



## Information about the subject

**Degree:** Bachelor of Science Degree in Medicine

**Faculty:** Faculty of Medicine and Health Sciences

**Code:** 341201 **Name:** Anatomy II

**Credits:** 9,00 **ECTS Year:** 2 **Semester:** 1

**Module:** Morphology, structure and function of the human body

**Subject Matter:** Anatomy **Type:** Basic Formation

**Field of knowledge:** Health Science

**Department:** Anatomy and Physiology

**Type of learning:** Classroom-based learning

**Languages in which it is taught:** Spanish

### Lecturer/-s:

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## Module organization

### Morphology, structure and function of the human body

Subject Matter	ECTS	Subject	ECTS	Year/semester
Morphology and microscopic structure of the human body	6,00	Histology	6,00	2/1
Biology	6,00	Cell Biology	6,00	1/1
Anatomy	27,00	Anatomy II	9,00	2/1
		Anatomy III	6,00	2/2
		Embryology and Anatomy I	12,00	1/2
Biochemistry	9,00	Biochemistry and Molecular Biology	9,00	1/2
Physics	6,00	Biophysics	6,00	1/2
Physiology	12,00	Human Physiology I	6,00	2/1
		Human Physiology II	6,00	2/2

## Recommended knowledge

Basic and elementary knowledge of the human anatomy and physiology acquired during general secondary education.

Notions of embryology acquired in the first course of the module where this subject is included.



## 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 Embryonic development and organogenesis.
- R2 Know the main events of embryogenesis and fundamental events in the genesis of the various systems and structures to better understand the adult organization of the human body.
- R3 Know the main concepts that integrate anatomical terminology, its fundamentals and clinical and surgical utility
- R4 Search for bibliographic information from different sources and know how to use it in a critical and constructive way
- R5 Apply general knowledge of anatomy in cadaveric dissection and in working with bone remains
- R6 Use dissection instrumentation in practical work, acquiring the ability to handle surgical material
- R7 Know the main concepts that integrate anatomical terminology, its fundamentals and clinical and surgical utility
- R8 Know thoraco-abdominal topography and distinguish the different anatomical structures of the chest and abdomen by framing them in the different regions
- R9 Know the external and internal morphology of each intrathoracic and abdomino-pelvic organ and the anatomical relationships between them
- R10 Using dissection instrumentation in practical work
- R11 Apply general knowledge of Anatomy
- R12 Search for bibliographic information from different sources and know how to use it in a critical and constructive way
- R13 Argument with rational criteria from his work.
- R14 Know thoraco-abdominal topography and distinguish the different anatomical structures of the chest and abdomen by framing them in the different regions



- R15 Know the external and internal morphology of each intrathoracic and abdomino-pelvic organ and the anatomical relationships between them
- R16 Use different work techniques in the anatomy lab
- R17 Seek bibliographic information from different sources and know how to analyze it in a critical and constructive spirit.
- R18 Be able to produce documents on anatomy and work as a team.
- R19 Argument with rational criteria from his work.



## 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):

BASIC		Weighting			
		1	2	3	4
CB1	Students have demonstrated to possess and understand knowledge in a study area that starts from the base of the general secondary education, and is usually found at a level that, while supported by advanced textbooks, also includes some aspects that involve knowledge from the forefront of their field of study				X
CB2	Students know how to apply their knowledge to their job or vocation in a professional way and possess the competences that are usually demonstrated through the elaboration and defense of arguments and the resolution of problems within their area of ??study				X
CB3	Students have the ability to collect and interpret relevant data (usually within their area of study) to make judgments that include a reflection on relevant social, scientific or ethical topics				X
CB4	Students can pass on information, ideas, problems and solutions to both a specialized and non-specialized audience				X
CB5	Students have developed the learning skills needed to undertake further studies with a high degree of autonomy				X
GENERAL		Weighting			
		1	2	3	4
CG6	Developing professional practice with respect for other health professionals, acquiring teamwork skills			X	
CG7	Understanding and recognizing the normal structure and function of the human body, at the molecular, cellular, tissue, organic and systems levels, at the different stages of life and in both sexes		X		
CG11	Understanding and recognizing the effects of growth, development and aging on the individual and their social environment	X			



