated through a written test that will deal with the contents of the theoretical program. It will contribute to 80% of the final grade. To pass the written test, it is necessary to obtain a grade equal to or greater than 5.0 to add the evaluations corresponding to the computer tutorials and practices.

Evaluation of the tutorials: the preparation, content and exposition of the works will be valued; progress in the appropriate use of scientific language; raising doubts; critical spirit and ability to collaborate in groups, all this will contribute to the final grade with 10% of the final grade, their attendance being mandatory.

Evaluation of computer practices: it will be carried out based on the teacher's report on the attitude, use and learning process, of the evaluation of the memory that the student will present at the end of the practical period, of the results obtained. It will contribute to 10% of the final grade, its attendance being mandatory.

The continuous assessment activities, which in this subject are shown to be practices and tutorials, are MANDATORY ATTENDANCE and, therefore, NON-RECOVERABLE, in accordance with the provisions of article 6.5 of the UV Assessment and Qualification Regulations for titles Degree and Master. In the event that, for justified reasons, you cannot attend any of these activities, you must notify us sufficiently in advance. In this way, the person in charge of the subject will be able to assign the student a session in another group.

The copying or manifest plagiarism of any task that is part of the evaluation will mean the impossibility of passing the subject, subjecting themselves to the appropriate disciplinary procedures. Keep in mind that, in accordance with article 13. d) of the University Student Statute (RD 1791/2010, of December 30), it is the duty of a student to refrain from the use or cooperation in fraudulent procedures in the evaluation tests , in the work carried out or in official documents of the university.

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

REFERENCES

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- Fletcher RH, Fletcher SW, Wagner EH. Epidemiología Clínica. 2ª ed. Madrid: Elsevier-Masson, 2007.

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- Drummond M, Stoddart GL, Torrance GW. Métodos para la evaluación económica de los programas de atención de la salud. Ed. Días de Santos, 1991.

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