26759 - General Anatomy and Human Embryology

Información del Plan Docente

Academic Year	2018/19
Subject	26759 - General Anatomy and Human Embryology
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	6.0
Year	1
Semester	First semester
Subject Type	Basic Education
Module	

1.General information

1.1.Aims of the course

The subject and their expected results respond to the following statements and objectives:
Basically, know the human structures.
Learn about embryonic development, organogenesis and growth, maturation and ageing of the different devices and systems.
Know and recognize methods macroscopic and microscopic morphology, microscopic skin, the blood and the immune system
Handle material and basic laboratory techniques
Observe, identify and describe the anatomy of the processes of formation, development and aging of the human body, as well as the skin, blood and immune system, using macroscopic, microscopic and methods using techniques of image of clinical utility .
Learn about the functions of the process of training, development and aging of the human body, as well as the skin, blood and immune system at different stages of life

1.2.Context and importance of this course in the degree

General Anatomy and human embryology class is one of the basic subjects of medical studies. Introduced in basic and structural processes of formation, growth, maturation and ageing of different equipment and systems of the human body, with an emphasis on developing early embryo and supporting tissues

1.3.Recommendations to take this course

Prior knowledge and skills.
That you have access with an adequate preparation of compulsory secondary education and the Bachelor
early embryo and supporting tissues

2.Learning goals

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2.1.Competences

To overcome the course, the student will be more competent to...
Basic and General
CB1 - that students have demonstrated to possess and understand knowledge in an area of study that part of the basis of general secondary education, and is often found at a level that, although it is supported by advanced textbooks, includes also some aspects that they involve knowledge from the forefront of their field of study
CB2 - students know how to apply their knowledge to their work or vocation in a professional manner and possess skills that tend to be demonstrated through the elaboration and defence of arguments and solving problems within their field of study
CB3 - That students have the ability to gather and interpret relevant data (typically within their field of study) for making judgements that include a reflection on issues of social, scientific or ethical nature
CB4 - Students can transmit information, ideas, problems and solutions to both specialized as non-specialist audiences
CB5 - That students have developed those learning skills needed to undertake studies with a high degree of autonomy
Cross-cutting
-Capacity for analysis and synthesis
-Capacity for organization and planificacionc
-Oral and written communication in the native language
-Computer skills relating to the field of study
-Information management ability
-Problem solving
-Decision making
-Team work
-Skills in interpersonal relationships
-Recognition of the diversity and multiculturalism
— Critical reasoning
-Ethical commitment
-Autonomous learning
-Adaptation to new situations
-Creativity
-Leadership
-Initiative and entrepreneurial spirit
-Motivation for the quality
-Sensitivity toward environmental issues
Specific
Belt CE03 - cellular communication. Excitable membranes. Cell cycle. Cell proliferation and differentiation. Information, expression and gene regulation. Heritage. Embryonic development and organogenesis
CE04 - Know the morphology, structure and function of the skin, blood, apparatus and systems circulatory, digestive, locomotive, excretory, reproductive and respiratory; endocrine system, immune system and central and peripheral nervous system. Growth, maturation and ageing of the different devices and systems. Homeostasis. Adaptation to the environment
CE05 - Handle material and basic laboratory techniques
CE07 - Recognize with macroscopic, microscopic methods and imaging techniques the morphology and structure of tissue, organs and systems
CE09 - basic physical examination

2.2.Learning goals

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The student, to overcome this subject, shall demonstrate the following results...
Student to pass this part of matter must demonstrate that it is capable of:
-. Describe, identify, locate, and relate basically, structures, systems, and devices that make up the human body
-Integrate the successive States of the prenatal development of the human being.
-Integrate the structure and function of placenta and its adjoining membranes.
-Identify the processes of fertilization and the leading to the nesting of the Zygote.
-Identify the different embryonic stages including the differentiation of annexes.
-Describe, identify and sequence the basic phenomena of early embryonic development (differentiation, induction, migration) that lead to the emergence of equipment and systems and their evolution, growth and further maturation.
-Describe the basic phenomena that lead to shape the external appearance of the embryo and fetus.
-Recognize scientific criteria mechanisms of development failures and interpret its consequences
-Correlate the macroscopic microscopic optics and the ultrastructural morphology.
-Recognise the structures in development through images of the usual methods of observation of the clinical diagnosis
-Integrate the relationship morphology, structure and function of all periods of development
-Handle tools for studying macro and microscopically, know the meaning and foundations of the basic techniques of Embryological sample preparation - anatomical.
-Mastering basic Embryological and anatomical terminology necessary for the exercise of the medical profession.
-Relate morphological knowledge with the other disciplines of the curriculum.

