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1121103 - Structure and function of the human body I

### Information about the subject

Degree: Bachelor of Science Degree in Occupational Therapy

Faculty: Faculty of Psychology

Code: 1121103 Name: Structure and function of the human body I

Credits: 6,00 ECTS Year: 1 Semester: 1

Module: BASIC TRAINING MODULE

Subject Matter: Human Anatomy Type: Basic Formation

Field of knowledge: Health Sciences

Department: -

Type of learning: Classroom-based learning

Languages in which it is taught: Spanish

Lecturer/-s:

1121 Cesar Rubio Belmonte (Responsible Lecturer) cesar.rubio@ucv.es

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## Module organization

#### **BASIC TRAINING MODULE**

Subject Matter	ECTS	Subject	ECTS	Year/semester
Human Anatomy	6,00	Structure and function of the human body I	6,00	1/1
Physiology	12,00	Kinesiology	6,00	1/2
		Structure and function of the human body II	6,00	1/2
Psychology	24,00	Basic Psychological Processes	6,00	1/2
		Developmental Psychology I	6,00	2/1
		Developmental Psychology II	6,00	2/2
		Psychology of the Personality	6,00	1/1
Anthropology	6,00	Anthropology	6,00	1/1
Social Moral- Deontology	6,00	Social Morality - Deontology	6,00	2/1
Science, Reason and Faith	6,00	Science, Reason and Faith	6,00	1/2

### Recommended knowledge

Not required.

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### Learning outcomes

At the end of the course, the student must be able to prove that he/she has acquired the following learning outcomes:

- R1 To know the morphological basis of the human body from a functional perspective.
- R2 To know and properly use the subject-specific terminology.
- R3 To use, interpret and critically asses the scientific documents on which Human Anatomy is based.

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### Competencies

Depending on the learning outcomes, the competencies to which the subject contributes are (please score from 1 to 4, being 4 the highest score):

GENER	AL		Weig	hting	ı
		1	2	3	4
CG1	To recognise the key elements of the profession, including ethical principles, legal responsibilities, the focus on the individual and population respecting their autonomy, and the oath of confidentiality.			X	
CG4	To recognise one's own limitations and the need to maintain and keep up to date one's professional competence, focusing specially on the importance of autonomous learning of knowledge and techniques and the desire for quality.		X		
CG5	To know, value critically and use the sources of information in order to obtain, organise, interpret and communicate the scientific, sanitary, socio-sanitary and information, preserving the confidentiality of the data.				X
CG6	To understand the conceptual foundations of the occupational nature of the human being and the carrying out of his occupations throughout the cycle of life.			X	
CG7	To understand and recognise the interrelationship between the concepts of wellbeing, health, significant occupation, dignity and participation.			X	
CG8	To understand and recognise the importance of contextual factors as determiners of occupational dysfunction and promote the right of individual/populations to satisfy their occupational needs.			x	
CG17	To recognise the influence of individual, religious, and cultural differences, as well as the customs about occupation and participation				X
CG18	To acquire and develop skills and practical experience in a socio-sanitary and community context			X	
CG22	To establish an assertive interpersonal communication with all the interlocutors that is relevant during the Occupational Therapy process.			x	

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CG24 To transmit written and/or oral information to a specialised audience as well as a non-specialised one.

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SPECIFIC			Weighting			
		1	2	3	4	
CE25	To know and understand the structure and functioning of the human body so students can evaluate, synthesise and apply Occupational Therapy treatments.	x				
CE26	To know and understand the physio-pathological process in every moment of the life cycle, from infancy to old age, identifying the problems and preventive and clinical aspects of the person, in health as well as in illness.			X		

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## Assessment system for the acquisition of competencies and grading system

Assessed learning outcomes	Granted percentage	Assessment method
R1, R2, R3	50,00%	Written tests: Summative and final theoretical-practical test (open questions, objective test questions, truncated test, etc.) Preparation of field work memoranda, practical case solutions, single cases.
R1, R2, R3	30,00%	Presentation of group and individual works.
R1, R2, R3	20,00%	Individual monitoring of attendance at face-to-face sessions and active participation in theoretical and practical classes, seminars and tutorials.

