888	CD 8.5.1 CURRICULUM DISC STUDII UNIVERSI	CIPLINĂ PENTRU ITARE	Redacția: Data: Pag. 1/15	08 21.02.2020
	FACULTY OF ST	TOMATOLOGY		
	STUDY PROGRAM 09	11.1STOMATOLO	OGY	
CHAIR O	F STOMATOLOGICAL PRO	PAEDEUTICS "P.	AVEL GO	DOROJA'
at the meeting Assuarance a Curriculum Faculty of Stor Minutes No. <u>4</u> Committee Pre Stepco Elena	APPROVED g of the Committee for Quality and the evaluation of the natology of 2A.03.2020 sident, Khd. DMS., DAPPROV At the meeting of the Propaedeutics "Pavel Godoroja Minutes No. 3 of 18.09.2020 Head of chair, Phd., DHMS., Ass Uncuta Diana	APP at the Council mer Ston Minutes No. <u>2</u> of Dean of Faculty of St Associate professor, Solomon Oleg VED chair of Stomatol vector Chair of Stomatol	ROVED eting of the natology <u>30.09.00</u> tomatology,	Faculty of 220 Phd., DMS., and a Rep. CANATUL
DISCIPLINE	: FUNCTIONAL MORPHOLOG	Y OF THE STOMAT	FOGNATH	IC SYSTEM
	Integrated	l studies		
ype of course:	Compulsory discipline			
	Chişinău	, 2020		



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I. PRELIMINARIES

• General presentation of the discipline: the place and role of the discipline in the formation of the specific competences of the vocational/specialty training program.

The discipline, functional morphology of the stomatognathic system is an important component of the preclinical and clinical education of the future dentist and aims to study the components of the stomatognathic system - the philogenetic, ontogenetic, morphological and functional level of developing the stomatognathic system, the integral part of the human body. This discipline refers to the knowledge, understanding and acquiring of the general notions regarding the morphology of the elements of the stomatognathic system, correlation of the acquired knowledge with the ones studied in anatomy, physiology, histology, knowledge of the morphological entity of each individual and their association in a functional morphological complex - stomatognathic system. At the same time, special attention is paid to the knowledge of the macroscopic and microscopic structure of the dental tissues and their topographic relationship.

Mission of the curriculum (aim) in vocational training

The functional morphology of the stomatognathic system aims to present the importance of knowledge about the morphology and functions of the stomatognathic system and their implementation in the following courses in becoming a good dentist. This discipline is oriented towards a medical attitude that starts from knowing the essential material for understanding pathological changes. In this way, we consider it necessary to know the functional morphology of the elements of the stomatognathic system for the elaboration and application of dental therapy.

- **Discipline teaching languages**: Romanian, Russian and English.
- Beneficiaries: students of the first year, second semester, the faculty of Dentistry.

II. DISCIPLINE ADMINISTRATION

Discipline code		S.02.O.014		
Discipline name		Functional morphology of stomatognathic system		
Responsible for discip	line	 Bajurea Nicolae, Phd., associate professor Uncuța Diana, habilitated doctor, associate professor, Head of the deparment 		
Year	Ι	Semester	Π	
Total number of hours, including:		·	90	
Lectures	17	Practical courses	17	
Seminars	34	Individual work	22	
Evaluation form	E	Number of credits	3	



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III. THE TRAINING OBJECTIVES OF THE DISCIPLINE

• At the level of knowledge and understanding:

