



DISCIPLINE SHEET

1. Data about the programme

1.1.	“CAROL DAVILA” UNIVERSITY OF MEDICINE AND PHARMACY
1.2.	FACULTY OF MEDICINE
1.3.	DEPARTMENT
1.4.	DISCIPLINE
1.5.	DOMAIN OF STUDY: HEALTH – Sectorally regulated within the European Union
1.6.	STUDY CYCLE: LICENCE
1.7.	STUDY PROGRAME: MEDICINE – ENGLISH MODULE

2. 2. Data about discipline

2.1.	Name of the discipline in the educational plan: ANATOMY AND EMBRYOLOGY I				
2.2.	Discipline code: DFIS1M/DFIS2M				
2.3.	Discipline type (FD/SD/CD):FD				
2.4.	Discipline regimen (MD/OPD/):MD				
2.5.	The holder of the course activities Professor FLORIN FILIPOIU PhD.Diaconescu B Senior Lecturer PhD : Mihaela Banu, ,Tarta Eugen,Bulescu Ioan,Gheoca Mutu D				
2.6.	The holder of the seminar activities : Senior Lecturer PhD: Eugen Tarța-Arsene, Gheoca Mutu D As.Dr.Chirculescu Mihaela, As.Dr.Marinescu Tudor,SL.Dr. Bulescu Ioan, As.Dr.Ursuț Bogdan, As.Dr.Negoi Ruxandra, As.Dr. Stroica Laura, As.Dr.Bratu Matei, As.Dr.Breazu Alexandru, Baloiu A, As.Nitescu B.As.Dogaru A,As.Radu C,As Ion R,As.Ciupan M,As.Zamfir R,Petrescu A				
2.7. Year of study	I	2.8. Semester	I,II	2.9. Type of evaluation E	Practical and multiple choice examination

3. Total estimated time (hours/semester of didactic activity an self preparation/study

I. Academic training (teaching, practical application, assessment)						
3.1. Nr hours/week	8-sem I 6-sem II	From which:	3.2. lecture	2 ore	3.3. seminary/ laboratory	6-sem I 4-sem II
3.4. Total hours of educational plan	196	From which:	3.5. lecture	56	3.6. seminary/ laboratory	140
Evaluation (nr. of hours) : 7						
II. Self preparation/study 28 weeks						
Time allocation						196 hours
Study of course materials, textbooks, books, study of the recommended minimal bibliography						20 HOURS
Additional research in the library, research through the internet						10

Performing specific activities for preparing projects, laboratories, elaborating reviews or other tasks	12
Specific preparation activities for projects, laboratory work, assignments, and reports	8
Tutoring	2
Other activities	2
3.7. Total individual study hours	54
3.9. Total hours per semester (3.4.+ 3.7.)	250
3.10. Number of credits	10

4. Preconditions (where applicable)

4.1. of curriculum	Not applicable
4.2. of competences	Not applicable

5. Conditions (where applicable)

5.1. to conduct the lecture	PowerPoint presentations, use of multimedia systems, and projector
5.2. to conduct the seminar / laboratory	Equipped with the necessary apparatus for conducting practical activities

6. Learning outcomes

Knowledge	Skills	Responsibility and autonomy
The student identifies, describe and explains fundamental concepts regarding the characteristic of the healthy human body, anatomical structures	• Structural and developmental description and recognition of representative human anatomical elements - bones, muscles, vessels, nerves-as guideline for clinical diagnosis • Application of techniques methods and acquired anatomical knowledge, in order to establish the diagnosis, to elaborate the scheme of treatment, to identify the most effective prevention measures for diseases • Elaboration of a research project for a given study subject, with the investigation and description of anatomical structures	The student integrates fundamental notions, formulates and assumes reasoned conclusions regarding the state of health or illness.

