

Información del Plan Docente

Academic Year	2017/18
Faculty / School	104 - Facultad de Medicina 229 - Facultad de Ciencias de la Salud y del Deporte
Degree	304 - Degree in Medicine 305 - Degree in Medicine
ECTS	9.0
Year	2
Semester	Second semester
Subject Type	Compulsory
Module	---

1.General information**1.1.Introduction****1.2.Recommendations to take this course****1.3.Context and importance of this course in the degree****1.4.Activities and key dates****2.Learning goals****2.1.Learning goals****2.2.Importance of learning goals****3.Aims of the course and competences****3.1.Aims of the course****3.2.Competences****4.Assessment (1st and 2nd call)****4.1.Assessment tasks (description of tasks, marking system and assessment criteria)****5.Methodology, learning tasks, syllabus and resources****5.1.Methodological overview**

The methodology followed in this course is oriented towards achievement of the learning objectives. It favors the acquisition of knowledge related to Physiology. A wide range of teaching and learning tasks are implemented, such as lectures, practice sessions, and assignments.

26768 - Physiology IV

Students are expected to participate actively in the class throughout the semester.

Classroom materials will be available via Moodle. These include a repository of the lecture notes used in class, the course syllabus, as well as other course-specific learning materials.

Further information regarding the course will be provided on the first day of class.

5.2.Learning tasks

The course includes 9 ECTS organized according to:

- Lectures (2,2 ECTS): 55 hours.
- Practice sessions (0,68 ECTS): 17 hours.
- Assignments (0,32 ECTS): 8 hours.
- Autonomous work (5,8 ECTS): 145 hours.

5.3.Syllabus

Theoretical program:

1. Introduction to the endocrine system.
2. hypothalamic-posterior pituitary axis. ADH and oxytocin.
3. hypothalamic-anterior pituitary axis.
4. Growth Hormone. Other hormones of the anterior pituitary.
5. Thyroid function.
6. Endocrine pancreas.
7. Control of calcium-phosphorus balance. Bone physiology.
8. Physiology of the adrenal cortex.
9. Endocrine functions of the male gonads.
10. Endocrine functions of the female gonads. Gonadotropins. Menstrual cycle.
11. Reproductive functions of man.
12. Reproductive functions of women. Childbirth and Breastfeeding
13. Functional organization of the nervous system. Circuit types and functions.
14. Cerebral circulation. Cerebrospinal fluid. Glia functions. blood brain barrier. Cerebral edema.
15. Sensory nervous system functions. Receptor properties. Modalities of sensation.
16. Somatic sensitivity. Skin sensitivity. Sensitivity to pain.
17. Visual sensitivity.
18. Hearing sensitivity.
19. Chemical Senses.
20. Somatic muscles. Physiology of movement.
21. Spinal reflexes. Somatic reflexes.
22. Upper adjustment of motor activity.
23. Vestibular function. Motor functions of the cerebellum and basal ganglia
24. Vegetative motor control. Integrative role of the hypothalamus.
25. Thermoregulation.
26. Sleep and wakefulness. Physiology of the pineal gland.
27. Emotions and motivation. Bases dependencies.
27. Higher functions of the nervous system.

Laboratory practices and problems program of Zaragoza:

1. [Assessment of thyroid function](#)
2. Studies in carbohydrate metabolism.
3. Exploring reflexes.
4. Exploration of the sense of balance.
5. Exploration and functional assessment of vision.
6. Physiology of optics and refraction.
7. Exploration of hearing.
8. Chemical Senses.
9. Sleep Study.
10. Temperature Curve
11. Patient with hyperthyroidism.
12. Patient with diabetes.
13. Patient with amenorrhea
14. Patient with Stroke

