Last update: 07-07-2019

370501 - ANATOGENE - General Anatomy

Coordinating unit: 370 - FOOT - Terrassa School of Optics and Optometry
Teaching unit: 731 - OO - Department of Optics and Optometry
Academic year: 2019
Degree: BACHELOR'S DEGREE IN OPTICS AND OPTOMETRY (Syllabus 2009). (Teaching unit Compulsory)
ECTS credits: 6 Teaching languages: Catalan, Spanish

Teaching staff

Coordinator: Lluch Margarit, Sara (http://futur.upc.edu/SaraLluchMargarit)
Merindano Encina, Maria Dolores (http://futur.upc.edu/MariaDoloresMerindanoEncina)

Others: Lluch Margarit, Sara (http://futur.upc.edu/SaraLluchMargarit)
Merindano Encina, Maria Dolores (http://futur.upc.edu/MariaDoloresMerindanoEncina)

Degree competences to which the subject contributes

Specific:

1. Technical english applied to optics and optometry

2. Apply the techniques of detection of ocular and systemic diseases with visual affectation, from the etiology, signs, symptoms and epidemiology.
3. Applying an specific anamnesis to extract relevant information.

4. Ability to write and interpret a report

5. Detecting the need to derive the patient with the corresponding report to the appropriate professional and be able to collaborate keeping the follow-up of the pacient
6. Follow up of eye diseases with involvement. (Follow up of patients with diseases affecting visual)

7. Interpret the registers obtained with different techniques. Determine the status of ocular structures.

8. Interpret refractive test results to determine the suitable optical prescription.

9. Producing accurately diagnoses and remission reports.

10. Know establish an optimal therapeutic relationship, know communicate with the patient

11. Knowing how to do clinical examinations and interpret the results

12. Know interpret functional and health test results of the visual system.

13. Being able to take, treat, represent and interpret experimental data. "Use basic laboratory equipment and techniques"
14. Being able to perform literature searches.

15. Value the nervous control of the visual system.

35. Anatomy, histology, physiology, biochemistry and neurophysiology of the visual system and the process of vision

Generical:

16. Acquire communication techniques appropriate to ensure the success of teamwork

370501 - ANATOGENE - General Anatomy

17. Apply the principles of emotional intelligence to develop a teamwork

18. Capacity to assume different roles within the team, leadership, coordination with other members

19. Define the general objectives and to carry out a specific group

20. Develop empathy with people

21. Develop methods to encourage teamwork participation of its members, critical thinking, mutual respect, the ability to negotiate to achieve common goals
22. Judgments (ratings) reports and surveys

23. Display information orally and in writing of reasonably and coherent.

24. Extract the main points of a text or any source of information (oral or written)

25. Flexibility to integrate into dynamic environments, multidisciplinary and multicultural.

26. Encourage methodical work, rigorous, consistent and innovative

27. Interpret and use non-verbal language

28. Reflect and be able to make a critic of the knowledge and developed skills and the level of achievement.

29. Synthesize and organize information to convey it effectively orally and / or written

30. Locate new information and the interpretation of it in its context.

31. Working with evidence, methodology and rigour.

32. Value the methods used to achieve the objectives.

33. Value and incorporate technological necessary improvements for the proper development of the profession

34. Assessing the acquisition of the course objectives.

Teaching methodology

The course consists of 3 hours per week of lectures in class (midle group) and 6 sessions of 2 hours each of practical laboratory sessions (small group)
To attend the lab should be given a questionnaire prior
To get the most out of the course, follow the directions and deadlines that are described through the digital campus ATENEA

Learning objectives of the subject

At the end of the subject General anatomy, the student should be able to:

Last update: 07-07-2019

370501 - ANATOGENE - General Anatomy

Define and enumerate the anatomic concepts needed to understand the different tissues, organs and systems that make up the human body
Identify the structure of tissues as part of the body organs and systems
Describe placing and comparing different systems
Differentiating the bone structure of the head
Recognize and identify the structure of different organs and systems included in the head

Study load

Total learning time: 154h 36m	Hours large group:	0h	0.00%
	Hours medium group:	48h	31.05%
	Hours small group:	12h	7.76%
	Guided activities:	4h 36m	2.98%
	Self study:	90h	58.21%

Last update: 07-07-2019

370501 - ANATOGENE - General Anatomy

Content

Introduction to the subject

Learning time: 7h 30m

Practical classes: 3h
Self study : 4h 30m

Description:
1. Introduction to the Histology
2. Introduction to the Anatomy
3. Introduction to the Human Body Systems

This content is worked:
Basic concepts related to the organization of the human body

Head anatomy

Learning time: 142h 30m

Practical classes: 45h
Laboratory classes: 12h
Self study : 85h 30m

Description:
4. Integumentary system
   4.1 Constituent tissues (epithelial and connective)
   4.2 Skin
   4.3 Skin of the head and face
5. Skeletal system
   5.1 Constituent tissues (cartilage and bone)
   5.2 Bones
   5.3 Skull and eye orbit
6. Muscular System
   6.1 Constituent tissue (muscular)
   6.2 Muscles
   6.3 Muscles of the head and face
7. Nervous system
   7.1 Constituent tissue (nervous)
   7.2 Central nervous system
   7.3 Peripeheral nervous system
8. Circulatory system
   8.1 Constituent tissue (hemático)
   8.2 Heart and blood vessels
   8.3 Vascularization of the head and face

This content is worked:
Structure of different tissues, organs and systems that constitute the human head

Related activities:
It carried out training sessions 1-6, corresponding to 6 lab evaluated individually for each small group session.