#### **Observations**

Note: In order to add up the percentages, it is essential to pass each and every one of the evaluation instruments. Failure to comply with the rules and deadlines established for the performance of academic activities will invalidate the grade. The official exam dates will be set by the Faculty Dean's Team according to the periods established in the academic calendar. For MODIFICATIONS OF DATES OF EXAMS consult the reasons that justify such modifications and the procedure in article 12 of the Examination Regulations.

https://www.ucv.es/Portals/0/documentos/normativa/20170526144309926.pdf All submissions of individual and group assignments will be through the VIRTUAL CAMPUS of the UCV in the terms and forms established by the teacher of the course. Under no circumstances will late submissions be accepted. Tasks pending delivery will be submitted and assessed on the official date of the second call. A minimum of 75% of the attendance is required for the course grade to be computed. The attendance will be controlled through the VIRTUAL CAMPUS, only, at the beginning of each lesson. Absences must be justified by means of an official document scanned and sent through the VIRTUAL CAMPUS to the course teacher. Criteria to grant the honorific mention: -The honorific mention will be granted to the student who obtains a grade higher than 9 in the first call. -Attendance to classroom sessions, active participation and involvement in the theoretical and practical classes, as well as in the rest of the training activities by the student, candidate to receive the mention of honor, must reach the levels of excellence. -The honorific mention will be granted to students who have obtained a grade equal to or higher than 9.0. The number of mentions will not exceed 5% of enrolled students in a module in the academic year unless the number of enrolled students is below 20, in which case only one mention can be granted (Royal Decree 1125/2003).

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### Learning activities

The following methodologies will be used so that the students can achieve the learning outcomes of the subject:

M1 ON-CAMPUS CLASS

M2 PRACTICAL CLASSES

M3 SEMINAR

M4 GROUP PRESENTATION OF PAPERS

M5 OFFICE ASSISTANCE

M6 ASSESSMENT

M7 GROUP WORK

M8 INDEPENDENT WORK

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#### **IN-CLASS LEARNING ACTIVITIES**

	LEARNING OUTCOMES	HOURS	ECTS
ON-CAMPUS CLASS: Teacher presentation of contents, analysis of competences, explanation and in-class display of skills, abilities and knowledge.	R1, R2	29,00	1,16
PRACTICAL CLASSES: Group work sessions supervised by the professor. Case studies, diagnostic tests, problems, field work, computer room, visits, data search, libraries, on-line, Internet, etc. Meaningful construction of knowledge through interaction and student activity.	R2, R3	10,00	0,40
M2 SEMINAR: Supervised monographic sessions with shared participation	R1	7,50	0,30
GROUP PRESENTATION OF PAPERS: Application of multidisciplinary knowledge M4	R3	7,50	0,30
OFFICE ASSISTANCE: Personalized and small group attention. Period of instruction and /or orientation carried out by a tutor to review and discuss materials and topics presented in classes, seminars, eadings, papers, etc.	R1, R2, R3	3,00	0,12
ASSESSMENT: Set of oral and/or written tests used in initial, formative or additive assessment of the student M6	R1, R2, R3	3,00	0,12
TOTAL		60,00	2,40

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#### **LEARNING ACTIVITIES OF AUTONOMOUS WORK**

	LEARNING OUTCOMES	HOURS	ECTS
GROUP WORK: Group preparation of readings, essays, problem solving, seminars, papers, reports, etc. to be presented or submitted in theoretical lectures, practical and/or small-group tutoring sessions. Work done on the university e-learning platform (www.plataforma.ucv.es)	R3	40,00	1,60
INDEPENDENT WORK: Student study: Group Individual preparation of readings, essays, problem solving, seminars, papers, reports, etc. to be presented or submitted in theoretical lectures, practical and/or small-group tutoring sessions. Work done on the university e-learning platform ( www.plataforma.ucv.es )	R1, R2, R3	50,00	2,00
TOTAL		90,00	3,60

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### Description of the contents

Description of the necessary contents to acquire the learning outcomes.

