

## BASIC DETAILS:

<b>Subject:</b>	FARMAECONOMÍA II		
<b>Id.:</b>	33365		
<b>Programme:</b>	DOBLE GRADO EN FARMACIA Y BIOINFORMÁTICA. PLAN 2018		
<b>Module:</b>	LEGISLACIÓN Y FARMACIA SOCIAL		
<b>Subject type:</b>	OBLIGATORIA		
<b>Year:</b>	5	<b>Teaching period:</b>	Primer Cuatrimestre
<b>Credits:</b>	3	<b>Total hours:</b>	75
<b>Classroom activities:</b>	31	<b>Individual study:</b>	44
<b>Main teaching language:</b>	Inglés	<b>Secondary teaching language:</b>	Castellano
<b>Lecturer:</b>	FLORES SERRANO, DAVID (T)	<b>Email:</b>	dflores@usj.es

## PRESENTATION:

The costs of health services, and particularly the expenditure in drugs, are consistently stressing the Spanish and in other developed countries economies forcing the governments to implement expenditure control policies. Despite the recent reductions in drugs' expenditure and the good overall indicators provided by the OECD in previous years, in relation with costs and quality of service, it is well known that the health systems in western countries are currently under financial pressures and that the Spanish expenditure in drugs has increased again in the last years, which has been reinforced by the appearance of the COVID19 pandemic this year. The appearance of new technologies, new drugs, new epidemiologic events, demographic disbalances, new pathologies and new treatments will carry on putting economic pressure in the systems. In order to avoid this pressure and to ensure the sustainability and survival of the National Health Systems as we know them, we need professionals and researchers well trained in concepts, methodologies and techniques in relation with health economic evaluations who will be able to determine the efficiency of health plans and programmes and to provide advice and support to the decisions made in different institutions and organisations. This subject will provide the students with basic tools to assess, from a health-economic point of view, the different interventions, treatments, programmes and technologies currently used in order to provide and guarantee the future sustainability of the modern health services.

Los costes de la salud, y especialmente el gasto farmacéutico, incrementan la presión económica nacional tanto en nuestro país como en otros países desarrollados del mundo, forzando a los gobiernos a recortar gastos. A pesar del descenso del gasto farmacéutico de los últimos años y los buenos resultados generales de nuestro sistema de salud en comparación con otros, según informes de la OCDE, es bien conocido por todos la actual situación de déficit que sufre nuestro sistema en la que el gasto farmacéutico ha vuelto a incrementar en los últimos años, lo que se ha visto reforzado por la aparición de la pandemia del COVID19. La introducción de nuevas tecnologías y de nuevos fármacos, la transición epidemiológica, desajustes demográficos, la aparición de nuevas patologías y la incorporación de nuevas formas de tratamiento, nos permiten proyectar que los costes de la salud en nuestro país van a seguir aumentando. Para evitar que dicho crecimiento supere la capacidad económica del país de sostener al Sistema de Salud, se requiere de profesionales e investigadores entrenados en conceptos, metodologías y técnicas de la Evaluación Económica en Salud, que sean capaces de determinar la eficiencia de planes y programas sanitarios y de apoyar las decisiones que se realicen en las diversas instituciones. Esta asignatura proporcionará a los alumnos conocimientos básicos de las técnicas más adecuadas y recientes de evaluar, desde el punto de vista económico-sanitario, las diversas intervenciones, programas y tecnologías que se usan actualmente o que se pretenden incorporar en el futuro, aportando una visión técnica a la solución de los problemas en esta área.

## PROFESSIONAL COMPETENCES ACQUIRED IN THE SUBJECT:

<b>General programme competences</b>	G01	Ability to express opinions and propose arguments effectively both orally and in writing. Effectively use language skills to express views and formulate arguments both orally and in writing.
	G02	Troubleshooting and decision-making.
	G03	Ability for autonomous learning and self-criticism.