Last update: 07-07-2019

370501 - ANATOGENE - General Anatomy

Planning of activities

1. SYSTEMS LABORATORY

Hours: 4h
Laboratory classes: 3h 30m
Self study: 0h 30m

Description:
Practices 1-2 should be done in the laboratory, in pairs, with a duration of 2 hours. The laboratory should carry out the experimental part, and as autonomus learning is planned that students do after reading the script and identify targets.
The practice will be at the Laboratory of Anatomy

Support materials:
All materials for the realization of practical
Written by detailed questionnaire and series of images
anatomical models

Descriptions of the assignments due and their relation to the assessment:
Making a small assessment test will form part of 20% of the assessment of small group work

Specific objectives:
At the end of the activity, the student or student should be able to:
Set the anatomical components of the different human body systems

2. HISTOLOGY LABORATORY

Hours: 4h
Laboratory classes: 3h 30m
Self study: 0h 30m

Description:
Practice 2-4 to be made in the laboratory, in pairs, with a duration of 2 hours. The laboratory should carry out the experimental part, and as autonomus learning is planned that students do after reading the script and identify targets.
The practices will be at the Laboratory of Anatomy

Support materials:
All materials for the realization of practical
Written by detailed questionnaire and series of images
Histological preparations of different tissues

Descriptions of the assignments due and their relation to the assessment:
Making a small assessment test will form part of 20% of the assessment of small group work

Specific objectives:
At the end of practice the student or student should be able to:
Distinguish between the different components of human tissue
Differentiate the tissues that covering bodies surfaces (epithelial) and internal support tissues (connective)
Distinguish between different types of skeletal tissue (cartilage and bone)
Distinguish between different types of muscle tissue
Recognize the structure of nerve tissue

370501 - ANATOGENE - General Anatomy

3. LABORATORY ANATOMY OF THE HEAD

Hours: 4h
Laboratory classes: 3h 30m
Self study: 0h 30m

Description:
Practices 4-6 that must be done in the laboratory in pairs, with a duration of 2 hours. The laboratory has to perform the experimental part, and as autonomus learning is planned that the student make a preliminary reading of the script and identify targets.
Practices will be at the Laboratory of Anatomy.

Support materials:
All materials for the realization of practice.
Screenplay detailed questionnaire and series of images.
Histological preparations of different tissues.
Anatomical models.

Descriptions of the assignments due and their relation to the assessment:
Making a small assessment test will form part of the 20% of grade assessment in small group work.

Specific objectives:
After the activity, the student must be able to:
Recognize and differentiate the bones of the skull and face.
Identify the facial muscles.
Differentiating the components of the central nervous system.
Identify the main peripheral nerves.
Recognize the main arteries of the head.

4. INDIVIDUAL ASSESSMENT TESTS

Hours: 3h
Laboratory classes: 3h

Description:
Individual test in the laboratory.
Resolution of issues and images analyzed during practice sessions.

Support materials:
Script and images posted on ATENEA.

Descriptions of the assignments due and their relation to the assessment:
Represents 20% is the final qualification of the subject.

Specific objectives:
After the test, the student must be able to:
Determine the ability to apply knowledge acquired anatomical and histological during the sessions.
Assess the capacity of synthesis, composition and exposure.

5. FINAL ASSESSMENT TEST

Hours: 3h
Theory classes: 3h

Description:
Individual test in the classroom
Two exams related to the contents of the thematic blocks that contain all the general learning objectives of the course

Last update: 07-07-2019

370501 - ANATOGENE - General Anatomy

Support materials:
Educational material uploaded to ATENEA

Descriptions of the assignments due and their relation to the assessment:
The resolution of the test accounts for 80% (40% + 40%) of the final grade for the course.

Specific objectives:
After the test, students will be able to demonstrate:
- Demonstrate the ability to apply the anatomical and histological knowledge of the head and face acquired during face-to-face sessions
- Assess the ability of synthesis, writing and exposure

Qualification system

There will be two written tests: E1 and E2 (80%)
E1 Written exam (40%)
E2 Written exam (40%)
There will be six lab tests: L1 to L6 (20%).

Reassessment of General Anatomy will be taken according to general rules established in the “Normativa general de Graus i Màsters de la UPC” and to particular rules form the “Facultat d ’ Òptica i Optometria de Terrassa”. It will be a single final exam covering all the subjects of the course.

A final grade of 5 will be awarded to students passing this exam, otherwise the previous grade will remain.
Final Mark = 0.4·E1+0.4·E2+0.2·L

Regulations for carrying out activities

Required attendance at all activities evaluated.
If not done any of the activities evaluated, is considered as non-rated (0).

370501 - ANATOGENE - General Anatomy

Bibliography

Basic:

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Purves, Dales. Neurociencia. 3a ed. Buenos Aires: Médica Panamericana, 2006. ISBN 8479039892.

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Rubin, M.; Safdieh, J.E. Netter neuroanatomía esencial. Madrid [etc.]: Elsevier Masson, 2008. ISBN 9788445818718.

Others resources:

Computer material

Nom recurs

Resource