- ✓ To know the particularities of functional morphology of the stomatognathic system, components, the legacy of the reciprocal character between the structure (form) and its function;
- ✓ To know the functional morphology of the jaws. Resistance lines of the maxilla and mandible;
- ✓ To understand the principles of stomatognathic system compartment, the functions of each compartment, the interrelationships between different organs and systems of the whole human body;
- ✓ To know the factors that guide the development of the stomatognathic system, the reciprocal relation between function and morphology following the example of temporomandibular joint, two stages in postnatal morphology of teeth.
- ✓ To understand the notions: masticatory pressure, absolute muscular force, methods of determination.
- \checkmark To know and to understand the individual and group morphological characters of the teeth.
- ✓ To know and understand the factors that ensures the morphofunctional unity of dental arches. Occlusal area. Occlusal plan.
- ✓ To know and understand the notions of "occlusion", "static occlusion", "dynamic occlusion", "occlusion relations", varieties of dynamic occlusion.
- \checkmark To know the basis of the mandible biomechanics, the act of mastication.
- \checkmark To define the notions: organogenesis, dental histogenesis.
- \checkmark To know the formation of odontogenic mesenchyme.
- \checkmark To know and to demonstrate the formation of dental plate.
- ✓ To understand the development of primordial ties, differentiation of primordial.
- \checkmark To know dentin genesis.
- \checkmark To know amelogenesis.
- \checkmark To know the pulp histogenesis.
- \checkmark To know the theories of the dental eruption.
- ✓ To know the histological structure and chemical composition of hard dental tissues (enamel, dentin, cement morphology).
- ✓ To know the histological structure and chemical composition of soft dental tissue (dental pulp, vascularization, nerve supply, functions).
- \checkmark To know the terms of training, mineralization and eruption of temporary and permanent teeth.

• Application level:

- \checkmark To be able to identify and describe the teeth after the signs of differentiation;
- \checkmark To recognize the types of occlusion and analyze the teeth contacts in mandible movements;
- \checkmark To distinguish the signs of centric occlusion characteristic of all teeth and frontal teeth in orthognathic occlusion.
- ✓ To distinguish the characteristics of occlusal signs defining for the lateral teeth in the sagittal and transversal plane in the static occlusion.
- \checkmark To evaluate the practical role of Wild, Silverman and Robinson tests;
- \checkmark To be able to correctly use the tools for modeling and applying the practical manipulations.
- ✓ To model by curving the crowns of anterior teeth on the upper jaw and lower jaw in gipsum, soap and wax;
- ✓ To model by curving the crowns of posterior teeth on the upper jaw and lower jaw in gipsum, soap and wax;
 - At the integration level:



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- ✓ To be able to evaluate the place and role of functional morphology of the stomatognathic system in the preclinical preparing of the dentist;
- ✓ To be competent to use the knowledge and methodology of the functional morphology of the stomatognathic system in the ability to explain the nature of physiological or pathological processes;
- ✓ To be able to make connection between the structure and function of the stomatognathic system;
- \checkmark To be able to implement accumulated knowledge and use medical terms correctly;
- \checkmark To be able to assimilate new achievements in dental disciplines.

IV. PRECONDITIONS AND EXIGENCIES

Defining the stomatognathic system and its component parts, define and describe the components of the oral cavity; The role of the functional factor in the development and formation of the Stomatognathic System; Knowledge of the structure and functions of the the skull bones, vertical and horizontal ressistance line in upper and lower jaw, arterial and nerve supply; Knowledge of insertion and functions of movable muscles of mandible; Knowing the structure of temporomandibular articulations, functions. Obtaining the knowledge of descriptive dental anatomy; Knowledge of the morphological changes of the teeth in the human evolution; Defining and learning the types of dentitions; Learning and application in practice of tooth numbering systems; Knowledge of the anatomical terms used to describe the coronal and radicular teeth morphology; Knowledge of common morphological characters and differentiation of permanent and primary teeth; Knowledge of the elements that ensure the morphfunctional unity of the dental arches; Knowledge of centric occlusion signs; Knowledge of relations between physiological and pathological dental arcades; Defining the notions of organogenesis, dental histogenesis; Knowing the formation of odontogenic mesenchyme; Knowledge of dental plate formation; Knowledge of dentin genesis and amelogenesis; Knowledge of pulp histogenesis; Knowledge of dental eruption theories; Knowledge of histological structure and chemical composition of hard dental tissues (enamel, dentin, cement morphology); Knowledge of the histological structure and chemical composition of soft dental tissue (dental pulp, vascularization, excitation, functions); Knowledge of the terms of training, mineralization and eruption of temporary and permanent teeth.