	G04	Ability to effectively use new information and communications technology to improve written and oral presentations and to facilitate data analysis.
	G05	Ability for teamwork, actively contributing to the objectives and the organisation of a team.
	G07	Demonstrate creativity, independence of thought, autonomy.
	G08	Demonstrate critical and analytical ability to conventional approaches of the discipline.
	G09	Demonstrate capacity for innovation, creativity and initiative.
	G11	Knowledge of the English language for use in professional environments.
<b>Specific programme competences</b>	E15	Evaluate scientific data related to drugs and healthcare products.
	E16	Use statistical analysis applied to pharmaceutical sciences.
	E39	Conocer y comprender las técnicas utilizadas en el diseño y evaluación de los ensayos preclínicos y clínicos.
	E41	Promote the rational use of medication and healthcare products.
	E44	Understand the management and the characteristics of pharmaceutical assistance in Primary and Specialised Care structures in the Healthcare System.
	E50	Understand the management and characteristics of pharmaceutical assistance in an office environment and in the pharmaceutical industry.
	E51	Learn about the foundations of public health and intervene in the activities of health promotion, disease prevention at an individual and collective level and contribute to health education, recognising the determinants of health among the population health, both in terms of genetics as well as sex and lifestyle, demographic, environmental, social, economic, psychological and cultural dependants.
	E52	Know about, understand and apply legal, social and economic conditions related to the health sector and in particular with medication.
	E53	Conocer los principios éticos y deontológicos y actuar según las disposiciones legislativas, reglamentarias y administrativas que rigen el ejercicio profesional colaborando con otros profesionales de la salud y adquiriendo habilidades de trabajo en equipo.
	E54	Use efficiently information retrieval techniques for primary and secondary sources of information (including databases using computer).
	E55	Understand and apply management techniques in all aspects of pharmacy.
	E56	Understand the principles and scientific methodology applied to pharmaceutical sciences, including the historic and social role of the pharmacy.
	E57	Conocimientos básicos del Sistema Nacional de Salud, de la legislación sanitaria en general y específicamente la relacionada con los medicamentos, productos sanitarios y asistencia farmacéutica.
	E58	Learn the techniques of oral and written communication skills in order to be able to inform users of pharmaceutical establishments in terms that are understandable and appropriate for different cultural levels and social environments.
<b>Regulated profession competences</b>	P03	Know how to apply the scientific method and acquire skills in handling legislation, sources, bibliography, developing protocols and other aspects considered necessary for the critical design and evaluation of preclinical and clinical trials.
	P06	Promote rational use of medicines and healthcare products, and acquire basic knowledge in clinical management, health economics and efficient use of healthcare resources.
	P07	Identify, evaluate and assess the problems related to drugs and medication as well as participate in pharmacovigilance activities.
	P09	Intervenir en las actividades de promoción de la salud, prevención de enfermedad, en el ámbito individual, familiar y comunitario; con una visión integral y multiprofesional del proceso salud-enfermedad.
	P14	Conocer los principios éticos y deontológicos según las disposiciones legislativas, reglamentarias y administrativas que rigen el ejercicio profesional, comprendiendo las implicaciones éticas de la salud en un contexto social en transformación.
	P15	Recognise the limitations and the need to maintain and update professional skills, with particular emphasis on self-learning of new knowledge based on the available scientific evidence.

### PRE-REQUISITES:

Pharmacoeconomics is a global discipline involving several areas of knowledge within the discipline of Health Economics. In practice, most pharmacoeconomic projects are developed by a team of people from different areas of expertise and backgrounds so that the results of a pharmacoeconomic study are not dependent on one person being an expert in all the relevant disciplines. These teams cover areas such as Pharmacy, Medicine, Psychometrics, Economics, Statistics, Epidemiology, Decision Analysis, Survey Techniques, Strategy Management, etc. The main objective for the students of "Pharmacoeconomics II" would be to gain skills in order to understand the results of

pharmacoeconomic studies and to this end it would be useful to integrate the subjects approached in previous years such as pharmacology, drugs development and production, statistics, toxicology, public health, research and documentation analysis, Pharmacoeconomy I, etc.

