



MEDICAL UNIVERSITY
“PROF. DR. PARASKEV STOYANOV” VARNA
FACULTY OF DENTAL MEDICINE

Approved at a Faculty council meeting No 12 / 07.12.2022

Approved:
DEAN
/Prof. Dr. Stefan Peev, DMD, PhD, DSc/



CURRICULUM

of

“Functional Anatomy of the Masticatory Sistem, Dental Morphology and Occlusion“

Department: “Dental materials science and Prosthetic dental medicine”

Specialty: “DENTAL MEDICINE”

Educational-Qualification Degree: “MASTER”

Professional qualification: “PHYSICIAN IN DENTAL MEDICINE”

Type classes	Semester	Workload - hours per week	Workload-total hours
Lectures	First	2 hours per 2 weeks	15 h
	Second	2 hours per 2 weeks	15 h
Practical exercises	First	2 h/w	30 h
	Second	4 h/w	60 h
Total hours			120 h
Types of control	Current control	EXAM – After second semester Practical exam on wax-up and Theoretical exam on Dental morphology, occlusion and function of the jaws	
Credits (ECTS)			3+5 (8)
Extracurricular workload			120

Varna, 2022

Academic Staff of the Department:

1. Assoc. prof. Dr. Stoyan Georgiev Katsarov, DMD, PhD
2. Prof. Dr. Metodi Zahariev Abadzhiev, DMD, PhD, DSc
3. Assoc. prof. Dr. Desislava Atanasova Konstantinova, DMD, PhD
4. Assoc. prof. Dr. Iveta Plamenova Katreva, DMD, PhD
5. Chief-assist. prof. Dr. Kalina Stoyanova Georgieva-Bozhkova, DMD, PhD
6. Chief-assist. prof. Dr. Radostina Panayotova Vasileva, DMD, PhD
7. Chief-assist. prof. Dr. Dzhendo Atanasov Dzhendov, DMD, PhD
8. Chief-assist. prof. Dr. Kiril Georgiev Gogushev, DMD, PhD
9. Chief-assist. prof. Dr. Ivan Mihaylov Denkov, DMD, PhD
10. Chief-assist. prof. Dr. Preslav Plamenov Penchev, DMD, PhD
11. Chief-assist. prof. Dr. Liudmil Hristov Matev, DMD, PhD
12. Chief-assist. prof. Dr. Delyan Krasimirov Georgiev, DMD, PhD
13. Assist. prof. Dr. Simeon Georgiev Simeonov, DMD
14. Assist. prof. Dr. Nikoleta Tsankova Dimitrova – Lecheva, DMD
15. Assist. prof. Dr. Yavor Vasilev Gagov, DMD
16. Assist. prof. Dr. Tsvetelina Nikolova Kanlieva, DMD
17. Assist. prof. Dr. Magdalena Norman Gugleva, DMD
18. Assist. prof. Dr. Damyan Tsankov Tsanev, DMD
19. Assist. prof. Dr. Dimo Krasimirov Nedelchev, DMD
20. Assist. prof. Dr. Polina Plamenova Peneva, DMD
21. Assist. prof. Dr. Gabriela Rosenova Kirova, DMD
22. Assist. prof. Dr. Miroslav Stoykov Stoykov, DMD
23. Assist. prof. Dr. Yordanka Donkova Shekerova, DMD
24. Assist. prof. Dr. Gergana Angelova Georgieva, DMD
25. Assist. prof. Dr. Elina Vladimirova Todorova, DMD
26. Assist. prof. Dr. Mariyana Georgieva Dimitrova, DMD
27. Assist. prof. Dr. Iva Yordanova Yordanova, DMD

ANNOTATION:

DURATION OF EDUCATION – 2 semesters

AIM OF EDUCATION – to prepare students to learn the morphology of human dentition, anatomy and function of the masticatory system.

Classes are spread over two semesters as follows:

First semester

Dental morphology, occlusion and function of jaws

Drawing and sculpting teeth in tripled size.

