



| Teaching Guide | | | | |
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| Identifying Data | | | | 2021/22 |
| Subject (*) | Pharmacology | Code | 750G02109 | |
| Study programme | Grao en Podoloxía | | | |
| Descriptors | | | | |
| Cycle | Period | Year | Type | Credits |
| Graduate | 1st four-month period | Second | Basic training | 6 |
| Language | Spanish | | | |
| Teaching method | Hybrid | | | |
| Prerequisites | | | | |
| Department | Ciencias da Saúde | | | |
| Coordinador | Núñez Fernández, Lucia | E-mail | lucia.nunez@udc.es | |
| Lecturers | Núñez Fernández, Lucia | E-mail | lucia.nunez@udc.es | |
| Web | https://campusvirtual.udc.gal/my/ | | | |
| General description | <p>Pharmacology is the biological science that studies the actions and properties of drugs in organisms. We can define drug as any chemical used for the following purpose: treat, cure, prevent or diagnose a disease, or to prevent the occurrence of an unwanted physiological process.</p> <p>The main contents of the subject are:</p> <p>Introduction to pharmacology and current legislation.</p> <p>Rational use of the drug. Pharmacoeconomics.</p> <p>General principles of action of drugs: pharmacokinetics (Routes of drug administration).</p> <p>General principles of action of drugs: pharmacodynamics (Action and effects).</p> <p>Physiological and pathological factors that condition the response to drugs.</p> <p>Drug design and drug development. Adverse drug reactions. Toxicity studies.</p> <p>Drug interaction.</p> <p>Introduction to Clinical Pharmacology (Natural products, description of pharmacological groups and commonly used drugs, indications and contraindications).</p> | | | |
| Contingency plan | In the case of confinement, the student will be able to follow the classes in teams and will be able to take the seminars through the virtual campus. In the case of a positive pcr or confinement on the day of the exam, the UDC protocols will be followed. | | | |

| Study programme competences | |
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| Code | Study programme competences |
| A75 | CE11 - Coñecer os grupos farmacolóxicos e os procesos cinéticos dos medicamentos no organismo, identificando os fármacos de uso habitual as súas indicacións, contraindicacións, reaccións adversas, interaccións e vías de administración |
| A76 | CE12 -- Coñecer os principios de deseño de fármacos e desenvolvemento de medicamentos, Receitas, Estudos de toxicidade e produtos naturais de utilización terapéutica |
| B24 | CB2 - Que os estudantes saiban aplicar os seus coñecementos ao seu traballo ou vocación dunha forma profesional e posúan as competencias que adoitan demostrarse por medio da elaboración e defensa de argumentos e a resolución de problemas dentro da súa área de estudo |
| B25 | CB3 -- Que os estudantes teñan a capacidade de reunir e interpretar datos relevantes (normalmente dentro da súa área de estudo) para emitir xuízos que inclúan unha reflexión sobre temas relevantes de índole social, científica ou ética |
| B30 | CG03 - Obter a capacidade, habilidade e destreza necesarias para diagnosticar, prescribir, indicar, realizar e/ou elaborar e avaliar calquera tipo de tratamento podolóxico, ortopodolóxico, quiropodolóxico, cirurxía podolóxica, físcico, farmacolóxico, preventivo e/ ou educativo, baseado na Historia clínica |
| B36 | CG09 -Valorar de forma crítica a terminoloxía, ensaios clínicos e metodoloxía utilizados na investigación relacionada coa podoloxía |
| C16 | CT08 - V- Valorar a importancia que ten a investigación, a innovación e o desenvolvemento tecnolóxico no avance socioeconómico e cultural da sociedade |

| Learning outcomes |
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| Learning outcomes | Study programme competences | | |
|--|-----------------------------|--------------------------|-----|
| | A76 | B25 B36 | C16 |
| Know the design of drugs and the development of drugs. Know the toxicity of drugs. Know the use of the recipe. | A75 | B30 | C16 |
| Know and apply the principles of pharmacokinetics in the use and indications of drugs. Know the routes of administration of medications. | A75 | B25 B30 B36 | C16 |
| Know and describe the different pharmacological groups. Commonly used drugs, indications and contraindications. Know the natural products for therapeutic use. | A75 | B24 B25 B30 B36 | C16 |
| Know the action, effects, adverse reactions and pharmacological interactions. | A75 | | |

