COURSE DATA

Data Subject

Code	34074
Name	Clinical Pharmacy and Pharmaceutical Care
Cycle	Grade
ECTS Credits	6.0
Academic year	2020 - 2021

Study (s)

Degree	Center	Acad. year	Period
1201 - Degree in Pharmacy	Faculty of Pharmacy and Food Sciences	5	First term
1211 - D.D. in Pharmacy-Human Nutrition and Dietetics	Faculty of Pharmacy and Food Sciences	5	First term

Subject-matter

Degree	Subject-matter	Character
1201 - Degree in Pharmacy	22 - Clinical pharmacy and pharmaceutical care	Obligatory
1211 - D.D. in Pharmacy-Human Nutrition and Dietetics	1 - Asignaturas obligatorias del PDG Farmacia-Nutrición Humana y Dietética	Obligatory

Coordination

Name	Department
MERINO SANJUAN, MATILDE	134 - Pharmacy and Pharmaceutical Technology

SUMMARY

Clinical Pharmacy and Pharmaceutical Care represent the paradigm of the pharmaceutical profession in relation to the rational use of medicines.

The **future clinical pharmacist** must acquire the skills and ability to identify, integrate and apply the information in the medical and pharmaceutical sciences to detect actual or potential related problems with drugs and resolved through communication, information and education to the patient (or caregiver) an integrated and co-responsible with other health professionals.

The **program** of the course presents the basic tools that will be necessary to the pharmacist to practice in the setting of care (patient care process and management system to perform both primary and specialized care). The **objectives** of this course are:

1. Promote pharmaceutical care practice, that is, patient-centered to provide drug therapy
2. To know the methodological bases for promoting rational drug use

To get outcomes that improve or maintain the quality of life of patients

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PREVIEW KNOWLEDGE

Relationship to other subjects of the same degree

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

Other requirements

It is recommended to have studied subjects:
Biopharmaceutics and Pharmacokinetics,
Pharmacology and Toxicology

OUTCOMES

1201 - Degree in Pharmacy

- To know how interpret, value and communicate relevant data in the different aspects of pharmaceutical activity, making use of information and communication technologies.

- Skill to communicate ideas, analyze problems and solve them with a critical mind, achieving team-working abilities and assuming leadership whenever required.

- Know how to apply the scientific method and acquire skills in the management of legislation, information sources, bibliography, elaboration of protocols and other aspects that are considered necessary for the design and critical evaluation of preclinical and clinical trials.

- To develop communication and information skills, both oral and written, to deal with patients and other health professionals in the center where they carry out their professional activity. To promote the capacity of work and collaboration in multidisciplinary teams and those related to other health professionals.

- To recognize personal limitations and the need to keep up to date professional competence, paying particular attention to the self-learning of new knowledge based on available scientific evidences.

- Properly select and dispense medicines and other products of health interest using criteria of efficacy, safety, pharmacokinetic and cost / effectiveness.

- Provide therapeutic advice in pharmacotherapy and diet therapy.

- Promote the rational use of medicines and health products, as well as acquire basic knowledge in clinical management, health economics and efficient use of health resources.

- Identify, evaluate and assess problems related to drugs and medicines, as well as participate in pharmacovigilance activities.

- Carry out clinical and social pharmacy activities, following the cycle of pharmaceutical care.

- Assessing the therapeutic and toxic effects of substances with pharmacological activity

LEARNING OUTCOMES

- Identify relevant information about drugs and critically evaluate this information in order to provide objective and verified (using ICT) to both healthcare professionals and patients.
- Assess the clinical trials and scientific evidence to promote the selection of drugs and their rational use.
- Select and dispense medications properly and other health products of interest using the criteria of efficacy, safety, pharmacokinetics suitability and cost / effectiveness.
- Provide therapeutic counseling and health promotion at both the dispensing process, indicating, as in the pharmacotherapy follow-up.
- Identify, evaluate and assess the problems related to drugs, as well as to detect, prevent and resolve negative results of medication and participate in the activities of pharmacovigilance.

DESCRIPTION OF CONTENTS

1. Clinical Pharmacy and Pharmaceutical Care: introduction and clinical activities

Introduction to the Pharmaceutical Health and Welfare clinical Trials.

Pharmacovigilance

Pharmacotherapeutic management

Information and Communication Technologies (Electronic Health Records)

2. Clinical Pharmacy and Pharmaceutical Care: processes and procedures

Prescription drugs

Dispensing

Pharmaceutical indication

Communication Skills

Quality of care: safety and effectiveness of drugs

Pharmacotherapy follow custom.