V. THEMES AND ORIENTATIVE DISTRIBUTION OF HOURS

Nr		Nı	ımber	of hou	rs
d/0	THEME		Semi-	Pra-	Indivi
u/0		S	nars	ctice	dual
	Functional morphology of Stomatognathic System. Component				
	elements. The philogenetic and ontogenetic development of				
	Stomatognathic System.				
	Stomatognathic System. "Notion". Component elements of the				
1	Stomatognathic System. The factors which influence and lead development	1	2	1	1
1.	and formation of the Stomatognathic System. The role of functional factor in	1	Z	1	1
	development and formation of the Stomatognathic System. Comparative				
	dental anatomy. Components of the oral cavity. Oral mucosa.				
	Characteristics. The tongue. Structure. Functions. Salivary glands.				
	Characteristics. The functions of Stomatognathic System.				
	Dento – osseous Structures of Stomatognathic System, Blood Vessels				
2.	and Nerves.	1	2	1	2
	The bones of the skull. Overview. Functional morphology of the mandible.				



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Nr	THEME		Number of hours			
d/o			Semi-	Pra-	Indivi	
	Desigtance lines of mandible and their prestical importance. Eurotical	S	nars	ctice	dual	
	morphology of the maxillae. Vertical resistance lines of maxillae and their					
	morphology of the maximae. Vertical resistance lines of maximae and their					
	practical importance. Holizontal resistance lines of maxima and their					
	practical importance. Functional morphology of the hard parate. Functional					
	morphology of the alveolar process. Afternal supply to the teeth. Nerve					
-	supply to the jaws and teeth.					
	Muscle's functional morphology of Stomatognathic System.					
	The muscles of Stomatognatine System. Classification. Three groups of					
	removable muscles of mandible. Elevator muscles of mandible. Insertion.					
	Functions. Depressor muscles of mandible. Insertion. Functions. Protrusive					
_	muscles of the mandible. Insertion. Functions. Explain the role of muscle					
3.	function in development, formation and individual modeling of the	1	2	1	2	
	component parts of Stomatognathic System. Absolute muscular force.					
	Characteristics. How do temporal muscles influence the stereotype of					
	masticator process. How do maseter, internal pterygoid muscles, influence					
	the stereotype of masticator process. How does the stereotype of mastication					
	refer to the teeth morphology.					
	Functional morphology of Temporomandibular Joint (TMJ).					
	The component elements of TMJ. Condyloid process. Characteristics.					
	Mandibular fossa. Characteristics. Articular eminence. Characteristics.					
	Articular disk. Characteristics. Joint capsule. Characteristics. Mandibular					
4	ligaments. Characteristics. The deepness of glenoid fossa. Practical	1	2	1	2	
4.	importance. What determines the height of articular eminence. Shapes of	1	2	1	2	
	articular eminence. The role of function, in development and formation of					
	TMJ according to comparative anatomy. In how many compartments does					
	the articular disk divide the articular cavity. Movements in TMJ. What kind					
	of movements takes place in each compartment of TMJ. Totalization					
	Introduction to Dental Anatomy. Nomenclature. Tooth Numbering					
	Systems. Types of dentitions.					
	Introduction to dental anatomy. Types of dentitions. Overview. Teeth					
	number in permanent and primary dentition. Evolution. Name 4 groups of					
5.	teeth in permanent dentition according to their function. Dental	1	2	1	1	
	nomenclature. Tooth numbering systems. Explain the role of the function in					
	the development and differentiation of the teeth. Anatomical and clinical					
	crown of the tooth. Anatomical and clinical root of the tooth. Which are the					
	general characters of teeth functional morphology.					
	Functional morphology of incisors.					
	The permanent incisors. Overview. Maxillary central incisor. Characteristics.					
	Maxillary lateral incisor. Characteristics.Mandibular central incisor.					
6.	Characteristics.Mandibular lateral incisor. Characteristics.Differential signs	1	2	1	1	
	of upper incisors. Differential signs of lower incisors. Differential signs of					
	upper incisors from lower incisors. The height of contour. Notion. The place					
	of height of contour on incisors.					
	Functional morphology of canines.					
7.	The maxillary and mandibular canines. Overview. The maxillary canine.	1	2	1	1	
	Characteristics. The mandibular canine. Characteristics. Differential signs of					