#### Theoretical contents:

Content block	Contents
INTRODUCTION	1 Anatomy: Concepts, terminology. Historical Review
CYTOLOGY	<ul><li>2 Cell. Definition. General. Components</li><li>3 Process of cell division.</li><li>4 Organization: Tissues, Organs, Devices and Systems</li></ul>
EMBRYOLOGY	<ul> <li>5 Fertilization, segmentation, morula, blastula and gastrula</li> <li>6 Trilaminar embryo. Celomación Derived from the leaves blastodermic.</li> <li>7 implantation, Implantation and placentation</li> </ul>
LOCOMOTOR	8 Concept: Organization and components: bones, muscles and joints. Tendons, ligaments and fascia. Bone tissue: bone growth and reconstruction.  9 Types of joint. Classification and functional dynamics  10 Spine: Organization. Vertebrae types and differentiation  11 ribcage.  12 osteology and joints of the upper extremity and shoulder girdle  13 osteology and joints of the lower extremity and pelvic girdle  14Bones of the skull. Vault and skull base. Facial bones.  15 Muscles of the trunk: Retrosoma  16 Trunk Muscles: Chest and Abdomen  17 I Muscles of Upper Limb  18 Muscles of Upper Limb  19 Lower Limb Muscles II

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#### CIRCULATORY SYSTEM

- 21 .- Organization and components. Blood Circulation. Major and Minor Traffic Circulation.
- 22 .- Heart: external and internal configuration.

Vascularization and innervation. Pericardium.

- 23.-pulmonary vessels. Aorta and main branches. Vessels in the head and neck. Terminal branches of the aorta. Iliac vessels.
- 24.-Vessels of the upper limb. Lower limb vessels.
- 25 .- Veins. Cavas. Portal System
- 26.- Lymphatic system.

#### **SPLANCHNOLOGY**

#### A. - RESPIRATORY

- 27. Nostrils. Sinuses.
- 28. Larynx. Phonation apparatus.
- 29. Trachea and bronchial tree.
- 30. Lungs. Pleura. Mediastinum.
- **B.- DIGESTIVE**
- 31. Oral cavity. Language. Teeth. Salivary glands.
- 32. Pharynx. Esophagus. Stomach.
- 34. Small intestine. Large intestine
- 35.-Pancreatic exocrine and endocrine. Spleen. Liver. Bile ducts.
- 36.-Peritoneum. Intestinal vasculature.
- C .- UROGENITAL SYSTEM
- 37 .- Kidney and Urinary Tract
- 38 .- male genital.
- 39 .- female genital.

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#### **NERVOUS SYSTEM AND SENSES**

- 40 .- Introduction to the study of SN: Organization. Nervous tissue. Neurons and Glia.
- I. S.N. CENTRAL
- 41. Spinal cord. Grey substance sensory and motor. White matter. Ascending and descending pathways. Reflexes. Muscle tone.
- 42. Brainstem. Cranial nerves.
- 43. Cerebellum.
- 44. Diencephalon.
- 45. Cortex. Areas motor, sensory and association.
- 46. Pyramidal system. Extrapyramidal system.

Movimiento. Vías overall coordination of sensory conduction in the CNS.

- 47. Meninges. Cerebrospinal fluid. Vascularization of the CNS.
- II .- S.N. PERIPHERAL
- 48.-spinal nerves. Posterior branches.
- 49.-brachial plexus.
- 50.-intercostal nerves.
- 51.-lumbar plexus. Sacro.Plexo pudendal plexus.
- III .- SENSES
- 52 .- Anatomy Oran overall vision
- 53 .- General anatomy of Oran hearing and balance
- 54 .- General anatomy of Oranais of smell and taste.
- 55 .- Skin and appendages. Sense of touch.
- 56 .- Concept, generalities. Hormone and Feed-Back
- 57 .- Pituitary. Epiphysis.
- 58 .- Thyroid. Parathyroid. Adrenals. Gonads