Laboratory practices and problems program of Huesca

1. [Assessment of thyroid function](#)
2. Study of glucose regulation.
3. Oral glucose tolerance test .
4. Exploration of reflexes.
5. Exploration of balance.
6. Functional exploration of vision.
7. Exploration of hearing.
8. Exploration and evaluation of sensitivity. Chemical senses.
9. Sleep Study.
10. Biological Cycles: basal temperature
11. Patient with hyperthyroidism.
12. Patient with diabetes.
13. Patient with Addison's disease.
14. Patient with hypercalcemia
15. Patient with Heatstroke
16. Nervous excitability

5.4.Course planning and calendar

For further details concerning the timetable, classroom and further information regarding this course please refer to the "Facultad de Medicina" website (<http://www.unizar.es/estructura/facultades-y-escuelas/facultad-de-medicina>)

5.5.Bibliography and recommended resources

Zaragoza:

- BB Bases fisiológicas de la práctica médica / directores, Mario A. Dvorkin, Daniel P. Cardinali, Roberto H. Hermoli . 14ª ed. en español Buenos Aires [etc.] : Editorial Médica Panamericana, cop.2010
- BB Fisiología / editores, Bruce M. Koeppen, Bruce A. Stanto. 6ª ed. Ámsterdam ; Barcelona ; Madrid [etc.] : Elsevier, D.L.2009 [Precede al título: Berne y Levy]
- BB Fisiología humana / [director], Jesús A. Fernández Tresguerres, [coordinadores], Carmen Ariznavarreta Ruiz ... [et al.] . - 4ª ed. México ; Madrid [etc.] : McGraw-Hill, cop. 2010
- BB Fisiología médica : del razonamiento fisiológico al razonamiento clínico / Cristobal Mezquita Pla ... [et al.] . - [1ª ed., 1ª reimpr.] Buenos Aires ; Madrid [etc.] : Editorial Médica Panamericana, 2012
- BB Fisiología médica / Kim E. Barrett ... [et al.] ; traducción, José Rafael Blengio Pinto, Martha Elena Araiza Martínez. 25ª ed. México, D.F. ; Madrid [etc.] : McGraw Hill- Interamericana, cop. 2016
- BB Fox, Stuart Ira : Fisiología humana / Stuart Ira Fox ; traducción, Bernardo Rivera Muñoz . - 13ª ed. México ; Madrid [etc.] : McGraw-Hill Education, cop. 2014
- BB Fundamentos de fisiopatología / coordinadores, A. Esteller Pérez, M. Cordero Sánchez . - 1a. ed., 2a. reimpr. Madrid [etc.] : McGraw-Hill Interamericana, D.L. 2002

26768 - Physiology IV

- BB Hall, John E. : Tratado de fisiología médica [13ª ed.] / John E. Hall ; [revisión científica, Xavier Gasull Casanova]. - 13ª ed. Barcelona : Elsevier España, D.L. 2016
- BB Patton, Kevin T.. Anatomía y fisiología / Kevin T. Patton, Gary A. Thibodeau . - 8ª ed. Ámsterdam ; Barcelona ; Madrid [etc.] : Elsevier, D.L. 2013
- BB PhysioEx 6.0 : simulaciones de laboratorio de fisiología / Timothy Stabler... [et al.] ; traducción y revisión técnica, José Juan del Ramo Romero, Mª Dolores Garcerá Zamorano Madrid: Pearson Education, cop. 2006
- BB Pocock, Gillian. Fisiología humana : la base de la medicina / Gillian Pocock, Christopher D. Richards . - 2ª ed. Barcelona [etc.] : Masson, 2005
- BB Silbernagl, Stefan. Fisiología : texto y atlas / Stefan Silbernagl, Agamemnon Despopoulos ; ilustraciones de Rüdiger Gay y Astrid Rothenburger . - 7ª. ed. completamente rev. y ampl. Buenos Aires ; Madrid [etc.] : Editorial Médica Panamericana, cop. 2009
- BB Silverthorn, Dee Unglaub. Fisiología humana : un enfoque integrado / Dee Unglaub Silverthorn ; con la participación de William C. Ober, Claire W. Garrison, Andrew C. Silverthorn ; con la colaboración de Bruce R. Johnson . 4ª ed., [2ª reimpr.] Buenos Aires ; Madrid [etc.] : Editorial Médica Panamericana, 2010
- BB Tortora, Gerard J.. Principios de anatomía y fisiología [13ª ed.] / Gerard J. Tortora, Bryan Derrickson . - 13ª ed. Buenos Aires ; Madrid [etc.] : Editorial Médica Panamericana, cop. 2013