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Image: Consect Semi- superior canines. Differential signs of inferior canines. Differential signs of superior canines from inferior canines. The common features of buccal aspect in canines. The place of height of contour on canines. Consect Semi- semi- protectional morphology of permanent maxillary premolars. Functional morphology of permanent maxillary premolars. The maxillary premolars on right half arch from left half arch. Characteristics. Maxillary second premolar. Characteristics. Differential signs of maxillary premolars on right half arch from left half arch. Characterize the occlusal aspect of maxillary premolars. The place of height of contour on maxillary premolars. Overview. Mandibular first premolar. Characteristics. Mandibular second premolar. Characteristics. Differential signs of mandibular premolars. Overview. Mandibular first premolar. Characterize the occlusal aspect of mandibular premolars. The place of height of contour on maxillary premolars. Overview. Maxillary premolars. The mandibular premolars. Overview. Maxillary premolars. The mandibular premolars. Overview. Maxillary premolars. 1 2 1 2 9. Differential signs of mandibular premolars. The permanent maxillary molars. The place of height of contour on mandibular premolars. The permanent maxillary molars. Overview. Maxillary first molar. Characteristics. Maxillary second molar. Characteristics. Maxillary first molar. Characteristics. Maxillary second molar. Characteristics. Maxillary molars. The permanent maxillary molars. The place of height of contour on maxillary molars. The place of height of contour on maxillary molars. The permanent maxillary molars. The place of height of contour on mandibular molars. Overview. Mandibular first molar. Characteristics. Differential signs of mandibular molars between them. Characteristics. Differential signs of man	Nr			Number of hours			
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morphofunctional unity of dental arches. The contact points between teeth		Dental, alveolar, basal arch. Notion, Elements which assures					
		morphofunctional unity of dental arches. The contact points between teeth					
and practical importance. Shapes of superior and inferior dental arches in		and practical importance. Shapes of superior and inferior dental arches in					
physiological conditions. Teeth implantation in the upper jaw. Teeth	12.	physiological conditions. Teeth implantation in the upper jaw. Teeth					
implantation in the lower jaw. Correlation between dental, alveolar, basal		implantation in the lower jaw. Correlation between dental, alveolar, basal					
^{12.} arches in maxilla and mandible. Occlusal areas. Practical importance.		arches in maxilla and mandible. Occlusal areas. Practical importance.	1	2	1	1	
Parodontium. Notion, Component elements. Characteristics.Periodontal		Parodontium. Notion. Component elements. Characteristics.Periodontal					
space. The width of it. The periodontal fibers. Characteristics. Functions of		space. The width of it. The periodontal fibers. Characteristics. Functions of					
parodontium. Characteristics. Explain the function of amortization in		parodontium. Characteristics. Explain the function of amortization in					
parodontium. Notion – "Reserve forces of parodontium". Practical		parodontium. Notion - "Reserve forces of parodontium". Practical					
importance.		importance.					



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Nr		Nı	umber	of hou	S
d/o	THEME	Course	Semi-	Pra- ctice	Indivi dual
13.	Occlusion. Occlusal and rest mandible relation. Physiological and pathological occlusions. Biomechanics of mandible. Occlusion. Notion. Concepts. Centric occlusion. Centric relation. Notion. Characteristics. The Signs of centric occlusion for physiological relation between dental arches. Rest mandible position. Notion. Characteristics. The space between dental arches in rest mandible position. Active and passive elements which manage the rest mandible position. Notion "Space of physiological innocclusion". Practical importance. Notion "Space of physiological innocclusion". Practical importance. Notion "Space of free way speech". Practical importance. Occlusal plan. Practical importance. Occlusal curves. Practical importance. Relation between physiological dental arches (Types of physiological occlusions). Relation between pathological dental arches (Types of pathological occlusions). Biomechanics of mandible. Directions of mandibular movements. Characteristics. The mandible movements in TMJ. Poselt Diagram. Phases of mandible movement during mastication by Gyzi. Characteristics. Totalization	1	2	1	1
14.	Morphological structure and chemical composition of the enamel, dentinum and cementum. The general structure of the enamel. Enamel prisms and intermediate substance. Lines of Hunter-Schreger. Incremental striae of Retzus. Pickerill imbrication lines. Interprismal sticking substance. Lamellas, tufts, spindles. The basic structural formation of the enamel. Structure of the cristalls of hydroxyapatites. Molecular structure of the enamel. Mineral components of the enamel. Organic substance of the enamel. Functions of the enamel. Mechanisms and ways of penetration of the enamel. Maturation of the enamel. Vitality of the enamel. Hystological structure of the dentinum. External and internal dentinum. Chemical composition of the dentinum. Dentinal tubules. Primary, secondary and tertiary dentinum. Hystological structure of the cementum. Chemical composition of the cementum. Notion about cellular and acellular cementum.	1	2	1	1
15.	The structure and function of the dental pulp. The structure of the pulp. The basic substance of the pulp. Fibers of the pulp. Cells of the pulp. Blood supply of the pulp. Innervation of the pulp. Trophic function of the pulp. Defensive or barrier function of the pulp. Plastic function of the pulp. Changes in the pulp with age. Denticles (free, parietal, and inerstitial).	1	2	1	1
16.	Development of the teeth. I and II phases. Hystogenesis of tooth tissues. Name the stages of tooth development. How does the dental plate begin and develop. From which of the dental plates do the germs of the permanent teeth develop. Components of the dental germ. Laying and development of the temporary teeth. Laying and development of the permanent teeth. Differentiation of the cells of the enamel organ. Differentiation of the cells of the dental papilla. Hystological structure of the enamel organ. Hystological structure of the dental germ do the enamel, dentinum, pulp, cement develop. Which cells are in the internal epithelial layer of the enamel organs and their functions. The role of the Hertvige sheath. Hubernaculum dentis. Its role. Changes in the enamel	1	2	1	1