CG30 Basic knowledge of the National Health System and health legislation

X

SPECIFIC		Weighting			
		1	2	3	4
CE2	Knowing the basic principles of human nutrition. Cellular communication. Excitable membranes. Cell cycle. Cell differentiation and proliferation. Gene information, expression and regulation. Inheritance. Embryonic development and organogenesis			X	
CE3	Knowing the morphology, structure and function of the skin, blood, circulatory, digestive, locomotive, reproductive, excretor and respiratory systems; endocrine system, immune system and central and peripheral nervous system. Growth, maturation and aging of different devices and systems. Homeostasis. Adaptation to the environment				X
CE5	Recognizing with macroscopic, microscopic and imaging techniques the morphology and structure of tissue, organs and systems		X		
CE6	Performing functional tests, determine vital parameters, and interpret them. Basic physical examination				X
TRANSVERSAL		Weighting			
		1	2	3	4
CT1	Analytical and synthesis capacity			X	
CT3	Oral and written communication in mother language		X		
CT6	Manage information capacity		X		
CT8	Making decisions	X			
CT9	Team work				X
CT14	Critical reasoning		X		
CT16	Individual learning			X	



CT18 Creativity	x		
CT19 Leadership	x		
CT25 Autocriticism capacity		x	
CT32 Being able to establish and maintain relationships with other professionals and institutions		x	

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

Assessed learning outcomes	Granted percentage	Assessment method
R1, R2, R7, R8, R9, R11, R14, R15	10,00%	Open questions
R1, R2, R7, R8, R9, R11, R14, R15	55,00%	Tests
R3, R5, R6, R8, R9, R10, R11, R14, R15	5,00%	Practices
R1, R2, R7, R8, R9, R11, R14, R15	5,00%	Work
	25,00%	Practice exam

### Observations

#### Multiple choice exam

Multiple choice test with only one correct answer out of four possible ones.

Each valid answer will receive a score of three points, one point will be subtracted for each of the incorrect answers, the unanswered questions will no longer be evaluated and the score of each participant in the exam will be obtained from the previous operations.

#### Practical test

The student faces a test in which he must demonstrate through practical application the acquisition of certain knowledge.



## MENTION OF DISTINCTION:

In accordance with the regulations governing the assessment and grading of subjects in force at UCV, the distinction of "Matrícula de Honor" (Honours with Distinction) may be awarded to students who have achieved a grade of 9.0 or higher. The number of "Matrículas de Honor" (Honours with Distinction) may not exceed five percent of the students enrolled in the group for the corresponding academic year, unless the number of enrolled students is fewer than 20, in which case a single "Matrícula de Honor" (Honours with Distinction) may be awarded. Exceptionally, these distinctions may be assigned globally across different groups of the same subject. Nevertheless, the total number of distinctions awarded will be the same as if they were assigned by group, but they may be distributed among all students based on a common criterion, regardless of the group to which they belong. The criteria for awarding "Matrícula de Honor" (Honours with Distinction) will be determined according to the guidelines stipulated by the professor responsible for the course, as detailed in the "Observations" section of the evaluation system in the course guide.

## Learning activities

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

M1	Masterclass
M3	Virtual simulations
M4	Content presentations by teacher
M5	Knowledges and skills explanation
M8	Group activities supervised by professor
M9	Knowledge acquirance through student interaction and activity
M10	Anatomy dissection practices
M11	Personalised attention by professor
M12	Tests to understand the level of knowledge acquirance and skills
M14	Online activity on e-learning



M15 Personal study

M19 Group work for searching, discussion and information research

## IN-CLASS LEARNING ACTIVITIES

	LEARNING OUTCOMES	HOURS	ECTS
Theory class M1, M4, M5, M12, M14	R1, R2, R4, R7, R8, R9, R11, R12, R14, R15	62,00	2,48
Seminar and group practices M1, M3, M4, M5, M8, M9, M10, M12, M14, M19	R2, R4, R6, R7, R8, R9, R10, R11, R14, R15, R19	10,00	0,40
Tutoring M9, M11, M15	R12, R13	2,00	0,08
Evaluation M12	R8, R9, R11, R14, R15	5,00	0,20
<b>TOTAL</b>		<b>79,00</b>	<b>3,16</b>

## LEARNING ACTIVITIES OF AUTONOMOUS WORK

	LEARNING OUTCOMES	HOURS	ECTS
No attendance M1, M4, M5, M8	R1, R2, R4, R7, R8, R9, R11, R12, R14, R15, R17	146,00	5,84
<b>TOTAL</b>		<b>146,00</b>	<b>5,84</b>



## Description of the contents

Description of the necessary contents to acquire the learning outcomes.

Theoretical contents:

Content block

Contents



## BLOCK I: Thoracic splanchnology

UNIT 0: Introduction to the anatomy of the thorax: objective, systematics and study material

UNIT 1: Heart I. Introduction. Form. Location. Relationships. Pericardium

UNIT 2: Heart II. Walls. Cavities. Valves

UNIT 3: Heart III. Vascularisation and innervation. Conduction system.

UNIT 4: Great vessels. Great arterial trunks. Ascending aorta and pulmonary artery.