Quality of care in the context of Clinical Pharmacy

Systems pharmacotherapeutic quality management

Patient outcomes

3. Clinical Pharmacy and Pharmaceutical care in special population groups

Active dispensation and indication in community pharmacy

Pharmaceutical care in minor symptoms related with respiratory system and pain

Pharmaceutical care in minor symptoms related with digestive system and skin

Pharmaceutical care in pregnancy, lactation and pediatric

Pharmaceutical care in geriatrics

WORKLOAD

ACTIVITY	Hours	% To be attended
Theory classes	28,00	100
Computer classroom practice	20,00	100
Seminars	6,00	100
Tutorials	2,00	100
TOTAL	56,00	

TEACHING METHODOLOGY

- **Lectures.** In the lectures the teacher will make a presentation of the concepts and content of each topic, highlight the fundamentals for understanding. Teacher will solve any questions or issues that arise in the classroom.

- **Practical classes.** Practical classes will be held in the Clinical Pharmacy classroom or in a computer lab and will be distributed in 8 sessions of 2.5 hours each. The objective is that the student will be able: to provide patients with the information required to optimize the use of drugs, to obtain and analyse information related to treatment and clinical condition of patients; in order to identify opportunities for improvement and participate in patient monitoring. In the session, the teacher will indicate relevant issues and will guide the student in the use of technology of information in health for communication and registration of the activities.

- **Seminars.** Will be devoted to apply and deepen on various aspects of the subject. The teacher will provide the materials required and will propose a series of activities to promote learning. Students will work in groups the selected topics (4 students is considered the optimum number for members of the group). Students will deliver a report and will present and discuss it in the classroom. Problem based learnig (PBL) and service learning will be used.

 - **Tutorials.** Students will come to them in groups. In them, the teacher will guide the students about the elements of the learning process, general statements as well as specific issues.

EVALUATION

The assessment of student learning will take into consideration all sections exposed in teaching methodology section of this guide. For this, the course is divided into three parts: theory, practice and seminars:

 The rating theory block constitutes 55% of the final grade. It will be evaluated through a written exam consisting of conceptual questions and multiple choice questions that allow the student to demonstrate the degree of assimilation of fundamental concepts. They may also include topics to be developed that allow the student to demonstrate the ability of synthesis and exposure. The minimum score that is to be obtained in theory block to average with other activities of the course is 5.

 To evaluate the block of practices the student must attend all practice sessions. For this reason, if a student is unable to attend a practice session, if properly justified, the teacher will register him/her in another later group. During the last practice session a written exam on the issues discussed in the sessions will be hold. The mark obtained will represent 30% of the final grade. The minimum score required to pass this block is 5. If a student fails to pass the course, the grade obtained in the block of practices may be maintained for two subsequent courses.

 The evaluation of the block of seminars represents 15% of the final grade. The work submitted to the teacher and active discussion in the classroom during the preparation of the clinical cases represent 70%, the other 30% corresponds to the evaluation of the oral presentation and discussion of work performed.

According to the guidelines of the CAT of Pharmacy (May 14, 2012), students who do not show the theory exam but have participated and note any / s of the teaching activities carried out (seminars,, computer room, tutoria, etc..) will be assessed as not shown in the first round, but still not submitted for consideration by theory, the final grade on the second call will take into account the marks obtained in the various activities and thus may appear as SUSPENSE.

REFERENCES

Basic

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- Climente M. Jiménez NV. Manual para Atención Farmacéutica. Ivadis. 3ª edición. 2005
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Additional

- Baos V y Faus MJ. Protocolos de indicación farmacéutica y criterios de derivación al médico en síntomas menores. Fundación Abbott. 2008.
- Método DÁDER. Guía de Seguimiento Farmacoterapéutico. D Sabater, MM Silva y MJ Faus . Ed. La Gráfica. 2007. Granada.
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- Documento de Consenso. Foro de Atención Farmacéutica. Enero 2008
- Recursos en internet:
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  Sociedad Española de Farmacia Hospitalaria:http://www.sefh.es
  Sociedad Española de Farmacéuticos de Atención Primaria:http://www.sefap.org
  Agencia Española del Medicamento:http://www.agemed.es
  Agencia Europeadel Medicamento:http://www.emea.eu.int
  Consejo General de Colegios Oficiales de Farmacéuticos: http://www.cof.es

ADDENDUM COVID-19

This addendum will only be activated if the health situation requires so and with the prior agreement of the Governing Council

Methodology

If health emergency forces a hybrid teaching (face to face and on-line), the materials provided in the original guide for face-to-face teaching would be adapted, incorporating explanations and locutions so that the student can access to them at any time.

Synchronous or asynchronous video conferencing by BbC would also be used.

The forum of the moodle platform would be used to answer students questions.

The work carried out in the Seminars would be delivered through the "Task" option of the virtual classroom.

Presentations and the subsequent debate will be done by BbC videoconference, at the time established for the seminar sessions.

For the Practical sessions, the use of videoconferences by BbC, visualization of didactic videos and realization of the exercises proposed by means of the "Task" option of the virtual classroom, in the established schedule, would be combined.For group tutorials, Microsoft Team or BbC would be used. The virtual tutoring program is maintained (attention in 48 working hours by email).

Evaluation

The relative weight of each block is maintained as indicated in the Teaching Guide as weel as the structure of the exam, adapting it to the use of the virtual classroom platform if necessary.