2.3.Importance of learning goals

In a generic way, the objective is to get students to acquire an adequate basic training in knowledge, skills and values of the student which brings you the morphology and structure of macro and microscopic bodies, equipment and systems of the human body in training and development as key that are the functional meaning in normal conditions and its projection to the clinic as a knowledge base.

3.Assessment (1st and 2nd call)

3.1.Assessment tasks (description of tasks, marking system and assessment criteria)

The student must demonstrate that it has achieved learning outcomes expected by the following evaluation activities
1. the criteria of evaluation information
The objectives and the evaluation criteria as well as weight training activities will have on the final note is collected in this teaching guide and on the website of the subject.
To undertake:
-Theoretical and practical exams: evaluations qualifiers by groups of matter and a final exam, if necessary. Each evaluation or examination will consist of a written test (multiple choice test questions) and a practical part in which students will describe the components of devices and systems of the human body, and detailed several embryonic preparations.
-Supervised practical work / portfolio: elaboration of a portfolio that collect all the works, face to face and not face to face, made to throughout the course.

Assessment criteria and standards
-Assessment theoretical-practical: 90% (60% theory and 30% practice).
-Portfolio: 10%
To remove material the student must pass tests. Obtaining in its theoretical/practical not less than 5 points in each

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Evaluation by partial exam and final exam

Plus the partial acquisition of theoretical content and different competencies developed both in the face-to-face part the different self-study examinations and/or end of the course, which will consist of a part of type test multiple choice answers, and another part of description and development issues or questions.

Continuous assessment
You will be evaluated on an ongoing basis, according to the criteria and objectives releases previously, taking advantage of different activities for the acquisition of skills, using:
-Participation and performance in the classroom activities
-The development of articles, reports and practical activity book
-Ratings continued, both theoretical and practical stuff.
Students who do not pass the continuous assessment must be submitted to partial or final examination where appropriate

The final grade will be the weighted sum of partial qualifications obtained in all training activities, according to the criteria communicated at the beginning of the course.
It obtained in its theoretical/practical a note less than 5 in any of the tests do not average.
In accordance with article 5 of the RD-1125 / 2003 (BOE 18 September), the results obtained by the student will qualify according to the following numerical 0 to 10 scale, with expression of a decimal, to which can be added the corresponding qualitative rating:
0-4, 9: suspense (SS)
5, 0-6, 9: approved (AP)
7, 0-8, 9: remarkable (NT)
9, 0-10: excellent (SB)

Dates of global assessments
In Zaragoza: Strip time from 8 to 14 hours
-First call:
January 25, 2019
-Second call
September 13, 2019
In Huesca: Schedules and dates of global assessments are proposed by the Center and will appear at the following link: https://fccsyd.unizar.es/horarios-y-calendarios-medicina.

4.Methodology, learning tasks, syllabus and resources

4.1.Methodological overview

The learning process that is designed for this subject is based on the following:

Methodology: Given the nature of the discipline, we conjugaremos the theoretical and practical training so that the student will provide a better understanding of what is explained. To this end, the theoretical contents so as to allow the understanding of the conceptual aspects, this should ideally work the habitual use of practical examples to clarify the subject under study will be developed. As for how to impart the theoretical teaching, lesson largest group is used, the discussion addressed during the seminars and tutorial system. Coordinated and parallel to the theoretical practical teaching will be developed through personal study of biological and models related to the topics covered in lectures and through media images common diagnoses in clinical preparations. The teacher will guide and oversee the development of

the class and will be discussed the practical cases previously assigned.

4.2.Learning tasks

The program that the student is offered to help you achieve the expected results includes the following activities

The lectures, expository, explanatory and / or demonstration of content sessions using the blackboard and / or audiovisual material with computer support. They give students having prior knowledge of the subject, which should be actively involved and try to complement data or solve the problems that generate the most contentious points of the topic. Mandatory attendance 80%.

Presentation and discussion seminars, problem solving, case studies, simulations, discussion of scientific articles. Conducting individual or group work on a scientific topic or proposed practical problem. Reporting. Oral presentations. Sessions dissecting room, microscopy or laboratory, using appropriate instruments, classical methodologies and recent. They will include in-depth discussions of the issues already studied.

Practical sessions in the dissection room or in the laboratory, using appropriate materials and instruments, applying classic and current methodologies. In groups of 5-6 students depending on the number of enrolled.

Mandatory attendance 80%

The practical training program of the subject is constituted, in general, for the following activities:

- Observation and analysis of biological preparations and models, so tutored.

- Description and discussion of schemes and images obtained with different observation techniques and instruments provided by the teacher.

- Conduct a satchel containing and reflect what worked for the theoretical / practical student. This notebook also serve tutored work led by the teacher.

- Evaluation of skills acquired, based on the defined objectives in every practice

The work supervised by the teacher in which must employ a minimum of 1.5 hours each. These works may be carried out in small groups and to carry out the morphological preparations used.