Huesca:

- BB Fisiología / editores, Bruce M. Koeppen, Bruce A. Stanton. 6ª ed. Barcelona [etc.] : Elsevier, D.L.2009
- BB Fisiología humana / [director], Jesús A. Fernández Tresguerres, [coordinadores], Carmen Ariznavarreta Ruiz ... [et al.] . 4ª ed. México ; Madrid [etc.] : McGraw-Hill, cop. 2010
- BB Fisiología médica : del razonamiento fisiológico al razonamiento clínico / Cristobal Mezquita Pla ... [et al.] . Madrid [etc.] : Editorial Médica Panamericana, D.L. 201
- BB Fox, Stuart Ira. Fisiología humana / Stuart Ira Fox ; traducción, Bernardo Rivera Muñoz, Héctor Raúl Planas González, José Luis González Hernández . 12ª ed. México ; Madrid [etc.] : McGraw-Hill Interamericana, cop. 2011
- BB Fundamentos de fisiopatología / coordinadores, A. Esteller Pérez, M. Cordero Sánchez . 1a. ed., 2a. reimpr. Madrid [etc.] : McGraw-Hill Interamericana, D.L. 2002
- BB Ganong Fisiología médica / Kim E. Barrett ... [et al.]. [Traducción de la 23ª ed. en inglés] México, D.F. : McGraw Hill, cop. 2011
- BB Hall, John E.. Tratado de fisiología médica [13ª ed.] / John E. Hall ; [revisión científica, Xavier Gasull Casanova]. - 13ª ed. Barcelona : Elsevier España, D.L. 2016
- BB PhysioEx 6.0 :simulaciones de laboratorio de fisiología / Timothy Stabler [et al.] ; traducción y revisión técnica : José Juan del Ramo Romero, Mª Dolores Garcerá Zamorano . Madrid [etc.] : Pearson Education, cop. 2006
- BB Pocock, Gillian. Fisiología humana : la base de la medicina / Gillian Pocock, Christopher D. Richards . 2ª ed. Barcelona [etc.] : Masson, 2005
- BB Silbernagl, Stefan. Atlas de bolsillo de fisiología / Stefan Silbernagl, Agamemnon Despopoulos . 5a. ed., corr. y renov Madrid [etc.]: Harcourt, D.L. 2001
- BB Silverthorn, Dee Unglaub. Fisiología humana : un enfoque integrado / Dee Unglaub Silverthorn ; con la participación de William C. Ober, Claire W. Garrison, Andrew C. Silverthorn ; con la colaboración de Bruce R. Johnson . 4ª ed., [2ª reimpr.] Buenos Aires ; Madrid [etc.] : Editorial Médica Panamericana, 2010
- BB Thibodeau, Gary A.. Anatomía y fisiología / Gary A. Thibodeau, Kevin T. Patton ; [revisión, Mª Jesús Fernández Aceñero] . 6ª ed., [reimp.] Amsterdam ; Barcelona ; Madrid [etc.] : Elsevier, D.L. 2010
- BB Tortora, Gerard J.. Principios de anatomía y fisiología / Gerard J. Tortora, Bryan Derrickson . 11ª ed., 4ª reimp. Buenos Aires ; Madrid [etc.] : Editorial Médica Panamericana, 2010

THE UPDATED BIBLIOGRAPHY OF THE SUBJECT IS CONSULTED THROUGH THE LIBRARY WEB PAGE

<http://psfunizar7.unizar.es/br13/eBuscar.php?tipo=a>