Second semester

Dental morphology, occlusion and function of jaws

Waxing up teeth in real size on study models.

After the end of the second semester-**practical exam** on waxing up teeth in one quadrant for 8 academic hours.

After successful passing of the practical exam - **theoretical exam** on Dental morphology, occlusion and function of jaws.

EXERCISES I YEAR (I SEMESTER)

№	Subject	Number of hours
1	Drawing teeth in triple size. Sequence, requirements, tools. Seminar on morphology and structure of permanent teeth.	2
2	Seminar on morphology, structure and functionality of anterior teeth. Drawing incisors.	2
3	Admission of the drawings of the incisors. Sculpting upper central incisor from soap bar - 11 or 21.	2
4	Admission of the sculptured incisor.	2
5	Seminar on the morphology, structure and functional characteristics of the canines. Drawing canines.	2
6	Admission of drawings of canine. Sculpting of canine 13 or 23.	2
7	Admission of sculptured canine.	2
8	Seminar on morphology, shape and functional characteristics of premolars. Drawing premolars.	2
9	Admission of drawings of premolars. Sculpting of premolars - 15 or 25 or 34 or 44.	2
10	Admission of sculptured premolars.	2
11	Seminar on morphology, structure and functional characteristics of molars. Drawing of molars.	2
12	Colloquium. Admission of drawings molars. Sculpting of molars - (26 or 16) or (36 or 46).	2
13	Admission of sculptured molars.	2
14	Recognition of the natural teeth. Colloquium. Admission of practical work. Attestation of the semester.	2
15	Colloquium - Retake Admission of practical work. Attestation of the semester.	2
	End of First semester	30 h

LECTURES I YEAR (I SEMESTER)

№	Subject	Number of hours
1.	Prosthetic Dental Medicine-definition, main subject and purposes. Development of the Prosthetic Dental Medicine - a short historical review.	1
1	Orofacial complex. Oral cavity. Maxillofacial area and masticatory system.	1
2	Phylogenetic evolution of the masticatory apparatus and maxillofacial area.	1
2	Ontogenetic development. Theories for dental eruption and tooth growth.	1
3	Teeth. Planes for orientation of the dentition. Parts and sides of teeth. Dental functional groups. Dental formulas. Color of permanent dentition.	1
3	Dental anatomy-parts and morphology of teeth, periodontal ligament - structure and functions. Color of permanent dentition. Morphology of primary dentition. Terms of eruption and development. General characteristics and signs of recognition of teeth.	1
4	Morphology of permanent incisors.	1
4	Morphology of permanent canines.	1
5	Morphology of upper permanent premolars.	1
5	Morphology of lower permanent premolars.	1
6	Morphology of upper permanent molars.	1
6	Morphology of lower permanent molars.	1
7	Anatomical and functional wax-up of dental crowns in real size.	2
8	Occlusion and articulation. Classification of bites.	1
	End of First semester	15 h

EXERCISES I YEAR (II SEMESTER)

№	Subject	Number of hours
1	Drip-wax-up technique by P.K.Tomas. Occlusal schemes. Drip-wax-up technique – of the ascending wax modeling on large and small plaster plate.	4
2	Pouring of working models. Orientation of models in articulator. Preparation of models for modeling of the occlusal surfaces in natural size.	4
3	Wax up of upper front teeth /anatomic modeling/.	4
4	Wax up of lower anterior teeth /functional modelling/	4
5	Wax up of upper premolars.	4
6	Wax up of lower premolars.	4
7	Wax up of upper molars.	4
8	Wax up of lower molars.	4
9	Admission of wax-up occlusal surfaces. Preparation of models for the second modeling.	4
10	Second wax up of upper dental arch.	4
11	Second wax up of upper dental arch.	4
12	Second wax up of lower dental arch	4
13	Second wax up of lower dental arch	4
14	Admission of modeled occlusal surfaces.	4
15	Colloquium. Admission of practical work. Attestation of the semester.	4
	End of Second semester	60 h
	Total for first and second semester	90 h

LECTURES I YEAR (II SEMESTER)