Farmacoeconomía es una disciplina global que engloba diferentes áreas de conocimiento dentro de las Ciencias de la Economía de la Salud. En la práctica, la mayoría de proyectos de farmacoeconomía son desarrollados por equipos de personas de manera que no dependan de un único individuo que sea experto en todas las áreas de conocimiento relevantes. Estos equipos cuentan con personas expertas en Farmacología, Medicina, Psicometría, Economía, Estadística, Epidemiología, Salud Pública, Técnicas de toma de decisiones, Técnicas de estrategia comercial, etc. Para los alumnos que cursen esta asignatura, el principal objetivo es que sean capaces de comprender los resultados de los estudios farmacoeconómicos y para este fin es necesario que integren conocimientos adquiridos en asignaturas cursadas en años anteriores tales como Farmacología, Farmacocinética, Estadística, Toxicología, Salud Pública, Investigación y Análisis documentales, Farmacoeconomía I, etc.

## **SUBJECT PROGRAMME:**

### **Subject contents:**

<b>1 - CONSIDERATIONS IN CONDUCTING OR EVALUATING PHARMACOECONOMIC STUDIES</b>
1.1 - VARIABLES IN PHARMACOECONOMICS AND ASSESSMENT TOOLS
1.1.1 - Topic 1.- Cost determination analysis (CDA). Cost Minimization (CMA)
1.1.2 - Topic 2.- Cost-Benefit Analysis (CBA)
1.1.3 - Topic 3.- Cost-Effectiveness Analysis (CEA)
1.1.4 - Topic 4.- Cost-Utility Analysis (CUA)
1.1.5 - Topic 5.- Assessment of published pharmacoeconomic analysis. Verification checklists
<b>2 - MANAGEMENT OF A COMMUNITY PHARMACY (guest lecturer)</b>
2.1 - MARKETING AND POSITIONING OF A COMMUNITY PHARMACY
2.1.1 - Topic 6.- Stock management. Profits
2.1.2 - Topic 7.- How to set product prices
2.2 - PHARMACY DESIGN AND LAYOUT
2.2.1 - Topic 8.- How to establish the design of a community pharmacy. Relevant aspects
<b>3 - BUY SELL OF PHARMACIES. HOW TO APPROACH THE MARKET (guest lecturer)</b>
3.1 - PRINCIPLES OF BUY SELL IN THE COMMUNITY PHARMACY SECTOR
3.1.1 - Topic 9.- Theoretical principles of buy sell
3.1.2 - Topic 10.- Practical cases
<b>4 - FINANCE MANAGEMENT IN PHARMACEUTICAL INDUSTRY AND HOSPITAL ENVIRONMENTS (guest lecturer)</b>
4.1 - BIG PHARMA INDUSTRY
4.1.1 - Topic 11.- Finance basis and foundations of pharmaceutical industry
4.2 - FINANCE AND MANAGEMENT OF HOSPITALS. THE ROLE OF THE PHARMACIST
4.2.1 - Topic 12.- Finance basis and economic management role of pharmacists in Hospitals. Differences between public and private hospitals

Subject planning could be modified due unforeseen circumstances (group performance, availability of resources, changes to academic calendar etc.) and should not, therefore, be considered to be definitive.

## **TEACHING AND LEARNING METHODOLOGIES AND ACTIVITIES:**

### **Teaching and learning methodologies and activities applied:**

The student will acquire the desired knowledge and skills through the study of the teaching programme subjects. To this end the following tools would be provided:

- **Lectures** in which the most important subjects will be presented and some cases analysed in order to facilitate the understanding of some aspects. All power point presentations will be provided to the students. There would be GUEST LECTURERS who will provide the students with

the "reallity touch" required in the subject.

- A **basic text** in which the lectures are based and that the student will be able to use to consolidate and expand knowledge. Also some **extra bibliography** and **web sites** will be provided to alumni to compare the information received in class and also to expand knowledge for those students willing to investigate further.
- To consolidate the practical approach of the subject, **pharmacoeconomic examples** will be analysed in class during specific workshops and a **group assignment** completed about a real pharmacoeconomic analysis of their choice. These analysis will be marked both the written essay and the in-class presentation. The written essey will need to be submitted along with the article chosen by de students according to the dates above highlighted.
- Online **debates** will also be arranged for the students to participate throughout the semester if there are interesting themes in the media.
- There would be a significant support based on **video projections** related to the subject treated.
- **Individual tutorships** will be arranged if needed.