7. Course objectives (aligned with the learning outcomes)

7.1. General objective	- Familiarization with the university studying by means of anatomy, as one of the first medical subjects that is studied. Progressive knowledge of the anatomical composition, by gradual learning of the human body systems. Observance of professional values and ethics
7.2. Specific objective	Apart from knowledge gaining about each anatomical element, the anatomy aims are to develop the spirit of observation, the capacity of analysis and synthesis, but also to initiate into clinical application of the

	acquired information. The anatomy is the first medical subject that the students come in contact with and it has an important role in training of a physician/doctor, irrespective of his future medical specialty
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8. Contents

8.1. Lectures 1 st year, 1 st Semester	Teaching methods	Observations
1. - Introduction. Anatomy study objects. 2.- Ovogenesis and ovulation. 3.- Fecundation. Implantation. Cleavage. 4.- Evolution in the second and in the third week. 5.- Derivatives of the germ layers. 6. Fetal period. Embryonic annexes. 7. Embryonic annexes - Placenta. 8. Development of the limbs. Development abnormalities. 9. Notions of biomechanics. Classification of the joints-means of hinging, means of gliding. 10. Superior limb joints (shoulder) 11. Superior limb joints (elbow, radio-ulnar joints, radiocarpial joint) 12. Lower limb joints (Hip joint) 13. Lower limb joints (knee joint, talocrural joint) 14. Radioanatomy and cross sections course Lectures 1st year, 2nd Semester	Courses are taught in lecture halls (amphitheaters) and rooms that are technically equipped for this main purpose - laptop, projector. All lectures are updated, according to the reference books, journals, to books published by members of our discipline, but also to the new data online published- PowerPoint presentations, schemes, drawings. Our discipline has its own library to obtain medical information for useful university studying by means of anatomy.	2h/course
1. Development of the neurocranium and vicerocranium. 2. Development of the face-development abnormalities 3. Branchial region, the pharyngeal pouches-evolution, derivatives. 4. Temporomandibular joint- articular surfaces, means of joining, means of gliding. 5. Oral cavity- walls, content, blood supply, lymph vessels, nerve supply. Teeth- structure, deciduous teeth, permanent teeth, group features. 6. - Pharynx 7. - Larynx 8.- Development of the respiratory system 9, 10 - Development of the heart and of the great vessels 11.- Heart innervation and functional conductory pathways. 12. Coronary circulation. 13.- Topography of thoracic organs. 14.- Radioanatomy and cross sections course.	Courses are taught in lecture halls (amphitheaters) and rooms that are technically equipped for this main purpose - laptop, projector. All lectures are updated, according to the reference books, journals, to books published by members of our discipline, but also to the new data online published-	2h/course

	PowerPoint presentations, schemes, drawings. Our discipline has its own library to obtain medical information for useful university studying by means of anatomy.	
Recent bibliography Gray's Anatomy – pentru studenți, Coordonator F.Filipoiu, Editura Elsevier – Prior, București 2010 Atlas de anatomie – nomenclatura latină – Gilroy, Coordonator F.Filipoiu, Editura Prior, București 2010 Aparatul digestiv subdiafragmatic și splina – sub redacția Florin Filipoiu, Editura Universitară “Carol Davila” București 2010 Anatomia omului - Aparatul urinar, spatiul retroperitoneal, F. Filipoiu, C. Cristescu, D. Mihalea, Editura Universitară “Carol Davila”, București 2005 Anatomie – Pereții trunchiului – Lucrări practice sub redacția G. Lupu, Editura Universitară “Carol Davila” București 2010 Anatomia omului – Cap și Gât – Lucrări practice sub redacția G. Lupu, Editura Universitară “Carol Davila” București 2010 Anatomia omului – Aparatul digestiv – Lucrări practice sub redacția G.Lupu, Editura Universitară “Carol Davila” București 2010 Anatomie – Membrele sub redacția G. Lupu, Editura Universitară “Carol Davila” București Editura Universitară “Carol Davila” București2010 sub redacția Al .T. Ispas Anatomia omului – Aparatul Genital Anatomia omului – Sistemul Nervos Central – Lucrări practice, sub redacția Al.T.Ispas, Editura Universitară “Carol Davila” București2007 Sistemul nervos și organele de simț - Atlas color – Werner Kahle – Coordonator Prof. Al.T. Ispas, Editura Callisto București2012 Anatomia funcțională a toracelui - Cezar Th. Niculescu, Bogdan Voiculescu, Romică Cergan, Mihaela Banu, Editura Universitară “Carol Davila” București2001 Embriologie – Ghid de lucrări practice de microscopie An I – sub redacția Al. T. Ispas, Editura Universitară “Carol Davila” București 2014 Embriologie – Ghid de lucrări practice de microscopie An II – sub redacția Al. T. Ispas, Editura Universitară “Carol Davila” București 2014		
8.2. Laboratory/ practical lesson	Teaching methods	Observations
Laboratory 1st year, 1st Semester		3h/subject
1. Axes and orientation planes of the body. 2. Vertebrae: general vertebral features; cervical, thoracic, lumbar vertebrae. Particular	The main purposes of teaching methods are	

a. vertebrae; transition vertebrae. Sacrum and coccyx. Vertebral column –curvatures. Surface anatomy: the palpation and counting of the vertebrae; anatomic coordination points for the lumbar puncture. Radiological anatomy. Sternum. Ribs. Osseous thorax. Surface anatomy of the thoracic wall: orientation lines, osseous and muscular reliefs; counting of the ribs. Radiological anatomy. 3. Clavicle, scapula, humerus. Radius, ulna, skeleton of the hand. Surface anatomy and radiological anatomy of the upper limb. 4. Hip bone, skeletal pelvis. Surface anatomy: internal and external pelvimetry Femur, patella Tibia, fibula, skeleton of the foot. Surface anatomy and radiological anatomy of the lower limb. 5. EXAMINATION 6. Elementary notions of dissection. Dissection of the muscles connecting the upper limb with the vertebral column and of the muscles connecting the ribs to vertebrae:- latissimus dorsi, trapezius, levator scapulae, rhomboids, serrati posterior. Surface anatomy; weak points of the posterior abdominal wall- the lumbar triangle of Petit, the lumbar tetragonal of Grynfelt; the pentagon of Krause Dissection of the nuchal region. Suboccipital muscles, vessels and nerves. Surface anatomy: anatomic coordination points for the anaesthesia of the Arnold nerve. 7. Dissection of the anterolateral wall of the thorax- pectoralis major, pectoralis minor, serratus anterior, subclavius, intercostals. Topography of the intercostal space. Anatomic coordination points for the intercostal puncture. Mammary region: structure of the mammary gland; blood supply, nerve supply, lymphatic drainage of the mammary gland. 8. Dissection of the axilla. Walls of the axilla; main vascular-nervous bundle, secondary vascular-nervous bundles. Axillary artery. Dissection of the axilla. Formation of the brachial plexus. Dissection of the branches of the brachial plexus, axillary lymph nodes.	-recognition, but also structural and developmental description of the studied anatomical structures - understanding and development of skills in clinical using of acquired anatomical knowledge - development of logical , causal thinking in medical studying... The teaching methods for anatomical study: -dissections of human bodies, presentations on anatomical dissected parts, anatomical preparations, bones, sections; - microscopic examinations of histological sections-human embryos and fetuses- at practical sessions of embryology; radiological anatomy with examination of radiographies; - documentation in our discipline museum, study on cross-sections of human body, study on normal x-rays, CT and MRI	
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9. Dissection of the anterior region of the arm-muscles, vessels, nerves. Surface anatomy. 10. Dissection of the antero-lateral region of the forearm-muscles, vessels, nerves. Carpal tunnel: delimitation and content. Superficial veins of the upper limb. Surface anatomy. 11. Dissection of the palm. Topographic regions of the palm. Thenar muscles, hypothenar muscles, muscles of midpalmar region. Synovial sheaths of the carpal tendons. Vessels, nerves. Surface anatomy. 12. Dissection of the scapular region- muscles, vessels, nerves. Surface anatomy. 13. Dissection of the posterior region of the arm- muscles, vessels, nerves. Triangular and quadrangular spaces bounded by the humerus, long heads of the triceps brachii, teres major and teres minor (triangular space, triangular interval, quadrangular space): delimitation, content. Surface anatomy. 14. Dissection of the posterior region of the forearm-muscles, vessels, nerves. Surface anatomy. Topographic sections at the level of the upper		
. Laboratory 1st year, 2nd Semester		2h/subject
1. Neuro- and viscerocranium. 2. Walls of the orbit, osseous walls of the nasal cavity, infratemporal fossa, pterigopalatine fossa. Mandible. 3. Craniofacial muscles and facial nerve. Masticatory muscles and facial artery. 4. Trigeminal nerve (ophthalmic and maxillary nerves), ciliary ganglion, pterigopalatine ganglion (afferents and branches) 5. Mandibular nerve, otic ganglion (afferents and branches), submandibular ganglion (afferents and branches). 6. Posterior auricular artery, occipital artery, inferior thyroid artery and ascending pharyngeal artery (course and branches) 7. Sternocleidomastoid, scalenes, accessory nerve. 8. Glossopharyngeal nerve-course and branches. Vagus nerves at the level of the neck. Superior and inferior laryngeal nerves. 9. Hypoglossal nerve-course and branches 10. Cervical sympathetic trunk-structure, branches 11. Subclavian artery-course, branches. Arterial anastomoses around the scapula. 12. Cervical plexus-formation, superficial and deep branches. Ansa cervicalis (formation,		

distribution). 13. Infrahyoid and suprahyoid muscles. Cervical fasciae. 14. Veins of the head- internal, external and anterior jugular veins (formation, tributaries). 15. Thyroid gland, parathyroid glands (structure, relations, blood supply). 16. Lymph vessels and nodes of the head and of the neck. 17. Oral cavity and salivary glands. 18. EXAMINATION-the head and the neck 19. Walls of the thoracic cavity. Trachea and bronchi 20. Lungs (description, structure, segmentation). Blood vessels of the lungs (pulmonary and bronchial vessels) 21. Pleura- pleural recesses. Projection of the lung fissures. 22. Heart- external aspect (surfaces, margins, base, apex) 23. Internal aspect of the heart (atria, ventricles, interatrial and interventricular septa, orifices, valvular apparatus). 24. Blood supply of the heart (coronary arteries, coronary sinus). Nerve supply of the heart (cardiac plexus) 25. Serous and fibrous pericardium. Sinuses of the serous pericardium. Blood supply and nerve supply of the pericardium. 26. Mediastinum and its subdivision. Contents of the superior mediastinum: brachiocephalic veins, superior vena cava, aortic arch and its branches, thymus and the nervous structure in the mediastinum. Anterior and middle mediastinum. Posterior mediastinum (thoracic esophagus structure, blood supply, nerve supply). 27. Thoracic aorta and its branches. Thoracic duct. Mediastinal lymph nodes. Thoracic sympathetic trunk. 28. Review-thorax and its content		
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Recent bibliography

Gray's Anatomy – for students, by Richard Drake, PhD and all , Elsevier Health 2010

Gray's Anatomy – pentru studenți, Coordonator F.Filipoiu, Editura Elsevier – Prior, București 2010

Atlas de anatomie – nomenclatura latină – Gilroy, Coordonator F.Filipoiu, Editura Prior, București 2010

Aparatul digestiv subdiafragmatic și splina – sub redacția Florin Filipoiu, Editura Universitară “Carol Davila” București 2010

Anatomia omului - Aparatul urinar, spatiul retroperitoneal, F. Filipoiu, C. Cristescu, D. Mihalea, Editura Universitara “Carol Davila”, București 2005

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Anatomia omului – Aparatul digestiv – Lucrări practice sub redacția G.Lupu, Editura Universitară “Carol Davila” București 2010

Anatomie – Membrele sub redacția G. Lupu, Editura Universitară “Carol Davila” București Editura Universitară “Carol Davila” București sub redacția Al .T. Ispas Anatomia omului – Aparatul Genital 2010 Anatomia omului – Sistemul Nervos Central – Lucrări practice, sub redacția Al.T.Ispas, Editura Universitară “Carol Davila” București2007 Sistemul nervos și organele de simț - Atlas color – Werner Kahle – Coordonator Prof. Al.T. Ispas 2012

9. Evaluation

Activity type	9.1. Evaluation criteria	9.2. Evaluation methods	9.3. Percentage in the final grade
9.4. Lecture	Attendance at practical sessions/labs, at courses/lectures, at dissections on human bodies, presentations on anatomical dissected parts, on preparations, bones, sections and health issues, control tests.	Sem I The student receives a 30 MCQ test divided in 3 groups: I-lecture, II-upper limb, III-lower limb and abdominal wall. Each group must be passed with a minimum of 5 points each. Sem II The student receives a 30 MCQ test divided in 3 groups:I-lecture,II-anatomy of the head and neck,III-anatomy of the thoracic organs .Each group must be passed with a minimum of 5 points each	
9.5. Seminary/ practical activity		PRACTICAL EXAMINATION ORAL EXAMINATION	
9.6. Minimum performance standard			
Pass mark is 5. Failure of the practical ,the student being marked with grade 4			

Date of completion :
16.09.2025

Signature of the course holder
Professor Dr. Filipoiu Florin Mihail

Date of approval by the
Department Council:

Signature of the Department Director

Professor Dr. Costache Mariana