COURSE DATA

Data Subject	
Code	34102
Name	Pharmacoepidemiology
Cycle	Grade
ECTS Credits	4.5
Academic year	2023 - 2024

Study (s)

Degree	Center	Acad. year	Period
1201 - Degree in Pharmacy	Faculty of Pharmacy and Food Sciences	5	First term

Subject-matter

Degree	Subject-matter	Character
1201 - Degree in Pharmacy	37 - Pharmacoepidemiology	Optional

Coordination

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

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

1201 - Degree in Pharmacy

- Reinforce the acquisition of the general competences of the Curriculum of Degree in Pharmacy.
- To know the concept of pharmacoepidemiology and the study of the epidemiological logic in the evaluation of the drug.
- To know and evaluate the use of pharmacoepidemiology techniques and to design pharmacoepidemiological studies.
- To know the applications of pharmacoepidemiology in the field of clinical trials and in the study of the adverse effects of drug.
- Acquire knowledge for studies of drug use and pharmacovigilance.
- To acquire knowledge of pharmacoeconomics fundamentally applied to the analyzes of cost-effectiveness in the drug.
- Know the reasons and techniques for drug selection.
- To know the essential medicines and to acquire knowledge in the techniques of information and education on the drug.

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

The results of learning must lead to:

1. Knowing the pharmacoepidemiology concept and the study of epidemiological logic in evaluating medicines. Knowing and evaluating the determining factors of health.
2. Knowing and evaluating the use of pharmacoepidemiology techniques and designing pharmacoepidemiological studies. Knowing the healthcare education methods and means.
3. Knowing the pharmacoepidemiology applications in the field of clinical assays and in the study of the adverse effects of medicines. Knowing the techniques and applications in the environmental healthcare field, healthcare and industrial hygiene, basically in the pharmaceutical industry.
4. Acquiring knowledge to conduct studies about the use of medicines and pharmacovigilance. Acquiring knowledge about epidemiology and preventing transmissible and non-transmissible diseases.
5. Acquiring knowledge about pharmacoeconomy, basically its application to cost-effectiveness analyses in terms of medicines. Acquiring knowledge on planning and preventing occupational risks.

6. Knowing the reasons and techniques to select medicines.
7. Knowing essential medicines and acquiring knowledge of information techniques and education on medicines.

DESCRIPTION OF CONTENTS

1. STUDIES INTO USES OF MEDICINES

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

ACTIVITY	Hours	% To be attended
Theory classes	26,00	100
Computer classroom practice	10,00	100
Tutorials	5,00	100
Preparing lectures	50,00	0
Preparation of practical classes and problem	17,50	0
TOTAL	**108,50**	

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

Basic

- Argimón JM, Jiménez J, Ed. Métodos de investigación clínica y epidemiológica. Barcelona: Harcourt, 2004.
- Fletcher RH, Fletcher SW, Wagner EH. Epidemiología Clínica. 2ª ed. Madrid: Elsevier-Masson, 2007.
- Laporte JR, Togoni G. Principios de epidemiología del medicamento. Barcelona: Salvat.
- Sacristán JA, Badía X, Rovira J. Farmacoeconomía: Evaluación económica de Medicamentos. Editores Médicos S.A. 1995.

Additional

- Drummond M, Stoddart GL, Torrance GW. Métodos para la evaluación económica de los programas de atención de la salud. Ed. Días de Santos, 1991.
- Segundo Informe del Cómite de Expertos de la OMS. Uso de Medicamentos esenciales. Organización Mundial de la Salud. Serie de informes Técnicos 722. Ginebra: Organización Mundial de la Salud, 1985.