Nº	Subject	Number of hours
1	Functional anatomy of the masticatory system. Oral cavity.	1
1	Bones of the upper and lower jaw. Masticatory and mimic muscles. Salivary glands.	1
2	Temporo-mandibular joint - TMJ. Functional anatomy. Basic movements of the mandible. Basic positions of the mandible. Physiological rest.	1
2	Biomechanics of masticatory articulation. Articulation cycles. Chewing sequence	1
3	Compensatory curves-formation and function.	1
3	Devices for reproducing of the movements of the mandible, based on theories of occlusion II-(Bonwil, Hall, Monson and Gysi).	1
4	Articulators- general classification. Basic principles and function.	1
4	Arcon and Non- arcon articulators. Methods for registering movements of the mandible.	1
5	Christensen Phenomena, Tracking stylus.	1
5	Facebows. Pantograph. Evolution of the devices, for registration of the movements of the jaws.	1
6	Mechanical and digital devices, for registration an transferring of the main parameters.	2
7	Functional and age-related changes in the masticatory apparatus. Attrition and abrasion of the crowns. Dental erosion.	1
7	Anatomical and functional changes after single and partial tooth loss. Changes after complete edentulation.	1
8	Smile design and esthetic considerations in the esthetic zone. "Golden rule proportions". Shade selection sequence. Rules for proper shade selection.	1
	End of Second semester	15 h
	Total for first and second semester	30 h

PRACTICAL EXAM ON WAXING UP TEETH IN ONE QUADRANT FOR 8 ACADEMIC HOURS

Students who fail to pass the practical, will not be allowed to attend the theoretical exam.

THEORETICAL EXAM ON DENTAL MORPHOLOGY, OCCLUSION AND FUNCTION OF THE JAWS.

Students who fail to pass the theoretical exam, will not be allowed to continue with their education to the third semester.

QUESTIONNAIRE

DENTAL MORPHOLOGY, OCCLUSION AND FUNCTION OF THE JAWS

2022

1. Orofacial complex. Oral cavity. Lips, cheeks. Palate, mucosa, salivary glands, tongue.
2. Bones of the masticatory system - functional structure.
3. Functional anatomy of the temporo-mandibular joint (TMJ).
4. Masticatory and mimic muscles - functional anatomy.
5. Dental anatomy-parts and morphology of the teeth, periodontal ligament - structure and functions.
6. Primary and permanent dentition. Terms of eruption of primary and permanent dentition. Morphology of the deciduous teeth. Functional dental groups.
7. Planes for orientation of the dentition. Parts and sides of the teeth. Dental formulas. General characteristics and signs of recognition of the teeth.
8. Morphology of permanent incisors.
9. Morphology of permanent canines.
10. Morphology of the upper premolars.
11. Morphology of the lower premolars.
12. Morphology of the upper molars.
13. Morphology of the lower molars.
14. Biomechanics of the masticatory apparatus. Biomechanics of Periodontics. Masticatory forces. Occlusal forces. Chewing pressure.
15. Masticatory Unit, Masticatory reflex. Functional-mechanical equilibrium of the periodontium.
16. Biomechanics of masticatory articulation. Articulation cycles. Chewing sequence.
17. Basic positions of the mandible. Physiological rest. Occlusion. Articulation. Bite - variations
18. Movements of the mandible. Theoretical principle of combined movements.
19. Functional and age-related changes in the masticatory apparatus. Attrition and abrasion of the crowns. Dental erosion.
20. Functional and age-related changes of periodontal. Changes after single and partial tooth loss. Changes after complete tooth loss.

The Curriculum was updated with Protocol № 9 / 05.12.2022 of a Department council meeting of the Department of Dental material science and Prosthetic dental medicine, Faculty of Dental medicine, Medical University "Prof. Dr. Paraskev Stoyanov" – Varna.



Head of ES PDM:

(Assoc. prof. Dr. Stoyan Katsarov, DMD, PhD)

Head of Department DMSPDM:

(Prof. Dr. Mario Milkov, MD, PhD)