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

МЕДИЦИНСКИ УНИВЕРСИТЕТ - ВАРНА

Approved at a Faculty council meeting №......

Approved:
DEAN
/Assoc. prof. Dr. Georgi Papanchev, DMD, PhD/

CURRICULUM

of
"Dental morphology, occlusion and function of the jaws"
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	1/1 (2 hours per 2 weeks)	15 h
	Second	2 hours per 2 weeks	15 h
Practical exercises	First	2/4 (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+6 (9)
Extracurricular workload			150

Varna, 2026

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. Kiril Georgiev Gogushev, DMD, PhD
7. Chief assist. prof. Dr. Ivan Mihaylov Denkov, DMD, PhD
8. Chief assist. prof. Dr. Preslav Plamenov Penchev, DMD, PhD
9. Chief assist. prof. Dr. Liudmil Hristov Matev, DMD, PhD
10. Chief assist. prof. Dr. Delyan Krasimirov Georgiev, DMD, PhD
11. Assist. prof. Dr. Simeon Georgiev Simeonov, DMD
12. Chief assist. Dr. Yavor Vasilev Gagov, DMD, PhD
13. Chief assist. prof. Dr. Tsvetelina Nikolova Kanlieva, DMD, PhD
14. Chief assist. prof. Dr. Dimo Krasimirov Nedelchev, DMD, PhD
15. Chief assist. prof. Dr. Gabriela Rosenova Kirova, DMD, PhD
16. Chief assist. prof. Dr. Miroslav Stoykov Stoykov, DMD, PhD
17. Assist. prof. Dr. Yordanka Donkova Shekerova, DMD
18. Assist. prof. Dr. Gergana Angelova Georgieva, DMD
19. Assist. prof. Dr. Elina Vladimirova Todorova, DMD
20. Assist. prof. Dr. Mariyana Georgieva Dimitrova, DMD
21. Assist. prof. Dr. Iva Yordanova Yordanova, DMD
22. Assist. prof. Dr. Mihail Radoslavov Bachvarov, DMD
23. Assist. prof. Dr. Akseber Ayhanov Mehmedov, DMD
24. Assist. prof. Dr. Angelina Georgieva Shishmanidova, 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 waxing up teeth.

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.	2
4	Seminar on the morphology, structure and functional characteristics of the canines. Drawing canines.	2
5	Admission of drawings of canine.	2
6	Seminar on morphology, shape and functional characteristics of premolars. Drawing premolars.	2
7	Admission of drawings of premolars.	2
8	Seminar on morphology, structure and functional characteristics of molars. Drawing of molars.	2
9	Admission of drawings of molars.	2
10	Drop-wax modelling technique by P.K. Thomas. Occlusal compass. Drop-wax modeling technique – ascending wax modeling – small and large gypsum plate.	2
11	Pouring of working models. Orientation of models in articulator.	2
12	**Colloquium.**	2
13	Preparation of the models for modeling the masticatory surfaces in their natural size.	2
14	Admission of practical work. **Colloquium – Retake.**	2
15	Recognition of natural teeth. Submission of practical work. Semester certification.	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	Wax up of upper anterior teeth /anatomic modeling/.	4
2	Wax up of lower anterior teeth /functional modellation/	4
3	Wax up of upper premolars.	4
4	Wax up of lower premolars.	4
5	Wax up of upper molars.	4
6	Wax up of lower molars.	4
7	Admission of wax-up occlusal surfaces.	4
8	Preparation of models for the second modeling.	4
9	Second wax up of upper dental arch.	4
10	Second wax up of upper dental arch.	4
11	Second wax up of lower dental arch	4
12	Second wax up of lower dental arch	4
13	**Colloquium.**	4
14	Admission of modeled occlusal surfaces. **Colloquium-Retake.**	4
15	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)

№	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.

Suggested literature:

1. **Lection course**

2. **Шилдшбърг Хърбърт**, Основи на неснемаемите зъбни протези, 2001, медицинско издателство „Шаров"

3. **Peter E. Dawson**, Functional Occlusion From TMJ to Smile Design-, Mosby Elsevier, 2007

4. **Woelfels** DENTAL ANATOMY 8th Edition 2012

5. **Buddy D. Ranter, Allan S. Hoffman**. Biomaterials Science

6. **Ralph Phillips**. Science of Dental Materials

7. **William O'Brien.** Dental Materials and Their Selection

8. Glossary of Prosthodontic Terms

QUESTIONNAIRE

DENTAL MORPHOLOGY, OCCLUSION AND FUNCTION OF THE JAWS

2026 - 2027

1. Orofacial complex. Oral cavity. Lips, cheeks. Soft and hard 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. Teeth recognition.
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 permanent upper premolars.
11. Morphology of permanent lower premolars.
12. Morphology of permanent upper molars.
13. Morphology of permanent 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 № 64 / 22.05.2026 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 Department DMSPDM: .....
(Prof. Dr. Mario Milkov, MD, PhD)