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Nr		Nı	ımber	of hou	rs
d/o	o THEME		Semi-	Pra-	Indivi
u/ 0			nars	ctice	dual
	organ, which precede to the hystogenesis. Stage of formation and				
	mineralization of the dentinum and enamel. Name the stages of hystogenesis				
	of hard tooth tissues. How do the enamel prisms form. How do the dentinal				
	tubules form. The Toms fibers of the odontoblasts. The processes of Toms of				
	the ameloblasts. How does the enamel-dentin junction form. Change of the				
	polarity of ameloblasts. Significance. Hystogenesis of tooth tissues.				
	Dental eruption. Terms of formation, mineralization and eruption of the				
	primary and permanent teeth.				
	Dental eruption. Notion. Overview. Name and characterize the steps of				
	dental eruption. Mechanism of eruption of the teeth. Theories of eruption.				
	The eruption of primary teeth. Laying of the dental germs. Beginning of				
17.	mineralization and formation of crowns of the primary teeth. Terms of	1	2	1	1
	eruption of primary teeth. Terms of the beginning and finishing of resorption				
	of roots of primary teeth. Types of the resorption of roots. The eruption of				
	permanent teeth. Laying of germs, beginning of mineralization and				
	formation of permanent teeth. Terms of eruption of permanent teeth. Terms				
	of formation of roots of permanent teeth. Totalization				
	Total	17	34	17	22

VI. REFERENT OBJECTIVES AND CONTENT UNITES

Objectives	Content units
Functional morphology of dento-osseus stuctu	res, muscles and the temporomandibular joints
of the stomatognathic system.	
\checkmark To define the stomatognathic system and its	The stomatognathic system and its component parts
component parts;	
 ✓ To define and describe the components of the oral cavity; 	The oral cavity and its component parts
\checkmark To develop own opinions about the role of the	The role of the functional factor in the development
functional factor in the development and formation of the stomatognathic system;	and formation of the stomatognathic system.
\checkmark To know the dento-osseous structure and	The dento-osseous structures (maxillae,
functions of the stomatognathic system, the	mandible
vertical and horizontal rezistance lines of the	
maxilla and the rezistance lines of the mandible,	
the arterial and nerve supply;	
 To know the insertion and functions of the movable muscles of mandible; 	Movable muscles of mandible
\checkmark To know the structure and functions of the	
temporomandibular joint;	Temporomandibular joint
\checkmark To argue the significance of the stomatognathic	
system functions on the human body;	
\checkmark To apply the gained knowledge in other	
disciplines;	
✓ To formulate conclusions.	
Teeth - elements of macroscopic and clinical mo	rphology
\checkmark To gain knowledge about descriptive dental	



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Objectives	Content units
 anatomy; To know the morphological changes of the teeth in the period of human evolution; Define and acquire the types of dentition; To learn and to apply in practice the tooth numbering systems; To know the anatomical terms used to describe the coronal and radicular morphology of the teeth; To know common morphological characters and to be able to distinguish permanent and temporary teeth between them; To model by curving the crowns of posterior teeth on the upper jaw and lower jaw in gipsum, soap and wax. 	Crown and root Tooth crown (5-aspects) Anatomical crown Clinical crown Tooth crown hight of contour Cervical line The root of the tooth Cusp Cusp slopes Developmental grooves Marginal and triangular ridges Cingulum Fossa, pit Tooth numbering systems
Chapter 3. Dental arches. Occlusion. Mandible l	biomechanics
 ✓ To define notions: dental, alveolar, basal arch; periodontium, physiological and pathological dental occlusion, mandible biomechanics; ✓ To know the elements that ensures the morfo-functional unity of the dental arches; ✓ To know and demonstrate the signs of physiological centric occlusion between the dental arches; ✓ To understand the relationship between dental arches in physiological and pathological conditions; ✓ To know the movements of mandible in the temporomandible joint (TMJ); ✓ To demonstrate schematically the area of mandible movements in the sagittal and vertical plane of the Posselt Diagram; ✓ To know the stages of mastication by Gizi. 	Dental, alveolar, basal arch Occlusal area Occlusal plan Compensating curves. Periodontal - component elements. Centric occlusion, centric relation. Rest mandible position Physiologic occlusions Non – physiologic (traumatic) occlusions Mandible biomechanics
Chapter 4. Morphological structure and chemic	al composition of teeth. Development phases.
 ✓ To define notions: Organogenesis, dental histogenesis; ✓ To know the formation of odontogenic mesenchyme; ✓ To know and demonstrate the formation of dental plate; ✓ To understand the development and differentiation of primary epithelial band; ✓ To know the dentinogenesis. ✓ To know the amelogenesis 	Oral cavity organogenesis Embryological development of the dental organ Amelogenesis Cito Differentiation of ameloblasts Mineralization and maturation of enamel Dentine Differentiating odontoblasti Mineralization of dentin Tooth root formation



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Objectives	Content units
\checkmark To know the pulp histogenesis.	Formation of root dentine
\checkmark To demonstrate schematically the	Cementoblast
development of the tooth root.	Alveolar bone formation
\checkmark To know the theories of the dental eruption.	Dismantling formation
\checkmark To know the histological structure and	The terms of formation, mineralization and
chemical composition of hard dental tissues	eruption of temporary and permanent teeth.
(enamel, dentin, cement morphology).	
\checkmark To know the histological structure and	
chemical composition of soft dental tissue	
(dental pulp, vascularization, excitation,	
functions).	
\checkmark To know the terms of formation,	
mineralization and eruption of temporary	
and permanent teeth.	

VII. PROFESSIONAL (SPECIFIC (SC)) AND TRANSVERSAL (TC) COMPETENCES AND STUDY OUTCOME

Professional competencies (specific) (SC)

SC1: Strong knowledge of the particularities of structure, development and functioning of the stomatognathic system, knowledge and understanding of the organization of the stomayognathic system from the anatomical and physiological point of view;

SC2: Practical work performed by drawing, modeling and carving in soap, wax or gypsum of permanent teeth: incisors, canines, premolars and molars in the maxilla and mandible.

SC3: Knowledge, understanding and use of dentistry-specific language, principles of evolution of periods of organogenesis and morphogenesis;

SC4: Explaining and interpreting the structure, development and functioning of the dental system

SC5: Solving situational issues and formulating the conclusions.

SC6: Analysis of various elements and processes of structure, morphology and function of the stomatognathic system and the pathways leading to pathological conditions.

Transverse competencies (TC)

TC1: Application of professional evaluation standards, professional ethics, and applicable legislation. Promoting logical reasoning, practical applicability, assessment and self-assessment in decision-making.

TC2: Performing activities and exercising the roles specific to team work within the endodontic cabinet / department. Promoting the spirit of initiative, dialogue, cooperation, positive attitude and respect for others, empathy, altruism and continuous improvement of their own activities;

TC3: Systematic assessment of competencies of personal role and expectations, application of selfevaluation of learned processes, acquired skills and professionalism needs, effective use of language skills, knowledge in information technologies, research and communication skills, adapting to the dynamics of policy requirements in health and for personal and professional development.

Study finalizations

At the end of the course, the student will be able to:

- To know the notions of the stomatognathic system morphology;
- To understand the principles of compartmentalization the stomatognathic system;



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- To understand the relation of the stomatognathic system with the whole human body;
- To know the phylogenetic and ontogenetic development of the stomatognathic system;
- To know the morphology of the main components of the stomatognathic system;
- To know the dento-osseous structures of the stomatognathic system;
- To know the temporomandibular joint morphology;
- To know the morphology of the muscles of the dental system;
- To have general knowledge about the morphology of teeth, arches and supporting tissues;
- To identify human teeth groups and their numbering systems;

• To know the basic mandible-cranial principles: rest mandible position, the centric relation, the static and dynamic occlusion;

- To know the jaw relations in physiological and non physiological occlusion;
- To understand the process of mandible biomechanics;
- To know the bases and role of the occlusal area, the occlusal plane, compensatory curves;
- To know the morphological structure and chemical composition of the teeth;
- To know the stages of teeth development;
- To know the terms of formation, mineralization and eruption of temporary and permanent teeth;

• To be able to evaluate the place and role of functional morphology of the stomatognathic system in the preclinical preparation of the medical student;

• To be competent to use the knowledge and methodology of functional morphology of the stomatognathic system in the ability to explain the nature of physiological or pathological processes;

• To be able to deduce the possible causes of blockage of the underlying functional processes and their consequences on the stomatognathic system and the body as a whole;

• To be competent to use critically and confidently the scientific information obtained using the new information and communication technologies.



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VIII	I. STUDENT'S	S SELF-TRAINING		
Nr.	The expected product	Implementation Strategies	Evaluation Criteria	Deadline
1	Working with information sources:	Read carefully the lecture or the material from the manual to the necessary theme. Reading the questions on the theme, which require a reflection on the subject? To get acquainted with the list of additional information sources on the topic. Select the source of additional information for that theme. Reading the text entirely, carefully and writing the essential content. Forming the generalizations and conclusions regarding the importance of the theme / subject	Ability to extract the essentials; interpretative skills; the volume of work	During the semester
2	Working with the copybook of Practical Lesson:	Until solving the tasks in the notebook, to analyze the information and images from the respective subject in the lecture and the book. Solving consecutive tasks. Formulate conclusions at the end of each lesson. Verify the conclusion of the lesson and appreciate their achievement. Selection of additional information, using electronic addresses and additional bibliography.	Workload, problem solving, ability to formulate conclusions	During the semester
3	Working with online materials	Online self-evaluation, study of online materials on the site department, expressing your own opinions through forum and chat	Number and duration of site entries, self- evaluation results	During the semester



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IX. METHODOLOGICAL SUGGESTIONS FOR TEACHING-LEARNING-ASSESSMENT

• Teaching and learning methods used

In the teaching of the functional morphology of the dental system are used different didactic methods, oriented towards the efficient acquisition and achievement of the objectives of the didactic process. In the theoretical lessons, along with traditional methods (lesson-exposure, lesson-conversation, synthesis lesson), modern methods (lesson-debate, lecture-conference, problem-lesson) are also used. In the practical works are used activity individual forms, frontal, group, virtual lab. In order to acquire deeper material, different semiotic systems (scientific language, graphical and computerized language) and teaching materials (tables, diagrams, photographs, transparencies) are used. Within the lessons and extracurricular activities are used Communication Technologies - PowerPoint presentations, online lessons.