UNIT 5: Aortic arch. Supra-aortic trunks

UNIT 6: Carotid system

UNIT 7: Subclavian system

UNIT 8: Descending Thoracic Aorta

UNIT 9: Venous System

UNIT 10: Lymphatic System

UNIT 11: Respiratory system. Pharynx

UNIT 12: Respiratory system. Larynx

UNIT 13: Respiratory system. Trachea and bronchial tree

UNIT 14: Respiratory system. Lungs. Pleurae

UNIT 15: Superficial anatomy. Auscultation foci. Thoracic wall.

UNIT 16: Thyroid

UNIT 17: Thymus. Oesophagus



## BLOCK II: Abdominal, pelvic and retroperitoneal splanchnology

- UNIT 1: Introduction to abdominal anatomy: objectives, systematics and study material.
- UNIT 2.- Embryology. Abdominal topography. Walls of the abdomen. Peritoneum.
- UNIT 3.- Autonomic Nervous System. Sympathetic and parasympathetic.
- UNIT 4.- Coeliac viscera I. Oesophagus. Stomach.
- UNIT 5.- Coeliac viscera II. Duodenum-pancreas
- UNIT 6.- Coeliac viscera III. Spleen.
- UNIT 7.- Coeliac viscera IV. Liver and biliary tract.
- UNIT 8: Small intestine: jejunum and ileum.
- UNIT 9.- Large intestine: Colon.
- UNIT 10.- Large intestine: Rectum. Anal Canal.
- UNIT 11.- Introduction to the retroperitoneum. Retroperitoneal spaces.
- UNIT 12.- Central retroperitoneum: Aorta. Cava. Lymphatic duct. Solar plexus.
- UNIT 13.- Adrenal glands.
- UNIT 14.- Kidney and Ureter.
- UNIT 15.- Bladder and Urethra.
- UNIT 16.- Male genital apparatus. Testicle and spermatic tract.
- UNIT 17.- Male genital apparatus. Prostate, seminal vesicles, bulbourethral glands.
- UNIT 18.- Male genital apparatus. External genital organs.
- UNIT 19: Female genital apparatus. Ovary, tubes and uterus.
- UNIT 20: Female genital apparatus. Vagina and external genitalia.
- UNIT 21: Musculature of the pelvic floor. Perineum.
- UNIT 22.- Pelvic cavity: Angiology. Innervation. Pelvip erineal spaces.
- UNIT 23.- Mammary gland.
- UNIT 24: Radiological anatomy and clinical anatomy.

## BLOCK III: Practice

Splanchnology practices of the thorax and abdomen in the dissection room



## Temporary organization of learning:

Block of content	Number of sessions	Hours
BLOCK I: Thoracic splanchnology	16,00	32,00
BLOCK II: Abdominal, pelvic and retroperitoneal splanchnology	18,50	37,00
BLOCK III: Practice	5,00	10,00

## References

1. NETTER, F.H. Atlas de Anatomía Humana. Elsevier. Ed 7ª.2019.
2. ORTS LLORCA, F. Anatomía Humana. Científico-Médica. 6ed. 1986.
3. MOORE. Dalley A; Agur A. "Fundamentos De Anatomía Con Orientación Clínica". Ed. 6ª. Wolters Kluwer. 2019
4. ROHEN, YOKOCHI. Atlas fotográfico de Anatomía Humana. Ed 8ª. Elsevier.
5. ROUVIERE, Delmas. Anatomía Humana. Ed. Masson. Ed. 11ª. 2005.
6. PROMETEUS. Texto y atlas de Anatomía. Ed 3ª. Panamericana.
7. SOBOTTA – R. Putz, R. Pabst. Atlas De Anatomía Humana. Ed. Médica Panamericana. Ed. 24ª. 2018.
8. LATARJET- RUIZ LIARD. Anatomía Humana. Ed. Panamericana. Ed 5ª. 2019.
9. Drake R, Wayne A, Mitchell A. Gray's Anatomy for students. Elsevier. Ed 4ª. 2020



## 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.

**Situation 1: Teaching without limited capacity** (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.

**Situation 2: Teaching with limited capacity** (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:

☒ Microsoft Teams

☐ Kaltura



## **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:

☒ Microsoft Teams

☒ Kaltura

Explanation about the practical sessions:

If the practical classes of Anatomy II on cadavers could not be face to face, they will be taught using Microsoft Teams and videos will be uploaded to the UCV platform using the Kaltura tool



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

### ONSITE WORK

#### Regarding the Assessment Tools:

☒

The Assessment Tools will not be modified. If onsite assessment is not possible, it will be done online through the UCVnet Campus.

☐

The following changes will be made to adapt the subject's assessment to the online teaching.

Course guide		Adaptation	
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: