SUBJECT CHART

1. Schedule data

1.1 University	**„VICTOR BABEŞ" UNIVERSITY OF MEDICINE AND PHARMACY TIMISOARA**
1.2 Faculty	**FACULTY OF DENTAL MEDICINE**
1.3 Department	I
1.4 Studies area	License
1.5 **C**ycle of studies [2)]	License
1.6 Studies program	**DENTAL MEDICINE**

2. Discipline data

2.1. Subject name	**ANATOMY AND EMBRYOLOGY**							
2.2 Lecture activity tutor				Assistant Professor Grigoriță Laura, MD, PhD				
2.3 Practice activity tutors				Assistant Professor Ciobanu Iulia, MD, PhD				
2.4 Year of study	**I**	2.5 Semester	**II**	2.6 Assessment type	**Exam**	2.7 Type of Discipline	Content[3)]	**DF**
							Compulsory[3)]	**DF**

3. Estimated total time (hours per semester of teaching activities)

3.1 Number of hours per week	**7**	3.2 from which: lecture	**3**	3.3 practice	**4**
3.4 Total hours of the curriculum	**98 (7 x 14 for 1 sem)**	3.5 from which: lecture	**42**	3.6 practice	**56**

Distribution of time	hours
Study after manual, lecture material, references and notes	**32**
Additional documentation in the library, on the specialized electronic platforms and on the field	**6**
Training seminars / practice / projects, themes, papers, portfolios and essays	**10**
Tutoring	**-**
Exams	**4**
Other activities	**-**

3.7 Total hours of individual study	**48**
3.8 Total hours per semester	**150 (5 creditsx30 hours/credit)**
3.9 Credit points [5)]	**5**

5. Conditions (if necessarry)

5.1 lecture	• Mobile phones will be closed during classes, conversations are not tolerated. • The students' delay in the lecture will not be tolerated as it is proven disruptive to the educational process; • The date of the lecture's seminary is announced at the beginning of the semester. Claims for postponement will not be accepted for reasons other than a legitimate objective; The attendance at the lecture is compulsory, a maximum of 30% out of the total absences being accepted.
5.2 practice/ project	• Mobile phones will be closed during the practice, are not tolerated telephone conversations during the practice, nor students leaving the room. • The students' delay will not be tolerated as it proves disruptive to the educational process; • Presence at internships / practice is mandatory, a maximum of 15% out of the total absences is accepted (recovery of absences until the beginning of the session exams). • Recovery of absences is allowed up to 15% out of the total number of absences with the payment during the academic year (except for medical cases that will require individual approval of the Dean). • The date of the endpoint verification of practice material is announced at the beginning of the semester. Applications for postponement will not be accepted for reasons other than a legitimate objective; • The practical exam will be held in the last week of the semester or in the ordinary session, from the topic of the practical works / laboratories displayed in advance. The practical exam in the session will not be held on the same day with the MCQs. • Students accumulating between 15-30% of absences will recover them on a paying system and lose the right to attend the regular session. • Students accumulating over 30% of absences can not attend the exam during the current academic year and are required to re-study the discipline.

6. Specific skills

Professional Skills	1. Learning the *Nomina Anatomica*. 2. Acquiring appropriate medical language by the student. 3. Learning the theoretical and practical issues of individual anatomical elements and complexe structures. 4. Proper acquisition of exploration maneuvers and dissection techniques of normal anatomical structures of the head and neck. 5. Descriptive and topographic recognition of the anatomical structures of the head and neck. 6. Correlation of the descriptive anatomy knowledge with the live morphological exploration of radio-anatomic structures. 7. Correlation of the topographic anatomy structures with elements of medical semiology.
Transversal Skills	1. Interest for professional development by engaging critical thinking skills demonstrated through active participation in the lecture and practice seminar / project; 2. Involvement in scientific research activities by participating in the elaboration of papers, studies, specialized articles; 3. Effective use of information sources and communication resources and assisted training (Internet portals, specialized software applications, databases, on-line courses, etc.) in an international language; 4. Recognition of the normal anatomical structure and assessment of its participation in the development of a pathological condition, anatomical support of any non-invasive exploratory act (CT, MRI) or invasive (surgical act).

7. Discipline objectives (based on the specific competences)

7.1 General objective of Discipline	1. Knowing the elements of descriptive and topographic anatomy of the head and neck. 2. Study of embryogenesis and organogenesis of the head and neck. 3. Knowing the regions, fossae, neck areas and head cavities in the topographic anatomy. 4. Knowledge of the complex morphology of organ systems and apparatuses. 5. Morphological exploration of prepared body pieces (cadavers) of the head and neck. 6. Acquiring international anatomical terminology (*Nomina Anatomica).*
7.2 Specific objectives	1. Knowledge and understanding of anatomical structures of the head and neck. 2. Recognition of all anatomical structures of the head and neck. 3. Knowing the relationship between the different anatomical structures of the head and neck. 4. Study of topographical regions of the head and neck.