• Recommended learning methods

- Observation Identification of the elements characteristic for structures or biological phenomena of the dental system, description of these elements or phenomena.
- Analysis Imaginary decomposition of the whole into component parts. Highlighting the essential elements. Studying each element as part of the whole.
- Plan / figure analysis Selection of required information. Recognition based on knowledge and information selected structures indicated in the drawing, scheme. Analysis of the functions / role of recognized structures.
- Comparison Analysis of the first object / process in a group and determination of its essential features. Analysis of the second object / process and the determination of its essential features. Comparing objects / processes and highlighting common features. Comparing objects / processes and determining differences. Establishment criteria for decommissioning. Formulation of conclusions.
- Classification Identification of the structures / processes which need to be classified. Determining the criteria on which classification is to be made. Distribution of structures / processes by groups according to established criteria.
- Elaboration of the scheme Selection of elements, which must be included in the scheme. Showing the Elements Selected by Different Symbols / Colors and Indicating Their Relationships. Wording of an appropriate title and legend of the symbols used.
- Modeling Identifying and selecting the elements needed to model the phenomenon. Imaging (graphically, schematically) the phenomenon studied. Realizing the phenomenon using the developed model. Formulation of conclusions, deduced from arguments or findings.

Experiment - Formulation of a hypothesis, based on known facts, on the process / phenomenon studied. Verifying the hypothesis by performing the processes / phenomena studied under laboratory conditions. Formulation of conclusions, deduced from arguments or findings.

- Applied didactic strategies / technologies (specific for the discipline);
- "Brainstorming", "Multi-voting"; "The round table"; "Group Interview"; "Case Study"; "Creative Controversy"; "Focus-group technique", "Portfolio".
 Virtual Practices

Methods of assessment (including an indication of how the final grade is calculated)

Current: front and / or individual control through

- (a) applying control tests,
- (b) solving the problems / exercises,



- (c) Analysis of case studies
- (d) performing some role-plays on the topics discussed.
- (e) control work

✓ *Methods of assessment* (including the method of final mark calculation)

Current: Current checks during seminars and practical lessons, 4 totals in writing and / or as testcontrol. For the individual work done during the semester, the student is evaluated, the grade being included in totals. At the end of the semester, based on the grades from the totals, the average annual score is calculated.

Final: The course ends with an exam. The final grade is calculated at the end of the discipline study - 50%; from test-control - 20% and oral interview - 30%. The average annual mark and the marks of all final stages of testing (test and oral answer) - are expressed in numbers according to the scoring scale (according to the table) and the final mark obtained is expressed in two decimal digits, to be entered in the notes book.

Intermediate marks scale (annual average, marks	National	ECTS
from the examination stages)	Assessment System	Equivalent
1,00-3,00	2	F
3,01-4,99	4	FX
5,00	5	
5,01-5,50	5,5	E
5,51-6,00	6	
6,01-6,50	6,5	р
6,51-7,00	7	
7,01-7,50	7,5	C
7,51-8,00	8	
8,01-8,50	8,5	B
8,51-8,00	9	
9,01-9,50	9,5	Δ
9,51-10,0	10	

Method of mark rounding at different assessment stages

Note: Absence on examination without good reason is recorded as "absent" and is equivalent to 0 (zero). The student has the right to have two re-examinations.

X. RECOMMENDED LITERATURE:

A. Compulsory:

- 1. Nicolau Gh. Odontologie practică modernă. Chișinău: Nasticor 2010
- 2. Трезубов В.Н., Щербаков А.С., Мишнев Л.М., Фадеев Р.А. Ортопедическая Стоматология. Санкт-Петербург Фолиант 2002, 656 с.



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- 3. Chira Iulia. Morfopatologia Funcțională a Aparatului Dento-Maxilar. Editura didactică și pedagogică. București. 1981.
- Dorin BRATU, Mihai Romînu, Sorin Uram-Ţuculescu. Aparatul Dento-Maxilar date de morfologie funcțională clinică, Editura Helicon Timișoara, 1997
- 5. Stanley J. Nelson. Wheeler's Dental Anatomy Physiology and Occlusion, Elsevier, 2010
- 6. Bîrsa Gh., Postolachi I. Tehnici de confecționare a protezelor dentare. Chișinău 1994.
- 7. Postolachi I. și colab. Protetica Dentară. Chișinău, "Știința"1993

B. Supplementary:

- 1. Ștefania Crăițoiu, Mihai Crăițoiu, Maria Florescu. Cavitatea orală Morfolagie normală și patologică.–Editura Medicală București ,1999
- 2. Щербаков А. С., Гаврилов Е. И., Трезуб В. Н., Жулев Е. Н. Ортопедическая Стоматология. Санкт-Петербург ИКФ "ФОЛИАНТ" 1998