| Contents | |
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| Topic | Sub-topic |
| Introdución á Farmacología e lexislación vixente. | 1. Introdución á Farmacología. 2. Lexislación vixente. 3. Desenvolvemento e comercialización dos medicamentos. 4. Prescrición e uso de medicamentos. Receita. 5. Uso racional de medicamentos. 6. Información e selección de medicamentos. 7. A avaliación económica da utilización de medicamentos. Tipos de estudos farmacoeconómicos. |
| Principios xerais de acción de fármacos: farmacocinética (Vías de administración de medicamentos). | 8. Absorción de fármacos. 9. Distribución de fármacos. 10. Biotransformación de fármacos: Metabolismo e Eliminación. |
| Principios xerais de acción de fármacos: farmacodinámica (Acción e efectos). | 11. Interaccións fármaco-receptor. 12. Mecanismos moleculares de acción. |
| Factores fisiolóxicos e patolóxicos que condicionan a resposta aos fármacos. | 13. Factores fisiolóxicos que condicionan a resposta a fármacos. 14. Factores patolóxicos que condicionan a resposta a fármacos. |
| Deseño de fármacos e desenvolvemento de medicamentos. Reaccións adversas aos medicamentos. Estudos de toxicidade. | 15. Reaccións adversas aos medicamentos. 16. Ensaio clínico controlado. 17. Farmacovixilancia. |
| Interaccións farmacolóxicas. | 18. Interacción de fármacos. 19. Anamnesis farmacolóxica. |
| Introdución á Farmacología clínica (Produtos naturais, descrición grupos farmacolóxicos e fármacos de uso habitual, indicacións e contraindicacións). | 20. Produtos naturais de utilización terapéutica. 21. Descrición dos distintos grupos farmacolóxicos. 22. Fármacos de uso habitual, indicacións e contraindicacións. |

| Planning | | | | |
|--------------------------------|--------------------------------|----------------------|-------------------------------|-------------|
| Methodologies / tests | Competencies | Ordinary class hours | Student?s personal work hours | Total hours |
| Guest lecture / keynote speech | A75 A76 B30 B36 C16 | 20 | 50 | 70 |
| Workshop | A75 A76 B24 B25 B30 B36 C16 | 16 | 30 | 46 |
| Problem solving | A75 | 4 | 12 | 16 |



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|---------------------------|-----------------|---|----|----|
| Multiple-choice questions | A75 A76 B24 B30 | 2 | 12 | 14 |
| Personalized attention | | 4 | 0 | 4 |

(*)The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

| Methodologies | |
|--------------------------------|--|
| Methodologies | Description |
| Guest lecture / keynote speech | Exposición oral e con medios audiovisuais dos temas que compoñen o programa da materia. |
| Workshop | Sesións sobre os temas expostos na sesión maxistral co fin de aclarar puntos craves e/ou dúbidas dos alumnos. Combinaranse diversas metodoloxías/probas (exposicións, simulacións, debates, solución de problemas, prácticas guiadas, casos clínicos, etc) a través do que o alumnado desenvolve tarefas eminentemente prácticas sobre un tema específico, co apoio e supervisión do profesorado |
| Problem solving | Cálculo de dose, cambio de unidades e outros problemas de farmacocinética e farmacodinámica. |
| Multiple-choice questions | 50 preguntas con 5 respostas das cales só unha é correcta. Non se aplica factor de corrección polas respostas non acertadas. |

| Personalized attention | |
|--------------------------------|--|
| Methodologies | Description |
| Guest lecture / keynote speech | During the master sessions, any doubts that may arise could be asked. Later and via e-mail, questions can also be expressed about the topics presented in class. There will be a question forum/chat on moodle to raise questions. |
| Workshop | During the workshops, personalized attention will be provided to resolve any doubts or problems that may arise for the student. |