This plan will potentially be subject of changes depending on unpredicted events such as group progress, resources availability, calendar changes and accomodation of other subject needs and therefore should not be considered as closed and final.

El alumno adquirirá los conocimientos necesarios para superar la asignatura a través del estudio de los temas del programa. Para ello se proporcionarán las siguientes herramientas:

- **Clases teóricas** en las que se expondrán los temas y conceptos más importantes y se realizarán algunos ejercicios prácticos que faciliten la comprensión de ciertos aspectos. Todas las presentaciones se pondrán a disposición de los alumnos. Serán muy importantes las incorporaciones y apotaciones de PROFESORES INVITADOS, serán profesionales reputados que aportarán el toque práctico y de realidad que requiere la asignatura.
- Un **libro de texto** base en el que se fundamenta la asignatura y que el alumno podrá usar para consolidar o ampliar conocimientos. También se pondrán a disposición del alumno **libros de consulta** y **páginas web** para contrastar la información recibida en clase y para que aquellos alumnos interesados puedan ampliar conocimientos en temas específicos.
- Igualmente y para consolidar el carácter práctico de la materia, **ejemplos de análisis farmacoeconómico** serán discutidos en clase en sesiones específicamente reservadas a tal fin y un **trabajo en grupo** será realizado sobre un estudio farmacoeconómico real elegido por los alumnos. Este análisis será evaluable tanto la parte escrita como la presentación del mismo en clase. El artículo objeto de estudio deberá ser enviado junto con el trabajo final deacurdo a las fechas establecidas en el planning general indicado anteriormente en este documento.
- **Debates online** también serán planteados si durante el semestre se originan temas farmacoeconómicos de actualidad que puedan ser controvertidos.
- Se hará un uso significativo de **proyecciones audiovisuales** con el fin de profundizar en las materias y mejorar la comprensión del inglés.
- El profesor responsable estará disponible para **tutorías individuales**.

Este planificación puede estar sujeta a cambios durante el semestre y podrán verse modificados por motivos imprevistos (rendimiento del grupo, disponibilidad de recursos, modificaciones del calendario, necesidades de otras aignaturas) y por tanto no deben considerarse como cerrados y definitivos.

#### Student work load:

Teaching mode	Teaching methods	Estimated hours
Classroom activities	Master classes	18

	Practical exercises	6
	Coursework presentations	4
	Assessment activities	3
<b>Individual study</b>	Individual study	30
	Individual coursework preparation	8
	Group coursework preparation	6
	<b>Total hours:</b>	<b>75</b>

#### ASSESSMENT SCHEME:

##### Calculation of final mark:

Individual coursework:	32 %
Group coursework:	45 %
Final exam:	23 %
<b>TOTAL</b>	<b>100 %</b>

\*Las observaciones específicas sobre el sistema de evaluación serán comunicadas por escrito a los alumnos al inicio de la materia.

#### BIBLIOGRAPHY AND DOCUMENTATION:

##### Basic bibliography:

PRINCIPLES OF PHARMACOECONOMICS. Bootman, Townsend

##### Recommended bibliography:

INTRODUCTION TO APPLIED PHARMACOECONOMICS. Vogenberg, F. Randy. Editor: McGraw-Hill (ISBN 0071348468)

FARMAECONOMIA. Walley, T. Boland - 2005 (ISBN 9788481749052)

MARKETING FARMACEUTICO. Frías, Dolores M. Editor: Pirámide (ISBN 8436814282)

##### Recommended websites:

Pharmiweb	<a href="http://www.pharmiweb.com/">http://www.pharmiweb.com/</a>
Revista española de economía de la salud	<a href="http://www.economiadelasalud.com/">http://www.economiadelasalud.com/</a>
Health Economics, Medical and Pharmacy Resources by Category	<a href="http://www.healtheconomics.com/">http://www.healtheconomics.com/</a>
The International Peer-Reviewed Journal of Drug Therapy	<a href="http://www.clinicaltherapeutics.com">www.clinicaltherapeutics.com</a>
Adis Pharmacoconomics	<a href="http://adisonline.com/pharmacoconomics/Pages/default.aspx">http://adisonline.com/pharmacoconomics/Pages/default.aspx</a>