**ENDOCRINE** 

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#### Temporary organization of learning:

Block of content	Number of sessions	Hours
INTRODUCTION	1,00	2,00
CYTOLOGY	1,00	2,00
EMBRYOLOGY	1,00	2,00
LOCOMOTOR	10,00	20,00
CIRCULATORY SYSTEM	3,00	6,00
SPLANCHNOLOGY	3,00	6,00
NERVOUS SYSTEM AND SENSES	9,00	18,00
ENDOCRINE	2,00	4,00

#### References

#### ·Main bibliography (recommended as regular reading-consultation)

- -Suárez Quintanilla J. HUMAN ANATOMY FOR HEALTH SCIENCES STUDENTS. Elsevier. 2nd Edition 2020
- -Gilroy. Prometheus. ANATOMY FOR STUDENTS. 2nd edition. 2020
- -Waschke, Koch. ANATOMY TEXT. Elsevier. 1st Edition 2018
- -Wineski Lawrence, CLINICAL ANATOMY BY REGION, Wolters Kluver, 10th Edition, 2019
- -Drake J. GRAY, BASIC ANATOMY, Elsevier, 2nd Edition 2018
- -Hansen John. NETTER ANATOMY COLORING BOOK. Elsevier. 2nd Edition. 2019
- -Feneis H. ILLUSTRATED ANATOMICAL NOMENCLATURE Ed. Masson 6th Edition. 2021 **Further reading:**
- -Sobotta R. Putz. SOBOTTA. ATLAS OF HUMAN ANATOMY 3 VOLS. Elsevier. 24th Edition 2018
- -Netter F. ATLAS OF HUMAN ANATOMY. Elsevier. 7th Edition. 2019

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#### Addendum to the Course Guide of the Subject

Due to the exceptional situation caused by the health crisis of the COVID-19 and taking into account the security measures related to the development of the educational activity in the Higher Education Institution teaching area, the following changes have been made in the guide of the subject to ensure that Students achieve their learning outcomes of the Subject.

<u>Situation 1: Teaching without limited capacity</u> (when the number of enrolled students is lower than the allowed capacity in classroom, according to the security measures taken).

In this case, no changes are made in the guide of the subject.

<u>Situation 2: Teaching with limited capacity</u> (when the number of enrolled students is higher than the allowed capacity in classroom, according to the security measures taken).

In this case, the following changes are made:

#### 1. Educational Activities of Onsite Work:

All the foreseen activities to be developed in the classroom as indicated in this field of the guide of the subject will be made through a simultaneous teaching method combining onsite teaching in the classroom and synchronous online teaching. Students will be able to attend classes onsite or to attend them online through the telematic tools provided by the university (videoconferences). In any case, students who attend classes onsite and who attend them by videoconference will rotate periodically.

In the particular case of this subject, these videoconferences will be made through:

	Х	Microsoft Teams			
ſ	Х	Kaltura			

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#### Situation 3: Confinement due to a new State of Alarm.

In this case, the following changes are made:

#### 1. Educational Activities of Onsite Work:

All the foreseen activities to be developed in the classroom as indicated in this field of the guide of the subject, as well as the group and personalized tutoring, will be done with the telematic tools provided by the University, through:

χ Microsoft Teams	
χ Kaltura	
Explanation about the practical sessions:	
If necessary, it would adapt its delivery to telematics tools	

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## 2. System for Assessing the Acquisition of the competences and Assessment System

ONSITE WORK

Regarding the Assessment Tools:									
Х	The Assessment Tool will be done online thro		odified. If onsite assessment Campus.	: is not possible, it					
	The following changes will be made to adapt the subject's assessment to the online teaching.								
	Course guide		Adaptatio	on					
	Assessment tool	Allocated percentage	Description of the suggested changes	Platform to be used					

The other Assessment Tools will not be modified with regards to what is indicated in the Course Guide.

**Comments to the Assessment System:** 

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