8. Contents

8.1 Lecture	Teaching methods	No. of hours	Notifications
1.Head and neck embryology.	Interactive presentation of the teaching material, using multimedia, PowerPoint presentations, educational videos.	2	
2. Neurocranium and viscerocranium. Endobasis and exobasis. Craniometric points.		2	
3. Orbital cavity and nasal cavity – walls, contents and communications.		2	
4. Temporo-mandibular joint – articular surfaces, linking structures, movements. Anatomical variants.		2	
5.Fronto-parieto-occipital and temporal regions – limits and layers.		2	
6. Face regions – limits and layers.		2	
7.Superficial and deep triangles of the neck – limits and contents.		2	
8. Muscles of the oral cavity. Masticator muscles. Origin, action, relations, innervation and blood supply.		2	
9. Common carotic artery, external carotic artery and internal carotic artery. Origin, trajectory, branches, field, relations. Internal jugular vein. External jugular vein. Origin, trajectory, tributaries, relations.		2	
10. Cranial nerves excepting the maxillary and mandibular nerves – real origin and apparent origin, trajectory, branches and field.		2	
11. Maxillar and mandibular nerves – real and apparent origin, trajectory, branches and field.		2	
12. Oral cavity- walls. Palatum durum and palatum molle. Anatomical landmarks for anaesthesia.		2	
13. Macroscopic morphology of the theeth. Gingivae – structure, vascularization and innervation. Salivary glands		2	

14. Central nervous system. Sense organs.		2	

Mandatory references:

1. Șișu AM., *The skull*, Ed. Eurostampa, 2014.
2. Șișu AM., *Anatomy of the Head and Neck*, Ed. Eurostampa, 2016
3. Gray's Anatomy – *Anatomy descriptive and surgery*, Produced by Magpie Books, London, 1995.

Optional references:

1. Johannes Sobotta - *Sobotta Atlas of Human Anatomy* - Published by Lippincott Williams & Wilkins, 1996.
2. Frank Netter - *Atlas of Human Anatomy* - Published by Icon Learning Systems, 2003.

8.2 Practice	Teaching-learning methods	No. of hours	Notifications
1. Skull bones-generalities: number, structure, shape, mobility. Neurocranium and viscerocranium. Study of the frontal bone, parietal bone, occipital bone and ethmoid bone.	Checking of students' theoretical knowledge of the current work, proving by the student the knowledge of the method of dissection, assessment of each student's work. To verify the student's practical knowledge by identifying macroscopic anatomical structures on cadaveric parts, macroscopic anatomical specimens, sections, anatomical casts.	3	
2. Study of the sphenoid bone and temporal bone. Exobasis and endobasis.		3	
3. Bones of viscerocranium: lacrimal bone, nasal bone, vomer, palatin bone, zygomatic bone, inferior nasal concha, and maxilla. Maxillary sinus ("dental sinus "): its anatomo-topographic and clinical relations with superior alveolo-dentar process. Study of the mandibula and hyoid bone. Bony cavities of the cranium.		3	
4. Peculiarities of the temporo-mandibular joint. Study of the temporomandibular joint elements: bony elements, cartilaginous elements, linking structures, articular cavity. Study of the temporomandibular joint biomechanics (movements of TMJ and movements of mandibula).		3	
5. Anatomical exploring of the head and neck. Dissection of the head regions (fronto-parieto-occipital and temporal regions). Dissection of the facial regions. Dissection of the masseteric fossa, temporal fossa, infratemporal fossa, and zygomatic fossa. Dissection of the parotid fossa.		3	
6. Dissection of the suprahyoid and infrahyoid regions. Thyroid, parathyroid and submandibular glands. Dissection of the sternocleidomastoid region. Dissection of the vasculonervous bundle of the neck. Brachial plexus-Trunks of origin. Subclavicular vessels. Cervical Sympathetic (cervical portion of the autonomic system). Highlighting submandibular and submental triangles in the suprahyoid region. Highlighting the carotic triangle in the infrahyoid region.		3	
7. Dissection and study of the mimic muscles. Dissection of the masticator muscles: temporal muscle, masseter muscle, lateral and medial pterygoid muscles – insertion, vascularization, innervation and movements. Dissection of the anterior cervical region: platysma muscle, superficial cervical fascia. Dissection of the suprahyoid and infrahyoid regions. Scaleni muscles. Dissection of the pharynx and oesophagus. Study of the larynx and trachea.		3	
8. Dissection of the lateral vasculonervous bundle of the neck. Highlighting the origin, trajectory and branches of the common carotic artery. Dissection of the internal carotic artery and its trajectory forward to the skull base. Dissection of the external carotic artery and its collateral branches: superior thyroid artery, lingual artery, facial artery.		3	
9. Highlighting the cranial nerves excepting the maxillary and mandibular nerves. Highlighting the apparent origin in the brainstem, excepting the optic and olfactory nerves.		3	
10. Highlighting the apparent origin of the trigeminal nerve and its roots. Highlighting the trigeminal ganglion of Gasser and Meckel cavum. The maxillary nerve - origin, trajectory, relations, collateral and terminal branches. The mandibular nerve - origin, trajectory, relations, collateral and terminal branches. Dissection of the		3	