| Assessment | | | |
|---------------------------|-----------------------------|--|---------------|
| Methodologies | Competencies | Description | Qualification |
| Problem solving | A75 | A evaluación dos problemas realizarase mediante un test de 10 problemas no campus virtual unha vez finalizados os seminarios de problemas. | 5 |
| Multiple-choice questions | A75 A76 B24 B30 | The student must take a test of 50 test-type questions with multiple answers, a correct one of 5 possible. Do not score negative. The pass (5) will be in 70% of the correct answers, ie the number of correct answers to pass is 35. It is necessary to obtain a pass in the exam in order to pass the subject. | 70 |
| Workshop | A75 A76 B24 B25 B30 B36 C16 | It will be evaluated according to the participation of the student and the realization of the activities to realize in the seminars. The multiple choice test will include 5 questions from the material seen in the workshops. | 25 |

| Assessment comments |
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The rating system will be expressed by numerical rating in accordance with the provisions of art. 5 of Royal Decree 1125/2003 of 5 September (BOE 18 September), which establishes the European credit system and the system of qualifications in university degrees of an official nature and valid throughout the national territory. Rating system: 0-4.9 = Failed, 5-6.9 = Passed, 7-8.9 = Notable, 9-10 = Outstanding, 9-10 Honors (Graceful). Graceful Honor Enrollment will be awarded to the student with the highest overall score as long as it is greater than 9.5. In the event that the number of enrollments that can be awarded is less than the number of students with the highest overall score, honors enrollment will be awarded to those students with the highest grade on the exam. If the number of honorary registrations that can be awarded continues to be lower, the grade of the workshops in which oral presentations were made will be taken into account. Students with part-time registration (they must send an e-mail to the teacher indicating their situation at the beginning of the course): the evaluation of the workshops will be carried out by the delivery of the exercises presented in each workshop on the virtual campus platform. The evaluation of the multiple choice test will be performed following the directions in this guide. Students with second registration and later (they must send an e-mail to the teacher indicating their situation at the beginning of the course): all students must realize the problem test. The evaluation of the workshops will be maintained from the previous registration. It will be possible to raise the note returning to realize the exercises exposed in the workshops in that matrícula. The evaluation of the multiple choice test will be performed following the directions in this guide. It will be considered not presented: that student who delivers less than 50% of the exercises exposed in the workshop and does not attend the final exam.

Sources of information

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| Basic | 1. Rang HP, Dale MM, Ritter JM, Flower RJ. Farmacología. 7ª ed. Madrid: Elsevier, 2012. 2. Flórez J. Farmacología Humana. 5ª ed. Barcelona: Masson, 2008. 3. Lorenzo-Velázquez B, Lorenzo Fernández P. Farmacología básica y clínica. 18ª ed. Madrid: Médica Panamericana, 2013. 4. Goodman y Gilman. Las bases farmacológicas de la terapéutica. 11 edición. Editorial Panamericana, 2006. 5. Martindale JFK. The extra Pharmacopoeia. The Pharmaceutical Press. 31 edición. 1996. 6. Goodman & Gilman. Las Bases Farmacológicas De La Terapéutica. 13 edición. McGraw Hill. |
| Complementary | 1. Gómez Ortiz, Santiago y Gómez Facundo, Santiago. Guía farmacológica de utilización en podología. Consejo General de Colegios Oficiales de Podólogos. Barcelona: Nexus Médica Editores S.L. 2016. 2. J. Ignacio de Ahumada Vázquez, M.ª Luisa Santana Falcón, José S. Serrano Molina. Ignacio de. Farmacología práctica para las diplomaturas en ciencias de la salud: (enfermería, fisioterapia, podología): con autoevaluación. Madrid: Díaz de Santos, 2002. |

Recommendations

Subjects that it is recommended to have taken before

General Human Anatomy /750G02001
 General Physiology/750G02003
 Physiology of Systems/750G02004
 General Pathology/750G02008
 Microbiology and Parasitology/750G02107

Subjects that are recommended to be taken simultaneously

Subjects that continue the syllabus

Pharmacological Therapy/750G02024
 Practicum I/750G02134
 Pharmacological Therapy/750G02122

Other comments

When submitting assignments, students are encouraged to submit them in pdf format on the virtual campus. Students should be clear that the application of UDC regulations on plagiarism situations will be reviewed by teachers.

(*)The teaching guide is the document in which the URV publishes the information about all its courses. It is a public document and cannot be modified. Only in exceptional cases can it be revised by the competent agent or duly revised so that it is in line with current legislation.