Tutorials: Personal interview with a teacher for academic and personal guidance of the student. Consultation questions to the teachers. Students will have over the course of 5 hours of tutorials for personal or group consultations with teachers to clarify the difficulties, comments on the work and exam review

Students have at their disposal the **ADD** or a website, where they can find:

the program of theoretical and practical classes

the schedule of lectures, seminars and practical

teaching materials for each of the topics.

the recommended bibliography and some links to other websites

" All students will be informed about the risks that may have the realization of the practices of this subject , and if dangerous products are handled and what to do in case of accident , and must sign a commitment to comply with labor standards and safety carry them out . For more information, see the information for students Unit Occupational Health and Safety . Http://uprl.unizar.es/estudiantes.html "

4.3.Syllabus

Matter of General Anatomy and Human Embryology

It begins with the presentation of the different organs and systems that make up the human body. To intrododucirse in basic and structural processes of formation, growth, maturation and aging of the different systems of the human body, with emphasis on early embryo development and supporting tissues

General Program of Anatomy and Human Embryology

Theoretical program
1.- General Anatomy. Introduction to Anatomy. Definitions, axes, planes and basic structural elements. Organization by systems and devices. 2.- Concept of structures of support, integumentary, splanchnic, endocrine and nerve. 3.- Introduction to the locomotor system. Bones. Morphology, classification and architecture. 4.- Joints. Morphology, classification and dynamics. 5.- Muscles. Morphology, classification and dynamics. 6.- Introduction to the circulatory system 7.- Introduction to the respiratory system 8.- Introduction to the digestive system 9.- Introduction to the urinary system 10.- Introduction to the reproductive system 11.- Introduction to the endocrine system 12.- Introduction to the nervous system 13.- Introduction to the study of embryology. Germ cells. Fertilization. 14.- Germinal period: I and II Development week. Nesting. 15.- Germinal period: III Development week. Differentiation of embryonic soma. 16.- Formation of fetal membranes. Placenta. 17.- Hematogenesis. Vasculogenesis. Cardiogénesis. 18.- Development of the arterial, venous and lymphatic systems. 19.- Genesis of the primitive intestine. Formation of the mouth and nostrils. Facial sketch. 20.- Branquiogenesis and its derived organogenesis. 21.- Genesis of the respiratory system. Genesis and development of the coelom. Pericardium pleura 22.- Organogenesis derived from the caudal and transitional region of the anterior intestine. 23.- Evolution of the posterior intestine. Formation of proctodeo. Evolution of allantois, cloaca, anus and end sections of the large intestine. 24.- Evolution of the midgut. Development of the coelom. Peritoneum 25. Nephrogenesis. Evolution of the nephrogenic cord. Evolution of metanefros. 26.- Development of the urogenital system. 27.- Introduction to the development of the nervous system. Neurogenesis Neurohistogenesis. Derivatives of the neural crest. Wraps of S.N.C. 28.- Sensory placodes. Development of smell, taste and touch. 29.- Development of hearing apparatus. 30.- Development of the vision apparatus. 31.- Development of the central nervous system 32.- Development of the peripheral nervous system and autonomic nervous system. Paraganglios. Neuroendocrine system. Hypophysis. Adrenal gland 33. Skeletongenesis and Arthrogenesis. Skeletal development of trunk, limbs, skull and face. 34.- Myogenesis. Development of neuromuscular groups. 35.- Genesis of the integumentary systems. Odontogenesis

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Practical program 1.- First stages of development. 2.- Development of the circulatory system. 3.- Development of the digestive and respiratory apparatus. 4.- Development of the urogenital apparatus. 5.- Development of the nervous system. 6.- Development of the locomotor and integumentary systems. **Seminars**
Current topics will be discussed at the beginning of the course by the teacher
1.- Origin and destination of the blastodermal leaves 2.- Perinatal changes in systems. 3.- Embryology in Images 4.- Teratogenesis

4.4.Course planning and calendar

Schedule sessions and presentation of works

The program

It takes place on the 1st . semester : from September 17, 2018 to February 10, 2019

Exam period of January to February , 2019

Presential

Theoretical classes : 3 hours a week .

Practical classes: 3 hours a week in the dissecting room

Practices heads : One session a week

Seminars: 1 hour per week

Distnace : Studio and self- posted on the Web the course of ADD from the University of Zaragoza

Tutorial : 1 hour week, for guidance , strengthening and educational support in the curriculum. Face and through the Web Course

The practical organization is in each session , half the group distributed in tables 5-6 coordinated by a head table students (the head may be rotating)

For sessions in the dissection room is required , gown and gloves (legislation)

4.5.Bibliography and recommended resources

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