mandibular body, highlighting the mandibular canal and its contents.			
11. Anatomical study of the bucco-maxillo-facial field. Study of the oral cavity. Subdivisions: oral vestibul and proper cavum oris. Oral vestibul: limits, subdivisions, relations (frenulum of the upper and lower lips; parotid duct papilla; mental foramen; canin fossa), vascularization and innervation. Study of proper oral cavity: limits, contents, topographic divisions. Study of the palatinal and sublingual regions with practical correlations; vascularization; innervation.		3	
12. Study of the retromolar and tonsillar regions. Highlighting the superficial structures (fossa and superior and inferior retromolar papilla, pterygomandibular fold). Contents of the pterygomandibular space (medial surface of the mandibula, inferior alveolar nerve, lingual nerve, mylohyoidian nerve, buccal nerve and inferior alveolar artery).		3	
13.Study of the eyeball and its annexae. Sudy of the acoustic-vestibulary sense organ.		3	
14. Opening of the vertebral canal. Study of the spinal meninge and spinal nerves. Sections on meninge and study of the external feature of the spinal cord. Sections on spinal cord and internal feature. Study of external and internal morphology of the brainstem and cerebellum. The 4th Ventricle. Study of diencephalon and the third ventricle. Study of external, internal morphology and blood supply of the cerebral hemispheres. The first and second lateral ventricles.		3	

Mandatory references:

1. Motoc A., Şişu AM, Stana L., Moise M., Răducan S., Şelaru M., *Anatomy of the head and neck- practical guide*, Ed. Victor Babeş, 2011.
2. Richard L.Drake, A. Wayne Vogl, Adam W.M.Mitchell, *Gray s for students* , Churchill Livingstone Elsevier, 2010.
3. Frank Netter - *Atlas of Human Anatomy* - Published by Icon Learning Systems, 2003.

Optional references:

1. Johannes Sobotta - *Sobotta Atlas of Human Anatomy* - Published by Lippincott Williams & Wilkins, 1996.

10. Evaluation

Activity type	10.1 Assessment criteria	10.2 Methods of assessment	10.3 Percent of the final grade
10.4 Lecture	Entering the theoretical exam is conditioned by the participation of the students in at least 70% of the lectures. MCQs exam: - 50 MCQs with one correct answer (max. 30% out of the MCQs) and between 2 and 4 correct answers. - time of the exam- 60 min.	*Final assessment:* 50 MCQs. *Continuous assessment:*MCQs from the lecture activity.	60% 10%
10.5 Practical exam	Students accumulating up to 15% absences will recover them (totally) during the semester. Students accumulating between 15-30% absences will recover after paying and lose the right to enter in the regular session. Students accumulating over 30% of absences cannot attend the exam during the current academic year	*Final assessment*: practical exam	30%

	and are required to re-study the discipline. Practical exam and is held during the last week of the semester. Practical exam is mandatory: - Mark 5: The student must answer 100% out of the 5 questions of the minimum scale - Mark 10: The student must answer 100% out of the total number of questions.		
10.6 Minimum performance standard			
1. Knowing the *Nomina Anatomica*. 2. Recognizing the anatomical elements of the head and neck and the relationships between them. 3. Knowing the topographical regions, regional layers and anatomic structures of the head and neck.			

Date of completion **19.10.2018**	**Tutor Lecture Signature** Assist. Prof. Grigoriță Laura , MD, PhD	**Practice Tutor Signature** Assist. Prof. Ciobanu Iulia, MD, PhD
Head of Discipline Signature Prof. Matusz Pentru, M.D., Ph.D		
Date of approval in the Department	**Head of Department Signature** Prof. Sorin Bolintineanu, M.D., Ph.D	